

THE

UNIVERSITY OF LEEDS

CALENDAR, 1946-47

LEEDS JOWETT & SOWRY LTD., PRINTERS & LITHOGRAPHERS



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THE UNIVERSITY OF LEEDS

ALMANAC

SESSION 1946-47

1st TERM

(Tuesday, 1st October to Wednesday, 11th December).

Sept.	25	w.	Meeting of Senate Business Committee.
Oct.	I	Tu.	First Term in all Faculties begins
			Admission of students.
	2	W	Meeting of Senate.
			Admission of students.
	7	М.	Meeting of Applications Committee
	9	W.	Meeting of Finance Committee
	II	F.	Meeting of Library Committee
	14	М.	Meeting of Ph.D. Committee
			Meeting of University Extension and Tutorial
			Classes Committee Medical Inaugural Lecture
		T.,	0
	15	Tu.	Meeting of Board of the Faculties of Arts, Economics, Commerce and Law
	16	W.	Meeting of Council
	22	Tu.	Meeting of Board of the Faculty of Medicine
	24	Th.	Meeting of Board of the Faculties of Science
	44	A 41.	and Technology
	30	W.	Meeting of Senate Business Committee
	J.		Meeting of Women's Halls Committee
Nov.	4	M.	Meeting of Applications Committee
*****	5	Tu.	Meeting of Textile Industries and Dyeing
	5	~ ~ ~ ~	Committee
	6	W.	Meeting of Senate
	II	М.	Meeting of Ph.D. Committee
	12	Tu.	Meeting of the Board of the Faculties of Arts,
			Economics, Commerce and Law
	13	W.	Meeting of Finance Committee
	17	Sun.	University Sermon
2.0.0	19	Tu.	Meeting of Board of the Faculty of Medicine
	20	W.	Meeting of Council
	21	Th.	Meeting of Board of the Faculties of Science and
		tages -	Technology
	22	F.	Meeting of Library Committee.
	27	W.	Meeting of Senate Business Committee

Almanac

- Dec. 2 M. Meeting of Applications Committee
 - .4 W. Meeting of Senate
 - 9 M. Meeting of Ph.D. Committee
 - 11 W. Meeting of Finance Committee :
 - First term ends
 - 18 W. Meeting of Council
 - 24 Tu. University closed
 - 25 W. Christmas Day (University closed)
 - 26 Th. University closed

2nd TERM

(Wednesday, 8th January to Friday, 21st March).

Jan. 8 W. Second term begins

13

Meeting of Finance Committee

- M. Meeting of Applications Committee
- Meeting of Ph.D. Committee
- 14 Tu. Meeting of Board of the Faculties of Arts, Economics, Commerce and Law
- 15 W. Meeting of Council (provisional)
- 21 Tu. Meeting of Board of the Faculty of Medicine
- 23 Th. Meeting of Board of the Faculties of Science and Technology
- 29 W. Meeting of Senate Business Committee Meeting of Women's Halls Committee
- Feb. I Sat. Last day of entry for March Medical and Dental examinations Last day of entry for Masterships, Ph.D. and B.D.

examinations held in June

- 3 M. Meeting of Applications Committee
- 5 W. Meeting of Senate
- 10 M. Meeting of Ph.D. Committee
- 11 Tu. Meeting of Board of the Faculties of Arts, Economics, Commerce and Law
- 12 W. Meeting of Finance Committee
- 13 Th. Annual General Meeting of the Union
- 18 Tu. Meeting of Board of the Faculty of Medicine
- 19 W. Meeting of Council
- 20 Th. Montague Burton Lecture
 - Meeting of Board of the Faculties of Science and Technology
- 23 Sun. University Sermon
- 25 Tu. Meeting of Medical Library Sub-Committee
- 26 W. Meeting of Senate Business Committee
- 28 F. Meeting of Library Committee.

Almanac

Mar.	\mathbf{I}^{\pm}	Sat.	Last day of entry for degree and diploma
			examinations held in June
	3	M.	Meeting of Applications Committee
	4	Tu.	Meeting of Textile Industries and Dyeing Com-
			mittee.
	5	W.	Meeting of Senate
	IO	М.	Meeting of Ph.D. Committee
			Last day for return of books to the Library
	II	Tu.	Meeting of Board of the Faculties of Arts,
			Economics, Commerce and Law
	12	W.	Meeting of Finance Committee
	18	Tu.	Meeting of Board of the Faculty of Medicine
	19	W.	Meeting of Council
	20	Th.	Meeting of Board of the Faculties of Science and
			Technology.
	21	F.	Second term ends
April	4	F.	Good Friday (University closed)
	5	S.	University closed
	7	M.	Easter Monday (University closed)
	8	Tu.	University closed
	9	W.	Meeting of Finance Committee (provisional)
	16	W.	Meeting of Council (provisional)

3rd TERM

(Wednesday, 23rd April to Friday, 4th July).

- 23 W. Third Term begins
- 25 F. Foundation of University (1904) Meeting of Library Committee

30 W. Meeting of Senate Business Committee

May

I

- 5 M. Meeting of Applications Committee
- 7 W. Meeting of Senate

Th.

- 12 M. Meeting of Ph.D. Committee
- 13 Tu. Meeting of Board of the Faculties of Arts, Economics, Commerce and Law

Last day for receipt of theses for degrees

- 14 W. Meeting of Finance Committee
- 18 Sun. University Sermon
- 20 Tu. Meeting of Board of the Faculty of Medicine
- 21 W. Meeting of Council
- 22 Th. Meeting of Board of the Faculties of Science and Technology
- 26 M. Whit Monday (University closed)
- 27 Tu. University closed
- 28 W. Meeting of Senate Business Committee Meeting of Women's Halls Committee

Aimanac

June 2

- M. Meeting of Applications Committee
 - Meeting of Textile Industries and Dyeing 3 Tu. Committee
 - Meeting of Medical Library Sub-Committee
 - W. Meeting of Senate 4
 - M. Meeting of Ph.D. Committee 0
 - Tu. Meeting of Board of the Faculties of Arts, 10 Economics, Commerce and Law
 - W. Meeting of Finance Committee II
 - Tu. Meeting of Board of the Faculty of Medicine 17
 - т8 W. Meeting of Council.
 - Th. Meeting of Board of the Faculties of Science and 19 Technology.
 - 20 F. Meeting of Library Committee.
 - Meeting of Senate Business Committee 25 W.
- W. July 2 Meeting of Senate
 - F. Third Term ends 4
 - W. Meeting of Finance Committee 9
 - Meeting of Council 16 W.
- Aug. 1 F. Last day of entry for September examinations in Arts, Science and Technology.
 - M. University closed 4
 - Tu. University closed 5
- Sept. 1 M. Last day for applications for Entrance Scholarships

THE UNIVERSITY OF LEEDS

THE CHARTER

EDWARD VII, by the Grace of God, of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, King, Defender of the Faith. To all to whom these presents shall come, greeting.

Whereas by Charter of Her Late Majesty Queen Victoria, dated 20th April, 1880, the Victoria University was founded and constituted having its seat in the City of Manchester.

And whereas the Owens College, Manchester, was thereby constituted a College in the University and provision was made that other Colleges might from time to time be admitted as Colleges in the University in the manner and subject to the conditions therein prescribed.

And whereas the University College, Liverpool, was by resolution of the Court of the University admitted as a College of the University on the 5th November, 1884, and The Yorkshire College, Leeds, was by resolution of the said Court admitted as a College in the University on the 3rd November, 1887, but no other College has been so admitted.

And whereas the said University College, Liverpool, has presented to Us in Our Council a humble Petition under the Common Seal of that College praying us to erect a University within the City of Liverpool.

And whereas the Owens College, Manchester, has presented to Us in Our Council a humble Petition under the Common Seal of that College praying that a new or supplemental Charter may be granted so as to constitute and continue the Victoria University as a University in Manchester without association with any College except the Owens College. And whereas the Yorkshire College, Leeds, has presented to Us in Our Council a humble Petition under the Common Seal of that College, praying Us to erect a University having its seat in Leeds.

And whereas we have taken the said Petitions into Our Royal consideration and are minded to accede thereto.

Now therefore know ye that We, by virtue of Our Royal Prerogative and all other powers in that behalf enabling us of Our Special Grace certain knowledge and mere motion by these presents Do for Us, Our Heirs and Successors, grant, will, direct, and ordain as follows:

I. There shall be from henceforth for ever in Our said City of Leeds a University of the name and style of "The University of Leeds," which shall be and continue one body politic and corporate with perpetual succession and a common seal and with full power and capacity by and in such name to sue and be sued and to do all other lawful acts whatsoever and with full power and capacity, subject to the restrictions herein set forth, without any further licence to all persons and corporations to assure and to the University to take, by gift or otherwise purchase and hold and also to grant demise or otherwise dispose of real and personal property.

II. The University shall have the powers following :

1. To grant and confer Degrees and other academic distinctions to and on persons who shall have pursued an approved course of study in the University and shall have passed the examinations of the University under conditions laid down in its Statutes or Ordinances. Provided that degrees representing proficiency in technical subjects shall not be conferred without proper security for testing the scientific or general knowledge underlying technical attainments.

2. To admit graduates of other Universities to Degrees of equal or similar rank in the University.

3. To confer Degrees of the University on any persons who hold office in the University as Professors, Readers, Lecturers, or otherwise, or who shall have carried on independent research therein, or on any persons who. at the date of this Our Charter, are Associates of the Yorkshire College.

4. To grant Diplomas, Licentiateships, Certificates, or other distinctions to persons who have pursued a course of study approved by the University under conditions laid down by the University.

5. To confer Honorary Degrees, or other distinctions on approved persons.

Provided that all Degrees and other distinctions shall be conferred and held subject to any provisions which may be made in reference thereto by the Statutes, Ordinances, or Regulations of the University.

6. To provide for instruction in such branches of learning as the University may think fit, and also to make provision for research and for the advancement and dissemination of knowledge.

7. To examine and inspect schools and other educational institutions, to grant Diplomas and other Certificates, and to provide such lectures and instruction for persons not members of the University as the University may determine.

8. To accept the examinations and periods of study passed by students of the University at other Universities or places of learning as equivalent to such examinations and periods of study in the University as the University may determine, and to withdraw such acceptance at any time.

Provided that in no case shall the University confer a Degree in Medicine or Surgery upon any person who has not attended in the University during two years at least courses of study recognised for such Degree, or for one of the other Degrees of the University.

9. To affiliate other Colleges or institutions or branches or departments thereof, or to admit the members thereof to any of the privileges of the University, and to accept attendance at courses of study in such Colleges or institutions in place of such part of the attendance at courses of study in the University, and upon such terms and conditions and subject to such regulations as may from time to time be determined by the University.

10. To co-operate by means of joint boards or otherwise, with other Universities and Authorities for the

conduct of Matriculation examinations, for the examination and inspection of schools and other academic institutions and for such other purposes as the University may from time to time determine.

11. To enter into any agreement with the Yorkshire College for the incorporation of that College in the University, and for taking over its property and liabilities, and, if necessary, to promote a Bill in Parliament to confirm or carry out any such agreement.

12. To enter into any agreement with any other institution for the incorporation of that institution in the University and for taking over its property and liabilities, and for any other purpose not repugnant to this Our Charter.

13. To enter into any agreement with the Victoria . University of Manchester or with the University of Liverpool for the division or apportionment of any of the moneys, endowments, or property of the Victoria University, with due regard to the local origin of any particular foundation, to the wishes of the Donors, and other special circumstances, and for reference to an Arbitrator in case of difference.

14. To institute Professorships, Assistant Professorships, Readerships, Lectureships, Teacherships, and any other offices required by the University, and to appoint to such offices. Also to institute and award Fellowships, Scholarships and Exhibitions and Prizes.

15. To license Halls for the residence of students.

16. To do all such other acts and things whether incidental to the powers aforesaid or not, as may be requisite in order to further the objects of the University as a Teaching and Examining Body, and to cultivate and promote Arts, Science, and Learning.

III. It shall be the duty of the University to co-operate, by means of a Joint Board or otherwise, with the Victoria University of Manchester and the University of Liverpool for the regulation and conduct of Matriculation examinations, including the conditions of exemption therefrom. Statutes of the University shall prescribe and regulate the constitution

and duties of the said Joint Board, the appointment and continuance in office of the members thereof, the filling of vacancies among the members, and all other matters relative to the Joint Board which it may be thought are proper to be so regulated and prescribed.

Visitor

IV. We, Our Heirs and Successors, Kings and Queens of the Kingdom and Dominions aforesaid, shall be and remain the Visitor and Visitors of the University through the Lord President of our Council for the time being, and in the exercise of the Visitorial Authority We and Our Heirs and Successors shall have the right from time to time and in such manner as We or They shall think fit to direct an inspection of the University, its buildings, laboratories, and general equipment, and also of the examination, teaching, and other work done by the University.

Authorities of the University

V. The Authorities of the University shall be the Chancellor, the Pro-Chancellor, the Vice-Chancellor, the Pro-Vice-Chancellor, the Court, the Council, the Senate, the Faculties, the Boards of Faculties, and the Convocation. There shall be a Treasurer and other proper officers of the University.

The Chancellor

V1. The Chancellor shall be the Head and Chief Officer of the University and President of its Court, Council, and Convocation, and shall, except as otherwise hereby provided, confer Degrees. He shall hold office during his life or until his resignation or until his removal for good cause by the Visitor at the instance of the Court.

Our right trusty and entirely beloved Cousin and Councillor, George Frederick Samuel, Marquis of Ripon, Knight of Our Most Noble Order of the Garter, Doctor of Laws, shall be the first Chancellor of the University.

His successors from time to time shall be elected by the Court on the nomination of the Council of the University.

The Pro-Chancellor

VII. In the absence of the Chancellor, or pending a vacancy in the office of Chancellor, or during the Chancellor's inability to act, the Pro-Chancellor shall exercise all the functions of the Chancellor, except the conferring of Degrees, and shall, if present, preside at any meetings of the Court and Council. Our trusty and well-beloved Arthur Greenhow Lupton, Chairman of the Council of the Yorkshire College, shall be the first Pro-Chancellor of the University, and shall hold his office for one year. Subsequent appointments to the said office shall be made annually by the Court on the nomination of the Council.

The Vice-Chancellor

VIII. The Vice-Chancellor shall be ex-officio Chairman of the Senate. In the absence of the Chancellor the Vice-Chancellor shall confer Degrees, except as otherwise hereby provided.

Our trusty and well-beloved Nathan Bodington, Principal of the Yorkshire College, Doctor of Letters, shall be the first Vice-Chancellor of the University, and shall hold such office for such term or terms and subject to such conditions as may from time to time be determined by the Council.

His successors from time to time shall be appointed by the Court on the nomination of the Council and shall hold such office for such term or terms and subject to such conditions as may from time to time be determined by the Council.

The Pro-Vice-Chancellor

IX. Subject to the Statutes and Ordinances of the University, and in the absence of the Vice-Chancellor, the Pro-Vice-Chancellor may act as Vice-Chancellor. The Pro-Vice-Chancellor shall from time to time be appointed by the Council from among the members of the Senate.

The Court

X. The Court shall be the governing body of the University and shall direct the form, custody, and use of the Common Seal, and shall have power to regulate and

determine all matters concerning the University, and generally shall exercise all the powers and discretions of the University, except as otherwise provided by this Our Charter or by the Statutes.

The Court shall have power by Statute to increase or diminish the number of its members, by increasing or diminishing the number to be nominated or appointed by the persons or bodies possessing the right of nomination or appointment, or by adding representatives of other bodies, or in any other manner.

The Statutes set forth in the Schedule hereto annexed shall be the first Statutes of the University under this Our Charter. The Court may amend, add to, or repeal the Statutes for the time being in force (including those set forth in the Schedule hereto), but no such amendment, addition, or repeal shall be valid or operative until allowed by Us or by a Committee of Our Council.

Ordinances may be made by the Court for the regulation of all matters not required by this Our Charter to be dealt with by Statute.

Provided (1) that it shall not be lawful for the Court, by any Statute or otherwise, to adopt or impose on any person any test whatever of religious belief or profession in order to entitle him to be admitted as a Professor, Teacher, Student, or Member of the University, or to hold office therein, or to graduate thereat, or to enjoy or exercise any privilege thereof.

Provided (2) that any Statute or Ordinance made by the Court be not repugnant to the laws of this Realm or to the general objects of this Our Charter.

Provided (3) that Statutes or Ordinances relating to Degrees, studies, and examinations shall not be adopted without report from the Senate.

Provided (4) that no change shall be made in any Statute or Ordinance altering the status, powers, or constitution of any of the Authorities of the University until such Authority shall have had an opportunity of pronouncing an opinion upon the proposed change.

The Court shall have power to confer Degrees in absentia by a resolution of the Court, but save as aforesaid all Degrees shall be conferred by the Chancellor or in his absence by the Vice-Chancellor or Pro-Vice-Chancellor.

The Court shall have power to deprive any Graduate of the University who shall have been convicted of a crime or offence, or shall, in the opinion of the Court, have been guilty of scandalous conduct, of any Degree or Degrees conferred by the University and of all privileges enjoyed by him as such Graduate aforesaid.

The acts of the Court shall not be invalidated by any vacancy among its Members.

XI. Every Statute or alteration of a Statute, and every Ordinance or alteration of an Ordinance relating to any of the matters following, that is to say:

(a) The titles of Degrees,

(b) The establishment of new Degrees,

(c) The periods of residence and study in the University or in any affiliated or recognised institution required for Degrees,

(d) The conditions under which Degrees higher than the Degree of Bachelor in any faculty are to be granted,

(e) The courses for medical Degrees and the subjects of examinations,

shall before such Statute or alteration of a Statute shall be allowed and before such Ordinance or alteration of an Ordinance shall become operative and have effect be communicated to the Victoria University of Manchester and the University of Liverpool, and if within one month after the receipt of such communication notice of objection thereto shall have been given by the said Universities or either of them the question so arising shall be considered by a Joint Committee of the three Universities, and in default of agreement any of the said Universities may within one month make a representation in regard thereto to Us or to a committee of Our Council, and, in the event last mentioned, such Statute or Ordinance or alteration therein shall not become operative and have effect until allowed by Us or by such Committee.

Statutes of the University shall prescribe and regulate the constitution and appointment of the said Joint Committee and all other matters relating to the said Committee which it may be thought are proper to be so prescribed and regulated.

The Council

XII. The Council shall be the Executive Body of the University and may exercise and do such of the powers, authorities, and things by this Our Charter granted to or authorised to be done by the Court, as are, or shall from time to time be assigned to the Council by Statute or by the Court, except the election of Members of the Court to be Members of the Council.

The Court shall have power by Statute to increase or diminish the number of the Council, by increasing or diminishing the number to be nominated, elected, or appointed by the persons or bodies possessing the right of nomination or appointment, or by adding representatives of other bodies, or in any other manner.

The Council shall have power to draft Statutes and Ordinances as and when they see fit, and to submit the same to the Court for consideration and enactment.

The acts of the Council shall not be invalidated by reason of any vacancy among its members.

The Senate

XIII. The constitution of the Senate shall be determined by Statute.

The Senate shall, subject to the Statutes and Ordinances of the University, and subject also to review by the Court, have the control and general regulation of the instruction and education within the University and shall have power to discuss and pronounce an opinion on any matter whatsoever relating to the University and such other powers and duties as may be conferred upon it by Statute or Ordinance.

Faculties

XIV. The University shall include the Faculties of Arts, Science, Medicine and Technology, and such other Faculties

(whether formed by the sub-division of an existing faculty or by the creation of a new faculty or otherwise) as may from time to time be constituted by Statute.

The constitution and powers of the several Faculties shall be determined by Statute.

Such Boards of Faculties shall be appointed by the Council as the Council may from time to time determine; the members of each Board (the numbers of whom shall be in the discretion of the Council) shall be appointed by the Council from among members of one or more Faculties, or from among the External Examiners of the University.

Convocation

XV. The Convocation shall consist of the Chancellor, the Vice-Chancellor, the Pro-Vice-Chancellor, the Members of the Senate, the Lecturers, and the registered Graduates of the University.

The Court shall have power to fix the conditions of registration and to prescribe the annual or other fees, or a composition therefor which shall be necessary for registration.

The Chancellor, if present, shall preside at the Meetings of Convocation.

Powers of Convocation

XVI. Convocation shall have the following powers :

To elect its own Chairman, who shall, in the absence of the Chancellor, preside at its Meetings.

To elect representatives as Members of the Court and Council.

To discuss and pronounce an opinion on any matter whatsoever relating to the University, including any matters referred to them by the Court or the Council.

To prescribe the mode of conducting the proceedings of Convocation and of registering the same, and of reporting the same to the Court, Council, or Senate, or any of them.

To enter into communication directly with the Court, Council, or Senate on any matter affecting the University.

Regulations as to Procedure

XVII. The Court, the Council, the Senate, the Faculties, the Boards of Faculties, and Convocation respectively may from time to time make regulations for governing their respective proceedings, subject to this Our Charter and to the Statutes and Ordinances of the University.

The Treasurer

XVIII. Our trusty and well-beloved Sir John Barran, Baronet, Treasurer of the Yorkshire College, shall be the first Treasurer of the University, and shall hold his office for one year. Subsequent appointments to the said office shall be made annually by the Court.

Members of the University

XIX. The Members of the University shall be the Chancellor, the Pro-Chancellor, the Vice-Chancellor, the Pro-Vice-Chancellor, the Treasurer, the Members of the University Court, the Professors, Emeritus Professors, Assistant Professors, Readers, Lecturers and Demonstrators, and such other Teachers of the University as the Court may determine, the Members of the Faculties, the holders of such other University offices as the Council may from time to time determine, the Wardens or other chief officers of Halls of Residence licensed by the University, Fellows, Graduates, and Undergraduates of the University.

The Undergraduates of the University shall be such persons attending lectures, or receiving instruction in the University as shall have matriculated under the Statutes.

Advisory Committees

XX. The Council may from time to time appoint Advisory Committees, consisting of members of the University, and also if the Council shall think fit, of persons who are not members of the University, and may delegate to such Committees such duties as it thinks fit as regards financial, administrative, or other matters affecting the University or any particular Faculty or Department, or the management or supervision of any buildings or property of the University,

Examiners and Examinations

XXI. All examinations held by the University shall be conducted in such manner as the Statutes and Ordinances shall prescribe, provided that at least one external and independent examiner shall be appointed by the Council for each subject or group of subjects forming part of the course of studies required for University degrees, but this proviso shall not apply to examinations for admission or entrance to the University.

Provided that in case of a vacancy occurring in or during any examination or of other emergency the Vice-Chancellor shall have power to appoint a substitute for that examination.

General Provisions

XXII. All the Degrees and courses of study of the University shall be open to women, subject to such conditions and regulations as the Court may prescribe, and women shall be eligible for any office in the University and for membership of any of its constituent bodies, and in the present Charter words implying the male sex shall be held to include the female, unless the context clearly shows the meaning to be otherwise.

XXIII. The University may from time to time found and endow Fellowships, Scholarships, Exhibitions, and other Prizes for which funds or property may, by bequest, donation, grant, or otherwise be provided, and may make regulations respecting the same and the tenure thereof, but, except as aforesaid, and except by way of prize, reward, special grant, or remuneration for services rendered or to be rendered, in the past, present, or future respectively, the University shall not make any gift, division or bonus in money unto or between any of its members.

XXIV. In addition to the buildings, lands, and premises of the University for the time being used and occupied for the immediate purposes thereof, the University shall have power to hold lands, tenements, and hereditaments of an annual value not exceeding in the aggregate, at the time or respective times of the acquisition of the same, the sum of £,50,000. XXV. The University may demand and receive such fees as the Court may from time to time appoint.

XXVI. The Court may from time to time alter, amend, or add to these presents by a Special Resolution in that behalf, and such alteration, amendment or addition shall, when allowed by Us, our Heirs, or Successors, or by any Committee of our Most Honourable Privy Council, or otherwise as We or They shall think fit, become effectual so that these presents shall thenceforward continue and operate as though they had been originally granted and made as so altered, amended, or added to. This Article shall apply to this Charter as altered, amended, or added to in any manner aforesaid.

XXVII. A Special Resolution is a Resolution passed at one meeting of the Court and confirmed at a subsequent meeting, held not less than one calendar month, nor more than three calendar months after the former, provided that the Resolution be passed at each meeting by a majority of not less than three-fourths of the Members of the Court present and voting thereon.

XXVIII. In this Our Charter "Statutes" means the Statutes set forth in the Schedule hereto and any Statutes altering, amending, adding to, or repealing the same or any of them which may hereafter be made and may be allowed by Us in Council, or by a Committee of Our Council.

"Ordinances" means Acts of the Court under the powers conferred by this Our Charter to which Our further sanction is not hereby or by Statute required.

"Regulations," except when otherwise required by the context, means Regulations made pursuant to this Our Charter or the Statutes.

XXIX. Our Royal Will and pleasure is that this Our Charter shall always be construed and adjudged in the most favourable and beneficial sense for the best advantage of the University, and the promotion of the objects of this Our Charter as well in all our Courts as elsewhere notwithstanding any non-recital, mis-recital, uncertainty or imperfection herein.

THE SCHEDULE

STATUTES

Ι.

The University Court (a)

The University Court (hereinafter called the Court) shall consist of the following persons, viz. :

1. *Ex-officio* members, The Chancellor, the Pro-Chancellor, the Vice-Chancellor, and the Treasurer.

2 All present members of the Council of the Yorkshire College; all future members of the University Council, during their tenure of office; all present Perpetual and Life Governors of the College; and all future Donors of $\pounds_{1,000}$ to the University. If a donation of $\pounds_{1,000}$ be made by a company, society, or partnership firm, one member thereof may be nominated by the Donors as a member of the Court.

Six representatives of the Clothworkers' Company of London.

One representative of the Skinners' Company of London.

One representative of the Drapers' Company of London.

- One representative of the Trustees of William Akroyd's Foundation.
- One representative of the West Yorkshire Coal Owners' Association.
- One representative of the Yorkshire Board of Legal Studies.
- 3. Representatives of Public Authorities, viz.:
 - Six from the County Council of the West Riding of Yorkshire.
 - Two from the County Council of the North Riding of Yorkshire.

Two from the County Council of the East Riding of Yorkshire.

- Four from the Council of the County Borough of Leeds.
- Two from the Council of the County Borough of Bradford.

One from the Council of the County Borough of York.

One from the Council of the County Borough of Hull.

- One from the Council of the County Borough of Halifax.
- One from the Council of the County Borough of Huddersfield.
- One from the Council of the County Borough of Middlesbrough.
- One from the Council of each of such other County Boroughs to be created in future as may be approved by the Court.
- 4. Representatives of the University :

Ten from the Faculties.

- Representatives (not exceeding five in all) of the Convocation, viz:—one representative for every hundred members up to 500.
- 5. Representatives of other Institutions, viz. :

Representatives of such Affiliated Institutions as the Court may determine, and

- One representative of the Victoria University of Manchester.
- One representative of the University of Liverpool.

One representative of such other English University as the Court may determine.

6. Representatives of Schools:

Eight representatives of the Head Masters and Mistresses of Secondary Schools in Yorkshire, such representatives to be appointed by the Court.

7. Other Governors :

Three persons appointed by the Crown.

Ten persons elected by co-optation by the Court.

Except as otherwise by the Charter provided, and subject to the Statutes of the University, the Court may determine all matters relating to the nomination, appointment, and election of members of the Court and Council, and their respective periods or terms of office, and all other matters relating to the constitution of the Court and Council.

(b)

The Court shall have power to delegate its functions to the Council except as otherwise provided, and to delegate to the Senate the power to award Degrees other than *ad eundem* Degrees, Degrees conferred on persons who hold office in the University, and Honorary Degrees.

The periods during which members of the Court respectively shall hold office shall be as follows :

The Chancellor, the Pro-Chancellor, the Vice-Chancellor, the Treasurer, and all future members of the University Council shall hold office during the time they occupy the positions named respectively.

All present members of the Council of the Yorkshire College, and all present Perpetual and Life Governors of the Yorkshire College, and all future donors of $\pounds_{1,000}$ to the University, and the persons nominated by the donors in the case of donations of $\pounds_{1,000}$ made by a company, society, or partnership firm, shall hold office for their respective lives, or until resignation.

All other members mentioned in clause (a) 2 above, and all members mentioned in clause (a) 3 above, shall hold office for one year from the date of appointment. Of the members mentioned in clause (a) 4, the ten representatives of the Faculties shall hold office for two years from the respective dates of appointment, and five of such members, to be selected by lot or otherwise as the Court shall determine, shall retire in each year; provided that if a representative of a Faculty ceases to be a member of that Faculty he shall cease to be a member of the Court. The representatives of Convocation shall hold office for two years from the date of appointment. Members mentioned in clause

(a) 5 and 6, shall hold office for two years from the respective dates of appointment. Members mentioned in clause (a) 7 shall hold office for five years from the respective dates of appointment, but of the members appointed by co-optation two, to be selected by lot or otherwise as the Court shall determine, shall retire each year.

All retiring members shall be eligible for re-appointment or re-election.

Appointees or representatives need not be members of the bodies appointing.

Any member of the Court may resign such membership at any time by letter addressed to the Registrar of the University.

Any casual vacancy occurring by resignation, incapacity, or death among the appointed or representative or co-opted members shall be filled up as soon as convenient by the person or body which appointed or co-opted the member whose place has become vacant. If such member was a member for a term of years the person appointed to supply his place shall be a member of the Court for the remainder of that term.

Fifteen members of the Court shall form a quorum, and, until the above-mentioned representative members have been appointed, the other members shall form the Court.

IJ.

The University Council

(a) The University Council (hereinafter called the Council) shall consist of the following persons, namely:-

The Chancellor, the Pro-Chancellor, the Vice-Chancellor, and the Treasurer.

Two representatives of the West Riding County Council. One representative of the North Riding County Council. One representative of the East Riding County Council. Two representatives of the County Borough of Leeds.

One representative of the County Borough of Bradford.

One representative of the Council of the County Borough of York.

One representative of the Council of the County Borough of Hull.

One representative of the Council of the County Borough of Halifax.

One representative of the Council of the County Borough of Huddersfield.

One representative of the Council of the County Borough of Middlesbrough.

One from the Council of each of such other Yorkshire County Boroughs already existing or to be created in future as may be approved by the Court.

Two representatives of the Clothworkers' Company of London.

Six representatives to be elected by the Faculties of the University.

One member to be elected by Convocation.

One member to be nominated by the Crown.

Twelve members to be elected by the Court. Provided nevertheless, that at first such of the present members of the Council of the Yorkshire College as have been elected thereto by the Board of Governors of the College shall take the place of the said twelve members: and of such members of the Council of the Yorkshire College four, to be selected by lot or otherwise as the Council may determine, shall retire every three years until the number of such members has been reduced to twelve or less; and on the number of such members being reduced to less than twelve the Court shall have power to appoint any other person or persons to make up such number to twelve. Provided also that, as from the 1st May, 1920, the number of members to be elected by the Court shall be increased from twelve to sixteen. Provided also that a person of the age of 71 years or over shall not be eligible for election or reelection by the Court as a member of the Council unless he was a member on the 21st April, 1920. So soon as the number of such members shall have been reduced to twelve or less, the members of the

Council of the Yorkshire College who at that time remain members of the Council, together with such appointee or appointees of the Court as aforesaid, shall hold office for the period and be subject to the provisions as to retirement hereinafter mentioned, as if all such members and appointees as aforesaid had been elected members of the Council by the Court on the day when such number as aforesaid was reduced to twelve or less.

The members of the Teaching Staff who are members of the Council, however elected (including the Vice-Chancellor), shall not exceed one fifth of the whole Council.

(b) The periods during which the members of the Council respectively shall hold office shall be as follows :

The Chancellor, the Pro-Chancellor, the Vice-Chancellor and the Treasurer shall hold office for the time during which they occupy the positions named respectively.

All other members of the Council shall hold office for one year from the date of appointment, except as otherwise hereinbefore provided and except members elected by the Court, who shall hold office for three years (four, to be selected by lot or otherwise as the Council shall determine, retiring each year), and except the person appointed by the Crown, who shall hold office for five years. Provided that the term of office of members newly elected by the Court in or after the year 1920 (other than those appointed to fill casual vacancies) shall be four years, and that the term of office of retiring members re-elected by the Court after the year 1920 shall also be four years.

Subject to the proviso contained in the foregoing Sub-section (a) as to an age-limit for the election or re-election of members by the Court, all retiring members shall be eligible for re-appointment or re-election.

Appointees or representatives need not be members of the bodies appointing.

Any member of the Council may resign such membership at any time by letter addressed to the Registrar of the University.

Any casual vacancy occurring by resignation, incapacity, or death among the appointed or representative members shall be filled up as soon as convenient by the person or body which appointed the member whose place has become vacant. If such member was a member for a term of years the person appointed to supply his place shall be a member of the Council for the remainder of that term.

Seven members of the Council shall form a quorum, and until the above named representative members have been elected, the other members shall form the Council.

III.

Powers of the Council

Subject to the provisions made in the Charter and Statutes, the Council shall have the following powers:

To nominate the Pro-Chancellor and the Vice-Chancellor.

To elect Professors of the University, and either to elect or to delegate to the Senate the election of any academic officers of the University other than Professors.

To elect a Registrar and other officers of the University for such periods and under such conditions as may be determined by the Council.

To institute Professorships, Assistant Professorships, Readerships, Lectureships, or other teaching offices, after giving the Senate the opportunity of reporting thereon.

To abolish or hold in abeyance, after giving the Senate the opportunity of reporting thereon, any Professorship, Readership, or other academic office in the University.

To draft Statutes and Ordinances as and when it sees fit and submit the same to the Court. Provided that any Statute or Ordinance relating to courses of study shall not be adopted without giving the Senate the opportunity of reporting thereon.

To make regulations for any purposes for which regulations are or may be authorised to be made.

To govern, manage, and regulate the finances, accounts, investments, property, business, and all affairs whatsoever of the University, and for that purpose to appoint Bankers, Deputy-Treasurers, and any other officers or agents whom it may seem expedient to appoint.

To invest any moneys belonging to the University, including any unapplied income in such stocks, funds, fully paid shares or securities as the Council shall from time to time think fit, whether authorised by the general law for the investment of trust moneys or not, and whether within the United Kingdom of Great Britain and Ireland or not or in the purchase of freehold, copyhold, or leasehold hereditaments in the United Kingdom, including rent charges, or chief rents, with the like power of varying such investments from time to time by sale and re-investment or otherwise.

To sell, buy, exchange, lease, and accept leases of real and personal property on behalf of the University.

To provide the buildings, premises, furniture, and apparatus and other means needed for carrying on the work of the University.

To enter into, vary, carry out, and cancel contracts on behalf of the University. Any contract entered into on behalf of the University may be made in any manner authorised by law for the making of contracts by or on behalf of Companies incorporated under the Companies' Acts, 1862 and 1867.

IV.

Powers of the Vice-Chancellor

The Vice-Chancellor shall have the sole power of suspending or dismissing any offending student, subject to the right of appeal to the Visitor. He shall exercise general supervision over the educational arrangements of the University, regulate the admission of students, and maintain the discipline of the University, for which he shall be responsible to the Council.

V. The Senate

The Senate of the University shall consist of the Vice-Chancellor and the Professors of the University, and of such other members of the Boards of Faculties hereinafter mentioned as the Court may, after report from the Senate, appoint, provided that the number of such other members appointed shall not exceed three, and that they shall hold office for such term only as the Court shall determine.

The Professors of the University within the meaning of the Charter shall include those persons who shall be appointed by the Council as such, and also the Professors of the Yorkshire College at the date of the Charter, who shall hold their Professorships upon the same conditions as those upon which they held them at the date of the Charter, until such conditions shall be modified or altered by the Council.

The Senate shall have the following powers :

To make and submit to the Council, after report from the Board or Boards of Faculties concerned, all regulations for giving effect to the Statutes and Ordinances of the University relating to courses of study.

To appoint Internal Examiners after report from the Board or Boards of Faculties concerned.

To recommend External Examiners for appointment by the Council after report from the Board or Boards of Faculties concerned.

To report to the Council, after report from the Board or Boards of Faculties concerned, on all Ordinances relating to courses of study.

To report to the Council on Statutes or Ordinances or proposed changes of Statutes or Ordinances.

To report on any matter referred to or delegated to them by the Court or the Council.

To discuss and declare an opinion on any matter whatsoever relating to the University.

To appoint on delegation of the Council, Readers, Lecturers, and other academic officers of the University not being Professors.

To formulate and modify or revise, subject to the control of the Council, schemes for the organisation of Faculties of Arts, Science, Medicine, Technology, and any other Faculties of the University, and to assign to such Faculties their respective subjects; also to report to the Council as to the expediency of the establishment at any time of other Faculties, or as to the expediency of the abolition, combination, or subdivision of any Faculties.

To fix, subject to any conditions made by the Founders which are accepted by the Court, the times and mode and conditions of competition for Fellowships, Scholarships, and other Prizes, and to award the same.

To do such other acts and things as the Court shall authorise.

No new Degree shall be established or other distinction of Honour or Merit adopted until the Senate has had an opportunity of reporting thereon.

VI.

Faculties

Each of the Faculties shall respectively consist of :---

1. The Professors assigned thereto by the Council.

2. Such Lecturers, Assistant Lecturers, and other teachers of the University as may be appointed to the Faculty by the Council on the recommendation of the Senate.

3. Such other persons as may be appointed by the Council of the University on the recommendation of the Senate.

Each Faculty shall have the power to elect to the Court and to the Council of the University a representative or representatives or a representative jointly with such other Faculty or Faculties as the Council may from time to time decide, subject to the limitations hereinbefore defined.

Each Faculty shall have the power of presenting recommendations and reports to the Senate upon all matters connected with the subjects of study embraced by the Faculty.

As from the first day of August, 1933, the University shall include a Faculty of Law and a Faculty of Economics and Commerce.

The Faculty of Technology shall, until otherwise provided by Statute, include Agriculture, Dyeing, Engineering, Leather Industries, Mining, and Textile Industries.

The Vice-Chancellor shall be a member of each of the several Faculties and Boards of Faculties.

There shall be a Dean of each Faculty elected by that Faculty, or otherwise as the Council shall direct. He shall preside at the meetings of the Faculty and hold office during such period and with such powers as shall be determined by Statute or Ordinance, and shall be eligible for re-election.

VII.

Powers of the Boards of Faculties

The Boards of Faculties respectively shall have the powers following :----

To regulate, subject to the control of the Senate, the teaching and study of the subjects assigned to the Board in question.

To make recommendations as to the appointment of Examiners.

To report to the Senate on Ordinances and Regulations dealing with courses of study for degrees and other distinctions, and on any questions relating to the work of the respective Faculties.

To deal with any matter referred or delegated to them by the Senate.

VIII.

Convocation

A Register shall be kept containing the names of all persons who are members of Convocation according to the provision made by the Charter.

The Register shall be conclusive evidence that any person whose name appears therein at the time of claiming to vote in Convocation is entitled to vote, and that any person whose name does not appear therein is not so entitled.

A meeting of Convocation shall be summoned at least once in every year and at such other times as Convocation may by its by-laws determine.

A meeting of Convocation may be called by the direction of the Chairman, and shall also be called on the requisition in writing of at least twenty members.

IX.

Auditor

The Court shall annually appoint an Auditor, who shall be a member of the Institute of Chartered Accountants of England and Wales, or of the Incorporated Society of Accountants and Auditors, in the active practice of his profession, who shall receive such remuneration as may from time to time be determined by the Court.

Acceptance of office by an Auditor shall be deemed to carry with it an undertaking by the Auditor to the University that every certificate given by him, or passing of accounts by him, implies that he has satisfied himself by full and careful investigation (made by himself or agents, for whom he undertakes to be responsible) by every reasonable means within his power, and after the exercise of due professional skill, that the statements in the certificate are true and accurate, and that any accounts certified or passed are complete, true, and accurate.

Х.

Committee for considering objections by the Universities at Manchester and Liverpool

The Joint Committee to be constituted pursuant to Clause XI of the Charter for considering objections made by the Victoria University of Manchester and the University of Liverpool to proposed Statutes and Ordinances, shall consist of nine members, three to be appointed by each University.

The Joint Committee shall be convened by the Registrar of the Victoria University of Manchester.

XI.

Committee for considering objections to proposed Statutes and Ordinances of the University of Sheffield

Any Committee to be constituted for considering objections made by any of the Universities in Manchester, Liverpool and Leeds to proposed Statutes and Ordinances of the University of Sheffield shall consist of twelve members, three to be appointed by each of the said Universities.

Such Committee shall be convened by the Registrar of the Victoria University of Manchester.

XII.

Examination Requirements for Entry upon Degree Courses

The examination for Matriculation into the University, to be passed by students before entering upon degree courses, shall consist of such examination or examinations as may be determined and conducted by a Joint Board constituted as hereinafter prescribed.

The Joint Board shall determine the conditions and subjects of such examination or examinations, together with the exemptions and conditions of exemption therefrom, provided that the Senate of each University shall have power to exempt therefrom such persons as it may judge suitably qualified by higher study or research to enter upon a course for a degree.

The Board shall, with the consent of the five Universities concerned, have power to prescribe particular subjects to be passed as a condition of admission into particular Faculties, provided that at any time after any regulation to that end shall have been prescribed by the Board any of the five Universities shall have power to cause it to cease to be operative, on the expiration of two years from the date of notice to be given to the Board, so far as concerns such University.

The regulations of the Board regarding the examinations conducted by it shall not affect the power of each University (a) to require a standard higher than that of the examination for Matriculation in any subject or subjects as a condition of admission into any Faculty or School; (b) to require candidates as a condition of admission into its several

Faculties and Honours Schools and courses leading to a particular degree to have passed in such subjects as the University may determine; or (c) to determine how far the examinations recognised by the Joint Board as exempting from the examination for Matriculation shall be accepted by the University concerned as satisfying the requirements made by the University under sections (a) and (b) of this clause; (d) to admit students who have not passed the examination for Matriculation to such classes as it may think fit.

The Joint Board shall consist of twenty members, four to be elected annually by each of the Universities in Manchester, Liverpool, Leeds, Sheffield, and Birmingham, with power to co-opt not more than twelve other persons of experience in the practice or administration of Education.

When any change in the regulations regarding the examination for Matriculation is carried in the Joint Board by a majority consisting of less than two-thirds of the members who are present, the question at issue shall, if any four members present and voting so require, be referred to each of the five Universities, who shall each then nominate two additional members of the Board for the purpose of dealing with such question. The decision of the Board so constituted shall be final.

The Board shall send annual reports to each University.

The five Universities shall contribute to the expenses of the Joint Board in such proportions as may be from time to time determined.

XIII.

Periods of Study before Graduation

The period of study necessary to qualify any student for Graduation shall not be less than three years, all of which shall be subsequent to the date at which the student passes the examination for Matriculation.

This Clause shall come into operation not later than October 1st, 1906.

In the case of the Yorkshire College, and in the event of any other College or Institution, or any branch or department thereof, becoming affiliated to the University within six months from the date of the Charter, the University may

В

Statutes

accept attendance which commenced on or subsequent to the First day of October, 1903, at courses of study in the Yorkshire College or in such other College or Institution in place of attendance at courses of study in the University for the same period.

XIV.

Definitions

In these Statutes-

"Statutes" means the Statutes of the University.

- "Ordinances" means Ordinances made pursuant to the Charter or Statutes.
- "Regulations" means Regulations made pursuant to the Charter or Statutes.

In witness whereof We have caused these Our Letters to be made Patent.

Witness Ourself at Westminster the twenty-fifth of April in the Fourth Year of Our Reign.

By Warrant under the King's Sign Manual.

MUIR MACKENZIE.



EMERGENCY STATUTES

Emergency Statute made by the Court on the 27th February, 1940.

During the period of the present emergency and for twelve months thereafter :---

I. The Senate shall have power to waive the conditions of Statute XIII in the case of any person whose course of study has been, in the opinion of the Senate, affected by circumstances directly attributable to the emergency. Any action taken hereunder by the Senate shall be reported to the Council together with a brief statement of the circumstances.

Statutes

2. The Senate shall have power to waive the requirements of the existing Ordinances in so far as such Ordinances prescribe courses of study examinations and residence in the case of any person whose course of study has been, in the opinion of the Senate, affected by circumstances directly attributable to the emergency. Any action taken hereunder by the Senate shall be reported to the Council together with a brief statement of the circumstances.

3. The Senate shall have power to confer degrees by resolution and *in absentia* upon candidates who have satisfied the requirements for a degree and are unable to attend a degree ceremony owing to approved national service or other causes directly attributable to the emergency.

4. No action taken by any Committee of Examiners in the University shall be invalidated by reason of the fact that an external examiner has been prevented from taking part in the examination through causes arising from the emergency.

5. The quorum of members necessary for a meeting of the Court shall be seven.

6. Notwithstanding any provision or requirement of Clause XXVI of the Charter a Special Resolution shall not be required for the making of any Emergency Statutes.

Emergency Statutes made by the Court on the 29th May, 1941.

I. During the period of the present emergency and for twelve months thereafter the Council shall have power :---

(a) to postpone the election or admission or appointment to any office or emolument in the University;

- (b) to suspend any such office or emolument which may be or may become vacant;
- (c) to accumulate any income which, by reason of any such postponement or suspension as aforesaid, is not being received by any person;

(d) to apply for any purpose connected with the University the income of any University fund or property which is not for the time being actually being paid to a beneficiary, including any income not so being paid by reason of any such postponement, suspension or accumulation as aforesaid :

(e) to suspend or modify any obligation to make payments to any sinking fund, amortisation fund, depreciation fund, reserve fund, endowment fund, pension or superannuation fund, or any similar fund in or connected with the University, which the University may have undertaken by internal resolution.

2. During the period of the present emergency and for twelve months thereafter :—

- (a) Notwithstanding anything to the contrary contained in any law of the University it shall not be required to summon a meeting of Convocation at least once in every year. A meeting of Convocation shall be summoned only if the Standing Committee of Convocation so determine by a majority of twothirds of such Committee present and voting.
- (b) The powers of the Convocation shall be exercised by the Standing Committee of the Convocation and any vacancies which may occur in the membership of the Standing Committee through death, resignation or expiry of the term of office for which a member was elected may be filled by co-optation or in such other manner as the said Committee shall decide.

3. During the period of the present emergency and for twelve months thereafter it shall be competent for the Council to make such provision as it may deem necessary for the exercise of the powers and the performance of the duties attached to any office in the University (including the power of the Chancellor or the Vice-Chancellor to confer Degrees) by the holder of any other such office, or by any member of the staff of the University or of the court, council or senate of the University.

The power hereby conferred on the Council shall be in addition to all other powers the Council or the Court may have to appoint deputies or acting or temporary holders of such office.

ORDINANCES

made by the Court in accordance with the provisions of Clauses X and XI of the Charter

I. AFFILIATED COLLEGES AND INSTITUTIONS

1. Colleges and Institutions, or parts thereof, may be admitted to affiliation after report by the Senate. The Senate, before recommending the affiliation of any such College or Institution, shall satisfy itself:

- (a) That the College or Institution has attained a satisfactory standard of educational efficiency for the purposes for which affiliation is sought, and is established on a permanent basis.
- (b) That the majority of regular students in such College or Institution are of the age of sixteen years.

2. In the case of any affiliated College or Institution, or of any part of such College or Institution recognised for the purposes of this clause, students who have attained the age of seventeen years, and have passed the Matriculation examination of the University, or are exempt therefrom, shall be allowed to attend at any such College or Institution a part or the whole of a course of study, approved by the Senate of the University as exempting from such courses of study in the University as the Council may approve, provided that in no case shall the University confer a degree upon any person who has not attended in the University during one year at least the courses of study which have been recognised for such degree, and that in every case the period of attendance in the University of a candidate for an Honours degree shall be not less than two years.

3. The Council shall, after a report from the Senate, determine the privileges to which the students of any such affiliated College or Institution shall be admitted.

4. Any College or Institution desiring to avail itself of the foregoing Ordinance shall

(a) Make provision for the representation of the University on the body which determines the annual plan of study, in so far as it concerns the courses submitted for the approval of the University;

 (b) Submit for the approval of the Senate of the University day courses of study, whose duration, scope, and standard shall be equivalent to the corresponding courses of the University.

5. The University shall inspect from time to time the buildings and equipment for teaching provided in any such College or Institution, and shall satisfy itself as to the qualifications of any teacher therein appointed to conduct the courses offered in place of University courses.

6. The Council, after a report from the Senate, shall be entitled at any time to withdraw any privileges which may have been granted to any College or Institution under these Ordinances, and to remove the said College or Institution from affiliation.

Affiliated Colleges

THE COLLEGE OF THE RESURRECTION, MIRFIELD (May 18, 1904). By resolution of the Council the students of this College are exempt from attendance at the University upon the first of the three years of study required for the B.A. Ordinary or Honours degree.

THE TECHNICAL COLLEGE, HUDDERSFIELD. (March 2, 1906). By resolution of the Council, attendance upon certain classes in this College is recognised as exempting from attendance upon classes in the University in the first year of the courses required for the degrees of B.A., B.Sc. (including Engineering), and M.B. and Ch.B.

RAWDON COLLEGE, RAWDON. (May 17, 1916). By resolution of the Council (October 1, 1915), attendance upon certain courses of study in this College is recognised as exempting from attendance upon courses in the University in the first of the three years of study required for the B.A. (Ordinary and Honours Degree).

DIOCESAN TRAINING COLLEGE, YORK. (June 15, 1921). Attendance upon certain courses of study of this College is recognised as exempting from Intermediate (or Introductory) courses in the University in the first of the years of study for the B.A. and B.Sc. (Ordinary and Honours) degrees,

LEEDS TECHNICAL COLLEGE—PRINTING DEPARTMENT. (December 20th, 1922). Affiliation granted with a view to the recognition of classes at the Printing Department as part of the course for the degree of B.Com.

II. DEGREES IN ARTS

III. DEGREES IN COMMERCE

IV. DEGREES IN LAW

V. DEGREES IN SCIENCE

VI. DEGREES IN MEDICINE AND SURGERY VII. DEGREES IN DENTAL SURGERY

The Ordinances governing the above-mentioned degrees --Clauses II to VII—are set out in full in subsequent pages of the Calendar.

VIII. RECOGNITION OF VICTORIA UNIVERSITY COURSES AND EXAMINATIONS

(a) The Senate, or any Committee of the Senate appointed for that purpose, is hereby empowered to recognise courses of study pursued and examinations passed by students of the Yorkshire College or of the University of Leeds in the Victoria University or the Victoria University of Manchester prior to January 1, 1905, as equivalent to corresponding courses and examinations in the University of Leeds.

(δ) The Senate, or any Committee of the Senate appointed for that purpose, is hereby also empowered to make such concessions in exemption from examinations and from attendance on courses of study, as may be required to place a past or present student of the University or of the Yorkshire College, who has been admitted thereto before 1st October, 1904, in as favourable a position in the above respects as if he had become or had continued to be a student of the Victoria University or of the Victoria University of Manchester.

(c) A student of the Yorkshire College, who before December 31, 1904, has passed a Final examination of the Victoria University or of the Victoria University of Manchester, for the Bachelor's degree in the Faculty of

Arts, Science, Law, or Medicine shall be entitled to be admitted to the Bachelor's degree of the University of Leeds; and if he has been admitted to the Bachelor's degree of the Victoria University or the Victoria University of Manchester he shall be entitled to proceed to the higher degrees of the University of Leeds on the same conditions as if he had graduated in this University.

IX. RECOGNITION OF COURSES AND EXAMINATIONS OF OTHER RESIDENTIAL UNIVERSITIES

(a) Subject to the provisions of the Charter and Statutes, the Senate, or any Committee of the Senate appointed for that purpose, is hereby empowered to allow members of any University, in which residence is required as a condition of graduation, or members of any University who have attended courses of study at some College or other place of learning which is affiliated or associated with such University, after Matriculation at the University of Leeds, and presentation of certificates of conduct satisfactory to the Senate or Committee, to count such periods of residence passed by them at such other University as equivalent to such periods of residence at the University of Leeds as the Senate or Committee may determine, provided that no degree of this University shall be conferred on any such person unless he shall have pursued an approved course of study in this University extending over at least two years, and shall have passed the Final examination for such degree.

(δ) Undergraduates of other Universities who have been admitted, under this Ordinance, as members of this University may be allowed to count examinations passed by them at such other Universities as equivalent to such examinations or portions of examinations other than the Final examination of this University as the Senate, or any Committee of the Senate appointed for that purpose, may from time to time determine.

(c) Undergraduates of the University of Leeds who are pursuing an approved course of instruction in any of the Honours Schools of the University may be allowed to count

such periods of residence passed by them at other Universities during their undergraduate course as equivalent to such periods of residence at the University of Leeds as the Senate, or any Committee appointed for that purpose, may from time to time determine, provided that no degree of this University shall be conferred upon any such undergraduate unless he shall have pursued an approved course of study in this University extending over at least two years, and shall have passed the Honours examination for such degree.

X. CONFERMENT OF DEGREES UPON FORMER STUDENTS OF THE YORKSHIRE COLLEGE

1. As to conferment of *ad eundem* degrees on students who have attended full courses of study at the Yorkshire College and have graduated at various Universities, but who have not been admitted to the College Associateship:

- Graduates of the Victoria University shall be offered the same degrees in the University of Leeds as those which they have received from the Victoria University.
- Graduates in Medicine of other Universities shall be admissible on application to the M.B. degree of the University of Leeds.
- Applications from non-medical graduates of other Universities who have been students of the Yorkshire College shall be considered on their merits.
- In every case of admission under the above conditions a fee of 10s. 6d. shall be charged.
- 2. As to Associates of the Yorkshire College:
 - Graduates of the Victoria University shall be offered the same degrees in the University of Leeds as those which they have received from the Victoria University.
 - Graduates of other Universities shall be offered the degree of Bachelor in this University in the Faculties in which they graduated elsewhere.
 - All Associates of the Yorkshire College admitted to degrees of the University of Leeds under these conditions shall be admitted without fee.

3. All persons admitted to degrees of the University of Leeds under the foregoing conditions shall be admissible as life members of the Convocation of the University.

4. No graduate admitted under the above conditions to a lower degree shall be precluded from proceeding in the University of Leeds to a higher degree in his particular faculty.

XI. STANDING OF CERTAIN GRADUATES IN PROCEEDING TO HIGHER DEGREES

1. Graduates of other Universities who have been admitted to degrees of equal or similar rank in this University shall be allowed, in proceeding to higher degrees, to count their standing as graduates from the date of their graduation in such other Universities.

2. Associates by examination of the Yorkshire College who have been admitted to degrees in this University shall be allowed, in proceeding to higher degrees, to count their standing as graduates from the date of admission to the Associateship.

XII. AWARD OF DEGREES BY SENATE

The Senate is hereby empowered to award degrees other than (1) ad eundem degrees, (2) degrees conferred on officers of the University, and (3) honorary degrees, in accordance with the provision in that behalf contained in Statute I. b.

XIII. AWARD OF DEGREES BY COUNCIL

1. The Council is hereby authorised to grant to any Professor of the University, or to any Lecturer who is the head of any department in the University, a degree not higher than that of Master in the Faculty in which he has graduated, or, in the case of a Professor or Lecturer holding no degree, such degree, not higher than that of Master, as the Council may determine.

2. The Council is authorised, if it thinks fit, to grant to any other officer of the University such degree, not higher than that of Master, as it may determine, but no such degree shall be conferred until a report thereon has been received from the Senate.

3. No Medical degree shall be conferred under either of the above provisions (1) and (2) upon a person who does not already possess a registrable medical qualification; and no person, in virtue of a degree conferred under either of these provisions, shall be allowed to proceed to a degree higher than that to which he has been admitted.

XIV. JOINT MATRICULATION BOARD AND JOINT COMMITTEES

The Council is hereby empowered to elect annually, or as may be required :

- 1. Five members of the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield.
- 2. Three members of a Joint Committee of the Universities of Manchester, Liverpool, and Leeds, to consider objections which may be raised by one or more of those Universities, to Statutes or Ordinances proposed by any of them, or by the University of Sheffield.

XV. DIPLOMAS

Diplomas shall be granted by the University, in such subjects as the Council may from time to time determine, to students who pursue the courses of study and pass the examinations prescribed.

The Council is empowered to make from time to time Regulations under which such diplomas shall be awarded.

The award of diplomas under the provisions of this Ordinance is delegated to the Senate.

XVI. REGULATIONS FOR PROCEDURE

The Council, Senate, Faculties, Boards of Faculties, and Convocation are hereby empowered to enact Regulations for the conduct of their business and that of their Committees, subject to the provisions of the Charter and Statutes.

XVII. FEES

The Council is hereby empowered, after giving the Senate an opportunity of reporting thereon, to appoint such Registration, Examination, Class, Laboratory, and other

fees to be paid by students and others as the Council may from time to time determine, and to increase, reduce or abolish the same.

XVIII. REGULATIONS FOR EXAMINATIONS

Subject to the provisions of the Charter, Statutes, and Ordinances of the University, the Council is hereby empowered to adopt regulations, or to delegate to the Senate the making of regulations, as to the subjects, times, modes, and standards of the examinations.

XIX. ADMISSION TO EXAMINATIONS

Before admission to any examination candidates must pay the examination fee. The admission of all students to the examinations of the University shall be subject to the approval of the Vice-Chancellor.

XX. EXTERNAL EXAMINERS

The Council is hereby empowered to appoint, on the recommendation of the Senate, such External Examiners on such conditions as to tenure of office, remuneration, and otherwise as it may from time to time determine.

XXI. PRIZES

The Council is hereby empowered, upon report from the Senate, to institute such class and other prizes as it may from time to time determine, and to vary their value and to abolish the same.

XXII. EXAMINATION OF SCHOOLS, AND EXTENSION LECTURES

The Senate is hereby empowered to examine and inspect schools and other educational institutions, and to provide lectures and instruction for persons not members of the University under such Regulations as the Council may from time to time adopt. The Senate is empowered to award certificates in connection with lectures and instruction for persons not members of the University.

XXIII. TENURE OF OFFICE OF DEANS OF FACULTIES

Deans of Faculties shall be elected for periods not exceeding two years at a time.

XXIV. TENURE OF OFFICE OF ADDITIONAL MEMBERS OF THE SENATE

Such additional Members of the Senate of the University as may be appointed by the Court under Statute V. shall be appointed for one year only, but shall be reeligible at the end of each year.

XXV. REGISTER OF CONVOCATION

1. The Chancellor, the Vice-Chancellor, the Pro-Vice-Chancellor, the members of the Senate and the Lecturers shall be registered as members of Convocation without payment of any fee, and their names shall be continued upon the Register so long as they retain their qualifying offices.

2. Graduates who have been admitted to degrees of this University by reason of their having pursued courses of study in the Yorkshire College, and having been admitted to degrees of other Universities or to the Associateship of the Yorkshire College, shall be entitled to be registered immediately as life members of Convocation without payment of any further fee.

3. All persons admitted to degrees of this University prior to June 1st, 1926, shall be entitled to be registered as members of Convocation upon payment of a fee of 10s. 6d.

4. Every person admitted to a degree (other than an Honorary degree) of this University on or after June 1st, 1926, shall, unless already a member of Convocation, be required to pay prior to graduation, a fee of \pounds I, which fee shall entitle the graduate to be registered as a member of Convocation.

5. All Honorary graduates shall be entitled to be registered as members of Convocation on payment of a fee of 10s. 6d.

XXVI. COMMUNICATIONS FROM COUNCIL TO CONVOCATION

Convocation shall receive from the Council the draft of any Ordinance proposed which, in the opinion of the Council, would affect the status, position, rights, or privileges of Convocation or the members thereof, and further Convocation, if it so desires, may record its

opinion on any draft Ordinance so submitted within one month from the date at which it has been received, and such opinion when recorded shall be taken into consideration by the Council.

XXVII. AEGROTAT DEGREE

If a candidate be prevented by illness or other sufficient cause from attending the whole or part of an examination for a degree, or from presenting any dissertation or thesis which may be required in connexion with such examination, the Senate, upon report from the Internal and External examiners concerned and upon such further evidence as they shall think fit, may if satisfied, thereupon treat him as a successful candidate in such examination, or impose such conditions as they think fit the fulfilment of which shall be precedent to such treatment; provided always that a candidate in an examination for a degree with Honours shall not be placed in a class, and provided also that nothing in this Ordinance shall apply to the degrees of Medicine and Dental Surgery.

The Senate, on the recommendation of the Board concerned may allow a student whose course of study has been interrupted by illness or other sufficient cause to defer presenting himself for the examination in any Honours School for such period as is thought fit.

THE UNIVERSITY OF LEEDS

Visitor His Majesty THE KING.

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l'Université (French)	1938
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(Biomolecular Structure)	1945
Professor W. A. BAIN (Pharmacology)	1945
Professor W. A. DAIN (I narmacology)	1940
Professor Selig Brodetsky, M.A., Ph.D. (Applied Mathematics)	1924
Mathematics)	
	1946
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	1932
Professor G. W. CARTER, M.A. (Electrical Engineering).	1946
Professor FREDERICK CHALLENGER, D.Sc., Ph.D., F.I.C.	
(Organic Chemistry)	1930
Professor Guy P. CHAPMAN, O.B.E., M.C., M.A., B.Sc.	
(Modern History)	1945
	1021
(Obstetrics and Gynaecology)	1931
Chemistry)	1924
Professor E. G. Cox, D.Sc., F.Inst.P. (Inorganic and	
Physical Chemistry)	1945
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(Pædiatrics and Child Health)	1946
(Mechanical Engineering)	1922
Professor HENRY V. DICKS, M.A., M.D., M.R.C.S.,	1922
M.R.C.P. (Psychiatry)	1946
Professor BONAMY DOBREE, O.B.E., M.A. (English	1940
Literature)	1936
Professor Archibald Durward, M.D. (Anatomy)	1936
Professor Walter M. Edwards, M.C., M.A. (Greek)	1928
Professor MEREDITH G. EVANS, M.Sc. (Inorganic and	- ,
Physical Chemistry)	1939
Professor R. H. EVANS, D.Sc., Ph.D., A.M.I.Mech.E.	-737
A.M.I.E.E. (Civil Engineering)	1946
Professor F. S. FOWWEATHER, M.Sc., M.D., F.R.C.P.,	-
D.P.H., F.I.C. (Chemical Pathology)	1946
Professor A. GILLIES, M.A., D.Phil. (German) .	1945
Professor STANLEY J. HARTFALL, B.Sc., M.D. Leeds	- 10
M.R.C.P. (Therapeutics and Applied Pharmacology)	1937
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Senior Lecturer :	L. R. JOHNSON, M.Sc., <i>Leeds</i> , 15, Beckett Park Drive, Headingley, Leeds, 6
Lecturer :	R. CARRICK, B.Sc., <i>Glasgow</i> , Ph.D., <i>Edinburgh</i> , 16, Montpelier, Cliff Road, Leeds, 6
Agricultural	
Engineering-	
Lecturer :	G. MURRAY, B.Sc., Glasgow, N.D.A., N.D.D.
Veterinary Hygiene-	- 1111
Part-time Lecturer	P. L. SHANKS, B.Sc., Aberdeen, M.R.C.V.S., Hopewell House, King Lane, Leeds
Clerical Staff-	Lecus
Senior Clerks :	Miss D. MITCHELL, 59, Upland Crescent,
Sentor Clerns .	Oakwood, Leeds, 8
	Miss L. H. SHARPER, West Dene, Copmanthorpe, York
Clerk (Grade I) :	Miss O. BARKER, "Coton," Arthursdale, Scholes, near Leeds
Clerk :	Miss J. FOSTER, 5, Woodhouse Hill Place, Leeds, 10
Senior Laboratory	,
Steward :	G. E. TEASDALE,

MEDICINE

Dean of the Faculty MATTHEW J. STEWART, LL.D., M.B., Ch.B., F.R.C.P., F.R.F.P.S.

> Academic Sub-Dean W. A. BAIN, B.Sc., Ph.D., F.R.S.E.

Clinical Sub-Dean I. T. INGRAM, M.D., F.R.C.P.

Honorary Adviser for the Medical Library ARCHIBALD DURWARD, M.D.

Anatomy Professor :

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- G. IAN BOYD, M.D., F.R.C.S., Edinburgh, 59, Weetwood Lane, Leeds, 6
- R. J. SCOTHORNE, B.Sc., M.B., Ch.B., Leeds, Devonshire Hall, Headingley, Leeds. 6
- W. PATERSON, M.B., Ch.B., Leeds
- N. H. BIRCH, M.B., Ch.B., Leeds, 343, Spen Lane, Leeds, 6
- J. G. BROCKIS, M.B., Ch.B., Leeds, 33, Alder Hill Grove, Chapel Allerton, Leeds, 7
- †H. N. BURWELL, M.B., Ch.B., Leeds, Broomfield Lodge, Broomfield Crescent, Leeds, 6
- C. R. BURKIN, M.B., Ch.B., Leeds

J. C. GILLIES, M.B., Ch.B., Leeds, F.R.C.S., Edinburgh, 5, The Crescent, Selby

G. HARRISON, M.B., Ch.B., Leeds, F.R.C.S.

Vacant

Miss J. C. PICKARD, 44, Headingley Mount, Leeds, 6

W. HUTCHINSON

Honorary Demon-

strator in Radiological Anatomy.

Clerk (Grade III) : Senior Laboratory

Steward :

Honorary Demonstrators :

Lecturer :

Demonstrators :

Senior Lecturer :

Physiology (See also Faculty of Science)-

Professor of Physiology :

A. HEMINGWAY, M.Sc., M.B., Ch.B., Leeds, "Lindisfarne," Harrowby Crescent, Leeds, 6

W. A. BAIN, B.Sc., Ph.D., Edinburgh, F.R.S.E., 26, Weetwood Road, Leeds, 6

F. C. HAPPOLD, Ph.D., D.Sc., Manchester,

H. R. NOLTIE, M.A., B.Sc., Aberdeen,

G. WINFIELD, M.A., Cambridge, 318,

Spen Lane, West Park, Leeds, 6
A. SCHWEITZER, M.D., Cologne, Ph.D., London, 9, Claremont Drive, Leeds, 6
E. NEIL, M.D., Leeds, Moorfield House,

6, Bainbrigge Road, Leeds, 6

8, Weetwood Court, Leeds, 6

Birkenshaw, Bradford

Professor of Pharmacology :

Reader in Bio-Chemistry :

Senior Lecturer in Physiology :

Lecturers in Physiology :

Senior Lecturer in Pharmacy and Pharmaceutical Chemistry:

Assistant Lecturer in Pharmacy : M.P.S., "Rossett," Otley Road, Leeds, 6 J. G. DARE, Ph.C., 4, Virginia Terrace, Leeds, 2

A. W. LUPTON, M.C., M.Sc., Leeds, Ph.C.,

Assistant Lecturer in Pharmacological Chemistry:

Part-time Lecturer in Physiology and Hygiene :

Vacant

P. HEY, Ph.C.

F.R.I.C.

Lecturers in Bio-Chemistry :

 F. W. CHATTAWAY, M.Sc., Ph.D., London, I, Manitoba Place, Leeds, 7
 B. A. KILBY, M.A., Ph.D., Cambridge,

Assistant Lecturers in Bio-Chemistry: J. DAWSON, M.Sc., M.B., Ch.B., Leeds Mrs DORIS E. DOLBY, B.Sc., St. Andrews, 14, Kelso Road, Leeds, 12

Demonstrators in Phy

Physiology :	 E. G. BREWIN, M.B., Ch.B., Leeds, 42, Laurel Drive, Batley F. M. PARSONS, B.Sc., M.B., Ch.B., Leeds C. R. M. REDWOOD, L.R.C.P., M.R.C.S.
	C. R. M. REDWOOD, L.R.C.F., M.R.C.S.
Demonstrator in Pharmacology :	P. B. DEWS, M.B., Ch.B., Leeds, Devon- shire Hall, Headingley, Leeds, 6
Honorary	
Demonstrator :	L. N. PYRAH, M.Sc., Ch.M., Leeds, F.R.C.S., 29, Park Square, Leeds, 1
Research Assistant	
in Bio-Chemistry .	D. A. HALL, B.Sc., Ph.D., Leeds
Clerk (Grade II) :	Miss J. C. KING, 18, Harrowby Road, West Park, Leeds, 6
Senior Laboratory	
Steward :	H. SALTER
Senior Mechanic :	A. JEPSON

Pathology and Bacteriology

(The Chair of Bacteriology was endowed by the late Lord Brotherton. The funds for Cancer Research are derived from the Yorkshire Council for the British Empire Cancer Campaign).

Professor of Pathology and Head of Department :

MATTHEW J. STEWART, LL.D., M.B., Ch.B., Glasgow, F.R.C.P., F.R.F.P.S., 46, Cliff Road, Leeds, 6

Brotherton Professor of Bacteriology and City Bacteriologist :

W. McLEOD, O.B.E., M.B., Ch.B., Ι. Glasgow, F.R.S., 18, Springfield Mount, Leeds, 2

Professor of Experimental Pathology and Director of Cancer Research :

R. D. PASSEY, M.C., M.D., B.S., D.P.H., London, Lumby Hall, South Milford

Professor of

Chemical Pathology : F. S. FOWWEATHER, M.Sc., M.D., F.R.C.P., D.P.H., Liverpool, F.I.C., 32, Gledhow Wood Grove, Roundhay, Leeds, 8

Reader in Experimental Pathology and Assistant Director of Cancer Research :

Reader in Clinical Bacteriology :

Reader in Clinical Pathology :

Reader in Public

Senior Lecturer in Pathology :

Senior Lecturer in Pathology and Pathologist to St. James's Hospital :

Honorary Fellow in Pathology :

Lecturers in Bacteriology :

> Lecturer in Pathology :

Lecturer in Dental Pathology and Vacant Bacteriology :

Lecturer on Pathology of Industrial Diseases : Vacant

Lecturer in Experimental Bio-Chemistry :

- J. W. ORR, B.Sc., M.D., B.A.O., D.P.H., Belfast, M.R.C.P., 27, Shaw Lane, Headingley, Leeds, 6
- J. GORDON, M.D., Leeds, M.R.C.P., D.P.H., School of Medicine, Leeds, I
- D. H. COLLINS, O.B.E., M.D., Liverbool, M.R.C.S., L.R.C.P., 167, Cold Bath Road, Harrogate
- Health Bacteriology ! K. I. JOHNSTONE, B.Sc., Ph.D., M.B., Ch.B., Leeds, 30, West Park Crescent, Roundhay, Leeds, 8
 - R. CARMICHAEL, M.B., Ch.B., Edinburgh, 17. Fearnville Avenue, Oakwood, Leeds, 8
 - I. POLSON, M.D., Birmingham, C. F.R.C.P., M.R.C.S., Barrister-at-Law, 16, Tewit Well Road, Harrogate
 - R. CATTLEY, M.B., C.M., Edinburgh, B.Sc., D.P.H., Cambridge, 43, Main Avenue, Heworth, York
 - K. S. ZINNEMANN, M.D., Frankfort, 45, Grove Lane, Leeds, 6
 - D. E. DOLBY, B.Sc., Ph.D., Birmingham, 14, Kelso Road, Leeds, 2
 - C. J. E. WRIGHT, M.B., Ch.B., Leeds, 16, Trenance Drive, Shipley

L. H. STICKLAND, M.A., Ph.D., Cambridge, 9, Ingledew Crescent, Leeds, 8

Lecturer in Chemical Pathology :

Lecturer in Experimental Pathology :

Milligan Research Assistant :

Assistant Lecturer in Bacteriology :

Demonstrators in

Bacteriology :

- W. N. ANDERSON, B.Sc., Ph.D., Belfast, 21, Mount Preston, Leeds, 2
- D. E. PRICE, M.B., B.S., London, M.R.C.S., L.R.C.P.
- L. DMOCHOWSKI, M.D., Warsaw
- R. PHILIP, B.Sc., Ph.D., Glasgow

J. G. BENSTEAD, B.A., Cambridge, M.B., Ch.B., Leeds, Park House, Park Road, Thackley, near Bradford Mrs. BETTY DAWSON, M.B., Ch.B.,

Leeds

A.R.I.C.

Demonstrator in Chemical Pathology : A. T. HOWARTH, B.Sc., Manchester,

Part-time Demonstrator in Bacteriology :

Honorary Demonstrator in

Honorary Demonstrators in

Honorary Demonstrators in Pathology :

Cancer Research Fellows-Brotherton Fellowship :

> Riley Smith Vacant. Fellowship :

Medical Pathology: H. G. GARLAND, M.D., Leeds, F.R.C.P., 43, Park Square, Leeds, 1

Miss B. WHEATLEY, M.B., Ch.B., Leeds,

Glenwood, Horsforth

Surgical Pathology : H. W. SYMONS, M.B., Ch.B., Leeds, F.R.C.S., 40, Park Square, Leeds, I G. ARMITAGE, M.C., M.D., Ch.M., Leeds F.R.C.S., 42, Park Square, Leeds, 1

- N. LISSIMORE, M.D., Leeds, 37, Arncliffe Road, Leeds, 6
- R. M. HEGGIE, B.Sc., M.B., Ch.B., Glasgow, Clayton Hospital, Wakefield

Mrs. GEORGIANA M. BONSER, M.D., Manchester, M.R.C.P., M.R.C.S., 970, Scott Hall Road, Moortown, Leeds, 7

Bertram Parkinson Fellowship : Miss E. C. ARMSTRONG, M.B., Ch.B., Leeds, 8, King's Place, St. Michael's Road, Leeds, 6 William Aykroyd Fellowship: Vacant. Henry Oxley Fellowship : Vacant. Research Fellow in Vacant Rheumatism : I.C.I. Research Fellow : D. E. NICHOLSON, Ph.D., London, A.R.I.C. Clerks : (Grade I): A. MYERS Miss M. RIFKIN, 35, Mexborough Avenue, Leeds, 7 (Grade II) : Miss L. E. F. Z. MILNER, Summer Hill, Roundhay, Leeds, 8 Mrs. STELL, 7, Matterdale Road, Dewsbury Miss J. MORGAN, (Grade III) : Senior Laboratory F. HAIGH Stewards : W. H. LAWSON I. W. MACKAVOY A. RUMFITT F. KITCHEN W. I. ALLAN Medicine

Professor of Medicine :

Professor of Clinical Medicine :

Professor of Therapeutics and Applied Pharmacology :

Professor of Pædiatrics and Child Health :

R. E. TUNBRIDGE, O.B.E., M.D., Ch.B., M.Sc., Leeds, F.R.C.P., 11, West Parade, West Park, Leeds, 6

J. le F. C. BURROW, M.D., Edinburgh, F.R.C.P., 30, Park Square, Leeds, 1

S. J. HARTFALL, B.Sc., M.D., Leeds, F.R.C.P., 32, Park Square, Leeds, I.

W. S. CRAIG, M.D., F.R.C.P.E., F.R.S.E., B.Sc., Glasgow Survey L

Tutor and Registrar : IAN D. RILEY, B.Sc., M.D., Leeds, M.R.C.P., D.C.H., 92, Harrogate Road, Leeds, 7

Lecturer in Diseases' of the Skin :

J. T. INGRAM, M.D., London, F.R.C.P., 27, Park Square, Leeds, 1

Temporary Lecturer in Tuberculosis :

F. RIDEHALGH, M.A., M.B., B.Chir., Cambridge, M.R.C.P., M.R.C.S.

Lecturer in Dietetics and Metabolic Medicine : Vacant

Lecturer in Medical Hydrology : Vacant

Lecturer in Medical Ethics and Conditions

of General Practice : W. S. MACDONALD, M.C., M.B., Ch.B., Edinburgh, D.P.H., J.P., 151, Beeston Road, Leeds, 11

Honorary Demonstrators :

J. R. H. TOWERS, M.A., M.D., Cambridge, F.R.C.P., 42, Park Square, Leeds, 1

J. A. PRICE, M.D., Belfast, M.R.C.P., 4, Mornington Villas, Bradford

Reader in Medicine : †A. LEESE, M.A., Ph.D., M.B., Ch.B., Cambridge, M.R.C.P., "Penrhos," Langwith Park Avenue, Collingham, near Leeds

Vacant

Lecturer :

Tutor in Medicine : Vacant

Medical Tutor and Registrar : Vacant Temporary Medical Tutor (part-time) : L. WA

L. WATSON, M.D., *Leeds*, M.R.C.P., 43, Newgate, Pontefract

Tutor and Registrar in Dermatology :

S. T. ANNING, B.A., M.D., Cambridge, L.R.C.P., M.R.C.S., 5a, Shaw Lane, Headinglev, Leeds, 6

Temporary part-time Lecturer in Psychology in relation to Medicine : 7

The Rev. H. J. S. GUNTRIP, B.A., B.D., 147, Cross Flatts Grove, Leeds, 11

Surgery

Professor of Surgery :

Vacant

Professor of Clinical Surgery: H. W. SYMONS, M.B., Ch.B., Leeds, F.R.C.S., 40, Park Square, Leeds, 1

Director of Surgical Research : L. N. PYRAH,

Lecturer in Orthopædic Surgery : R. BROOMHEAD, M.B., Ch.B., Leeds. F.R.C.S., 22, Clarendon Road, Leeds, 2

Reader in Surgery : Surgical Tutors :

Vacant †R. A. HALL, M.B., Ch.B., Leeds, F.R.C.S., 25, Shaw Lane, Headingley, Leeds, 6 One vacancy

A. M. CLAYE, M.D., Leeds, F.R.C.S.,

D. W. CURRIE, M.D., Ch.M., Leeds,

B. L. JEAFFRESON, M.D., London,

R. F. LAWRENCE, M.B., Ch.B., Leeds,

F.R.C.O.G., 26, Park Square, Leeds, 1

F.R.C.S., F.R.C.O.G., 45, Park Square,

F.R.C.S., M.R.C.O.G., 32. Park Square,

F.R.C.S., 29, Park Square, Leeds, I

M.Sc., Ch.M., Leeds,

Obstetrics and Gynæcology

Professor of Obstetrics and Gynaecology:

Lecturer in Obstetrics :

Lecturer in Gynæcology :

Tutor in Obstetrics and Gynæcology :

Honorary Demonstrator in Clinical Obstetrics : Vacant

Honorary Demonstrator in Obstetrics and Gynaecology:

Vacant

Leeds, I

Leeds. I

D.R.C.O.G.

Psychiatry

Professor :

Lecturer in Mental Diseases : H. V. DICKS, M.A., M.D., Cambridge, M.R.C.S., M.R.C.P.

Vacant

Public Health	
Professor of Public Health :	J. JOHNSTONE JERVIS, M.D., Edin- burgh, D.P.H., London, "Keldholme," Wood Lane, Headingley, Leeds, 6
Part-time Lecturer :	J. F. WARIN, M.D., D.P.H., Leeds
Lecturer in Hospita Administration :	l Vacant
Honorary Demonstrator :	Vacant
Forensic Medicine	
Professor :	Vacant
Honorary Demonstrator in Toxicology :	Vacant
Ophthalmology <i>Reader</i> :	
Lecturers :	 J. FOSTER, M.A., M.B., B.Chir., Cambridge, F.R.C.S., 45, Park Square, Leeds, 1 G. W. BLACK, M.B., B.S., London, F.R.C.S., 26, Park Square, Leeds, 1
Otology	1.10 M
Lecturer :	G. S. SEED, M.B., Ch.B., Leeds, F.R.C.S., D.L.O.
Infectious Diseases	
Lecturer :	†ERNEST C. BENN, M.B., Ch.B., D.P.H., Liverpool, City Hospitals, Seacroft
Temporary Lecturer	HESTER E. de C. WOODCOCK, B.A., M.B., M.B., Ch.B., D.P.H., Leeds
Radiology and Radiotherapy	
Lecturer in Diagnostic	the second se
Radiology :	Vacant

Lecturers in

Radiotherapy :

1. 18 19 . 1 Samely

 J. M. LEES, M.A., B.M., B.Ch., Oxford, L.M.S.S.A., D.M.R., 41, Park Square, Leeds, 1
 A. A. DIGGES LA TOUCHE, M.A., M.B.,

A. A. DIGGES LA TOUCHE, M.A., M.B., B.Chir., *Cambridge*, F.R.C.S., D.M.R., "Greystones," Alwoodley, Leeds

Acting Lecturer in Radiotherapy :

J. R. NUTTALL, M.D., Manchester, D.M.R., F.F.R.

Lecturer in Medical Physics :

F. W. SPIERS, B.Sc., Ph.D., Birmingham, 14, Ash Grove, Headingley, Leeds, 6

Anæsthetics Lecturer :

Vacant

Vaccination

Instructor :

A. F. SHIRRAS, M.B., Ch.B., Glasgow, 209, Roundhay Road, Leeds, 8

Honorary Adviser for the Medical Library : A. DURWARD, M.D.

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Secretary :

J. T. AITKEN, M.A., Leeds, 28, Estcourt Avenue, Headingley, Leeds, 6

Clerk (Grade II): Miss C. J. HOCKIN, "Penraevon," The Avenue, Roundhay, Leeds, 8

Medical School Janitor :

A. WOOD

CLINICAL LECTURERS

Pathology

Medicine

- M. J. STEWART, LL.D., M.B., Ch.B., Glasgow, F.R.C.P., F.R.F.P.S., 46, Cliff Road, Leeds, 6
- I. le F. C. BURROW, M.D., Edinburgh, F.R.C.P., 30, Park Square, Leeds, I
- H. H. MOLL, M.D., Rome, M.B., Ch.B., Leeds, F.R.C.P., 43, Park Square, Leeds, I
- J. R. H. TOWERS, M.A., M.D., Cambridge, F.R.C.P., 42, Park Square, Leeds, 1
- R. E. TUNBRIDGE, O.B.E., M.Sc., M.D., Leeds, F.R.C.P., 11, West Parade, West Park, Leeds, 6
- S. J. HARTFALL, B.Sc., M.D., Leeds, F.R.C.P., 32, Park Square, Leeds, 1
- H. G. GARLAND, M.D., Leeds, F.R.C.P., 43. Park Square, Leeds, I

Diseases of Children W. S. M. CRAIG, B.Sc., M.D., Edinburgh, F.R.S.E., F.R.C.P.E.

Diseases of the Skin J. T. INGRAM, M.D., London, F.R.C.P., 27, Park Square, Leeds, 1

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H. V. DICKS, M.D., Cambridge, M.R.C.P.

C. BENN, M.B., Ch.B., D.P.H., E. Liverpool, City Hospitals, Seacroft, Leeds

R. LEES, M.D., Edinburgh, F.R.C.P. (E.)

DOROTHY PRIESTLEY, M.D., London, 26, Blenheim Terrace, Leeds, 2

- P. J. MOIR, M.C., M.B., Ch.B., Glasgow, F.R.C.S., 29, Park Square, Leeds, 1
- H. W. SYMONS, M.B., Ch.B., Leeds, F.R.C.S., 40, Park Square, Leeds, 1
- D. CHAMBERLAIN, Ch.M., Leeds, F.R.C.S., 25a, Park Square, Leeds, 1
- G. ARMITAGE, M.C., M.D., Ch.M., F.R.C.S., 42, Park Square, Leeds, 1
- L. N. PYRAH, M.Sc., Ch.M., Leeds, F.R.C.S., 29, Park Square, Leeds, 1

Psychological

Infectious Diseases

Venereal Diseases

Honorary Demonstrator :

Surgery

Medicine

- M. W. C. OLDFIELD, M.B.E., M.A., M.Ch., Oxford, F.R.C.S., 25a, Park Square, Leeds, 1
- A. J. C. LATCHMORE, M.B.E., M.S., London, F.R.C.S.
- H. S. SHUCKSMITH, B.Sc., M.B., Ch.B., Leeds, F.R.C.S., 4, The Grove, Alwoodley, Leeds

Orthopædic Surgery R. BROOMHEAD, M.B., Ch.B., Leeds, F.R.C.S., 22, Clarendon Road, Leeds, 2

A. B. PAIN, Ch.M., Leeds, F.R.C.S., 32, Park Square, Leeds, 1.

- W. R. HENDERSON, M.B., Ch.B., Edinburgh, F.R.C.S., 25, Park Square, Leeds, I
- P. R. ALLISON, B.Sc., Ch.M., Leeds, F.R.C.S., 26, Park Square, Leeds, 1
- J. FOSTER, M.A., M.B., B.Chir., Cambridge, F.R.C.S., 45, Park Square, Leeds, 1
- G. W. BLACK, M.B., B.S., London, F.R.C.S., 26, Park Square, Leeds, I
- G. S. SEED, M.B., Ch.B., Leeds, F.R.C.S., D.L.O., 37, Park Square, Leeds, 1
- T. McM. BOYLE, M.B., Ch.B., F.R.C.S., D.L.O.
- A. M. CLAYE, M.D., Leeds, F.R.C.S., F.R.C.O.G., 26, Park Square, Leeds, 1
- B. I. JEAFFRESON, M.D., London, F.R.C.S., M.R.C.O.G., 32, Park Square, Leeds, 1
- D. W. CURRIE, M.D., Ch.M., Leeds, F.R.C.S., F.R.C.O.G., 45, Park Square, Leeds, 1
- W. McINTOSH, M.B., Ch.B., Glasgow
- H. AGAR, B.Sc., M.B., Ch.B., Leeds, M.B., B.S., London, F.R.C.S., 8, Fearnville Mount, Leeds, 8
- GWENDOLEN HARRISON, M.B., Ch.B., Leeds, D.A., 8, Shire Oak Road, Headingley, Leeds, 6
- R. C. LAWRENCE, M.B., Ch.B., Leeds, D.A., Woodcroft, Newlay Lane, Horsforth, near Leeds
- Mrs. JEAN L. HALL, M.B., B.S., London, D.A.

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Neurological

Thoracic Surgery

Ophthalmology

Obstetrics and

Gynæcology

Surgery

Otology

Anæsthetics

SCHOOL OF DENTISTRY

Professor of Clinical Dental Surgery and Warden of the Dental School and Hospital: 7

School and Hospital: T. TALMAGE READ, F.R.F.P.S., Glasgow, L.R.C.P., F.R.C.S., Edinburgh, L.D.S., Glasgow, The Dental Hospital, Leeds, 1

Senior Lecturer in Clinical Dental Surgery :

M. R. HOLLINGS, B.Ch.D., Leeds, "Redwood," Allerton Avenue, Moortown, Leeds, 7

Lecturers in Clinical Dental Surgery : Two vacancies

Vacant

Lecturer in Dental Surgery :

J. P. COCKER, L.D.S., Eng., Bond Street, Wakefield

Lecturer in Dental Anatomy and Physiology :

Honorary Demonstrator in Dental Histology: J. G. SYKES, B.Ch.D., *Leeds*, St. Mary's House, Bootham, York

D. C. RAMSDEN, L.D.S., Leeds, F.R.M.S., 174, Otley Road, Leeds, 6

Lecturer in Dental Pathology and Bacteriology :

Lecturers in Orthodontics :

- G. L. WILKINSON, M.R.C.S., L.R.C.P., L.D.S., Eng., Barrister at Law, 31, Park Square, Leeds, 1
- H. SHAW, L.D.S., *Leeds*, 53, Gledhow Wood Grove, Leeds, 8

Honorary Demonstrator in Orthodontics :

Lecturer in Dental Mechanics :

- T. JASON WOOD, B.Ch.D., *Leeds*, L.D.S., *Eng.*, 4, Manor Street, Bradford
- H. D. STEPHENS, L.D.S., Eng., York House, New North Road, Huddersfield

Lecturers in Prosthetic Dentistry :

Honorary Demonstrator in Dental Prosthetics : Vacant

I.ecturer in Properties of Dental Materials :

Lecturer in Dental Radiology :

Clinical Dental Lecturers : C. WOODHEAD, L.D.S., *Leeds*, Dilston, 438, Otley Road, Leeds, 6 One vacancy

J. HUME, B.Sc., *Edinburgh*, A.R.I.C., Hazelhead, Green Lane, Cookridge, Leeds

Vacant

- W. SINTON THORBURN, M.Sc., Leeds, L.D.S., Edinburgh, 13, Reginald Terrace, Leeds, 7
- G. D. ILES, L.D.S., Eng., 15, Halifax Road, Dewsbury
- G. L. WILKINSON, L.R.C.P., M.R.C.S., L.D.S., *Eng.*, Barrister at Law, 31, Park Square, Leeds, 1
- J. K. CRAWFORD, L.D.S., *Eng.*, 10, Park Square, Leeds, 1
- J. P. COCKER, L.D.S., Eng., Bond Street, Wakefield
- J. G. SYKES, B.Ch.D., Leeds, St. Mary's House, Bootham, York
- J. M. MACRAE, L.D.S., Leeds. 8, Sunny Bank, Shipley
- *S. H. BRENAN, L.D.S., Manchester, 31, Park Square, Leeds, 1
- H. D. STEPHENS, L.D.S., Eng., York House, New North Road, Huddersfield
- R. N. ROSS, B.Ch.D., L.D.S., Leeds, 3. Parkinson Lane, Halifax
- H. G. L. JOHNSON, L.D.S., Eng., 32, Park Square, Leeds, I

One vacancy

- D. C. RAMSDEN, L.D.S., Leeds, F.R.M.S., 174, Otley Road, Leeds, 6
- S. R. WOODCOCK, L.D.S., Leeds, H.D.D., Edinburgh, 25, Albion Street. Hull

Honorary Clinical Tutors :

D. J. CORK, L.D.S., Leeds, 10, Park Square, Leeds, 1

Three vacancies

Two vacancies

W. OLDFIELD A. E. SCHOFIELD

M.

Leeds, 6

Miss

Honorary Anaesthetists :

Miss GWENDOLEN HARRISON, M.B., Ch.B., Leeds, 20, Hollin Lane, Leeds, 6 One vacancy

Senior House Surgeon :

F. L. SOUTHAM, L.D.S., Leeds, 35, Queen Victoria Street, Leeds, I

House Surgeons : Four vacancies

Assistant House Surgeons :

Instructors in Dental Mechanics :

Radiographer :

Theatre Sister :

Dental Attendants :

Laboratory Steward :

Secretary :

lanitor :

Headingley, Leeds, 6

Miss J. COUSINS, 47, Cragside Walk, Leeds, 5

Miss G. BONE, 247, Sandringham Road, Doncaster

F. LINFOOT, 37, Chatham Street, Park Lane, Leeds, I

Miss I. SMITH, Flat E, 90, Clarendon Road, Leeds, 2

Miss M. L. LANE, 21, Coniston Avenue,

I. N. W. WYNESS, M.S.R., 4, Ranelagh Avenue, Eccleshill, Bradford

16, Redesdale Gardens, Leeds, 6

NETTLETON.

Miss M. HILL, 45, Thornville Road, Leeds, 6

Miss M. W. STEVENSON, 20, Woodland Park Road, Leeds, 6

H. B. HARLAND, A.M.I.L.T., F.R.M.S.

A. BATT, A.H.O.A., 10, Moor Park Villas,

Clerical Assistants : Mrs. T. F. THOMPSON, 13, Southland Avenue, Leeds, 7

S.R.N.,

EXTRA-MURAL STUDIES

Director :

S. G. RAYBOULD, B.Sc., London, 28, Grove Road, Headingley, Leeds, 6

Director's Secretary : Miss M. SPINK, 11, Weetwood Court, Leeds, 6

TUTORIAL CLASSES

Senior Staff Tutor : Vacant

Staff Tutors :

- L. G. JOHNSON, B.A., Sheffield, 22, Woodland Park Road, Headingley, Leeds. 6
- F. M. H. HOLMAN, M.A., Cambridge, 18, Crescent Parade, Ripon
- H. BAINES, B.A., Leeds, "Lynn Garth," 6, Manston Gardens, Crossgates, Leeds
- J. M. CAMERON, B.A., Oxford, 8, Ellercroft Avenue, Bradford
- D. C. JONES, M.A., Wales, 212, Chapeltown Road, Leeds, 7
- A. JOHNSON, B.Sc., London, 160, Oxford Road, Linthorpe, Middlesbrough
- A. E. PYBUS, L.R.A.M., 15, William Rise, Halton, Leeds
- C. V. BELLAMY, B.Sc., Leeds, 3, Mount Royal, Horsforth, near Leeds
- C. JOHNSON, B.A., *Leeds*, 8, Grange Park Avenue, Dib Lane, Leeds, 8
- P. E. BROOKMAN, B.Com., Leeds, 72, Keighley Road, Skipton

Library

University Librarian and Keeper of the Brotherton Collection :

Organsing Tutor :

Deputy Librarian :

Sub-Librarians :

- RICHARD OFFOR, B.A., Ph.D., London, Fellow of University College, London, F.L.A., "Sunnyside," Weetwood Grange Grove, West Park, Leeds, 6
- S. ROBERTS, B.A., Leeds, 59, Headingley Avenue, Leeds, 6
- Miss D. M. LEAK, B.A., *Leeds*, 29, Fitzroy Drive, Roundhay, Leeds, 8
- Miss P. M. WALKER, B.A., Leeds, 412, Otley Road, Adel, Leeds, 6

Miss J. E. BENNET, B.A., London, 23, Richmond Mount, Leeds, 6 One vacancy

Assistant Librarians :

Miss MARIE A. HAMILTON, B.A., Leeds, 3, Balmoral Terrace, Claremont Road, Leeds, 6

- Miss ANTHEA KERRY, B.A., Leeds, 285, Otley Road, Leeds, 6
- E. LANGSTADT, Ph.D., Cambridge
- H. G. TUPPER, B.A., London
- A. WHITWORTH, 37, University Road, Leeds, 2
- Miss D. L. MAURY, 24, Dennistead Crescent, Leeds, 6
- Miss G. E. LANGLEY 6, Holly Bank, Otley Road, Leeds, 6,
- Miss A. C. STEAD, 332, Oakwood Lane, Leeds, 8
- Miss M. BOWERS, 3, Carlton Street, Horbury, Wakefield
- Miss B. J. HUTLEY, 43, The Turnways, Headingley, Leeds, 6

Temporary Junior Assistant :

Library Assistants:

Secretary :

- Miss N. BRUNT, B.A., Leeds, 314, Barnsley Road, Sandal, Wakefield
- Miss H. I. F. HUMMEL, I, West Parade, West Park, Leeds, 6

University Parliamentary Constituency

Registration Officer : J. V. LOACH, B.Sc., Ph.D., Birmingham, F.R.I.C.

University Appointments Board

Secretary :	Vacant
Senior Clerk :	Miss D. E. CALVERT, 19, Brudenell View, Hyde Park, Leeds, 6
Clerk (Grade III).	Miss B. NEWELL, 19, Estcourt Terrace, Kirkstall Lane Leeds 6

Tutor of Women Students

Miss DORA M. HIBGAME, M.A., Oxford, 7, Woodsley Terrace, Leeds, 2

Assistant Warden of Women Day Students

Mrs. W. A. SLEDGE, B.A., Leeds, 9, St. Chad's Drive, Headinglev, Leeds, 6

Warden of Non-Resident Men Students

J. McDOUGALL, M.A., Ph.D., Cambridge

Physical Education

Director :	R. E. MORGAN, B.A., London, The Grange, Far Headingley, Leeds, 6
Assistants :	G. T. ADAMSON, B.Sc., London, 55, Wedderburn Road, Harrogate
	Miss DOROTHY & HUNTER & Glen

Miss DOROTHY A. HUNTER, 4, Glen Road, Far Headingley, Leeds, 6

Halls of Residence for Women

Oxley Hall	
Warden :	Miss HELENA J. MCLAREN, M.A., Leeds
Sub-Warden :	Miss ELAINE T. MAY, B.A., Leeds

Weetwood Hall

Warden :	Mrs.	W.	O. REDMAN KING, B.Sc., Leeds
Sub-Warden :	Miss	M.	BRENDA CAREY

Halls of Residence for Men

Devonshire Hall	
Warden :	Professor FRANK SMITH, B.A., B.Sc, Manchester, M.A., Cambridge, Ph.D. Wales
Lyddon Hall	

C. A. SMITH, M.B.E., B.A., London

Woodsley House Warden :

Warden :

W. W. CHAMBERS, M.B.E., M.A., Glasgow, Ph.D., Munich, Les L., Paris and Lille

Hostel of the Resurrection, Springfield Mount, Leeds (Under the direction of the Community of the Resurrection, Mirfield)

Warden : The Rev. Father HUGH BISHOP, C.R.

Maternity Clerks' Hostel

Matron :

Miss M. K. HAYGARTH

Cecil Duncombe Observatory

Honorary Curator : Vacant

Astronomical Observer : Vacant

Meteorological Assistant :

J. E. HEMINGWAY, Ph.D., Leeds

Roebuck Stamp Collection

Honorary Curator: E. SOLLY, M.B., D.P.H., Strathlea, 4, Cold Bath Road, Harrogate

Ingham Herbarium

Honorary Curator : Vacant.

Photography

Photographer :

J. MANBY, F.R.P.S., 10, Langdale Avenue, Headingley, Leeds, 6

Administrative and General

Vice-Chancellor: B. MOUAT JONES, D.S.O., M.A., Oxford, 18, North Hill Road, Headingley, Leeds, 6 Vice-Chancellor's Miss G. V. M. SELBY, 116, Otley Road, Secretary : Headingley, Leeds, 6 Bursar : E. J. BROWN, B.Com., London, A.L.A.A., 24, Hollin Lane, Weetwood Lane, Leeds, 6 Registrar : J. V. LOACH, B.Sc., Ph.D., Birmingham, F.R.I.C., 29, Cumberland Road, Leeds, 6 Assistant Bursars : J. J. ILETT, 31, Headingley Mount, Leeds, 6 H. W. MERRELL, 17, St. Chad's Avenue, Far Headingley, Leeds, 6 Assistant Registrar : Vacant Senior Assistant to the Registrar : Miss G. ILLINGWORTH, 16a, Regent Park Terrace, Leeds, 6

Miss E. WESTON, 11, Miles Hill Road, Chapel Allerton, Leeds, 7 Miss D. A. LILEY, 22, Mayville Road, Cardigan Lane, Leeds, 6 E. WILLIAMSON, B.Sc., (Econs.), London, 16, Cavendish Road, Leeds, I J. BELL, 30, Heathfield Terrace, Leeds, 6 † J. RUDSDALE, B.A., London, M.A., Leeds Miss D. BOOTH, Flat 17, 4, Moorland Terrace, Leeds, 2 S. BOOTHMAN, 160, Ash Road, Leeds, 6 W. A. CULLEN, B.Com., London, Tinshill Lane, Cookridge, Leeds Miss M. M. DENISON, 17, Stanmore Avenue, Burley, Leeds, 4 Miss M. STROTHER, Beechcroft, Crabtree Hill, Collingham, near Leeds Mrs. BARTHOLOMEW, Thornhills, Breary Lane, Bramhope, near Leeds One vacancy Miss K. MACONOCHIE, 44, Weetwood Grade (II) : Avenue, Leeds, 6 Miss M. JAMESON, Springfield House, Low Green, Rawdon, near Leeds Miss D. M. SHACKLETON, 19, Hillcrest Avenue, Chapeltown, Leeds, 7 Mrs. DIGBY, 19, Birch Crescent, Halton, Leeds Miss M. MYERS, 3, Woodburn, Ben Rhydding, Ilkley (Grade III) : Miss M. RAWLINS, The Knoll, Lee Lane, Horsforth Miss W. E. WILSON, 58, Victoria Walk, Horsforth Miss B. HICKS, 20, Ash Crescent, Leeds, 6 Miss O. DAWSON, 25, Belvedere Road, Alwoodley, Leeds Miss S. M. BURRELL, 63, Rose Avenue, Horsforth

Assistants to the Registrar :

Assistant to the Bursar :

Chief Bookkeeper :

Assistant (unclassified) :

Senior Clerks :

Clerks (Grade I) :

Junior Clerk :	G. C. THOMAS, 2, Granville Mount, Otley
Clerk of the Fabric .	J. E. LAYBOURN, 9, Orville Gardens, Headingley, Leeds, 6
Assistants :	A. L. KNIGHTON, A.I.A.A., 52, Victoria Walk, Horsforth, Leeds
	J. SWINDALE, 23, Coronation Terrace, East Ardsley, near Wakefield.
Engineer :	R. W. THOMPSON, 11, Trenic Crescent, Headingley, Leeds, 6
Electrician :	H. PLUMMER, 18, Castle Grove Avenue, Leeds, 6
Joiner :	S. CHESTER, 15, Cross Flatts Grove, Beeston, Leeds, 11
Plumber :	Vacant
Head Gardener :	J. H. KING, F.R.H.S., 4, University Road, Leeds, 2
Head Groundsman :	C. R. W. JORDAN, Weetwood Athletic Grounds, Otley Road, Leeds, 6
Head Porter :	C. E. HILLIARD, 33, University Road, Leeds, 2
Superintendent of Women Cleaners :	Vacant
Head Cleaner :	Mrs. WRIGHT

University Union, 1946-47

President :	D. J. S. WATERHOU	ISE
Secretary :	J. S. PARRY, B.A.	
Clerk :	J. W. BOURN, 6, Hollin Park, Leeds.	

University Refectory

Manageress :	Miss E. M.	NICHOLSON, M.A., Edinburgh,
	Flat 6,	2, Moorland Terrace, Leeds, 2

Assistant Manageress :

Miss B. M. DAWSON, 14, Stanhope Avenue, Horsforth, near Leeds

School of Medicine Refectory

Manageress :

Miss M. OVEREND, 5, Rothbury Gardens. Adel, Leeds, 6

Senior Training Corps

Commanding Officer:

Lt.-Col. G. H. COLE

Air Training Squadron

Commanding Officer :

F/Lt. R. WHITTAN

First-Aid Superintendent

Vacant

REPRESENTATIVES OF THE UNIVERSITY ON COMMITTEES AND OTHER INSTITUTIONS

The number prefixed to a name indicates the number of years in the term of the appointment.

A. Joint Matriculation Board

				A	ppointm	nent expires
Professor Evans .				· .	. J	une, 1947
Professor SPEAKMAN	1.0		 1.			
¹ Professor SMITH .		•				
Professor WILLIAMSON						,,

B. Courts of other Universities

Birmingha	m		. 3 Professor CHALLENGE	R .	Dec., 1948
Bristol			. 7Professor Cox .		May, 1951
Liverpool			. 3Professor Edwards		Dec., 1947
Sheffield	•	•	. 3Professor STEWART	•	June, 1948

C. Education Committees

North Riding	Feb., 1949
East Riding Professor Dobrée	Feb. 1947
Borough of Harrogate . , Professor FRANK SMITH	. Dec., 1945
Borough of Ossett IMr. K. G. T. CLARK	Nov., 1945
Keighley Committee for	
Education Dr. C. S. WHEWELL	
York Committee for	
Education (Region I) Mrs. PASSEY	Jan., 1949
York Committee for	
Education (Region V.) Mr. C. A. SMITH	Jan., 1949
Dewsbury Secondary Educa-	
tion Sub-Committee (Gov-	
ernors of Secondary Schools) Dr. P. P. TOWNEND .	Nov., 1948

D. Affiliated Institutions

College of the Resurrection, Mirfield		EDWARDS .	June, 1947
Huddersfield Technical			- 5 , 517
College	"Professor	CHALLENGER	June, 1947
Rawdon College	. Professor	EDWARDS .	June, 1947
Diocesan Training College,			
York	. Professor	Smith .	Oct., 1947

E. Governing Bodies of Schools

Aireborough Grammar		
School }	3Mr. J. R. PARKINSON	May, 1949
School		
Askrigg, Yorebridge Gramman		
School	3Mr. F. M. H. HOLMAN	Ma r., 1949
F		

Appointment expires
Barnsley Grammar School . 3Mr. J. CROSSLAND . Nov., 1948
South Hiendley and Ryhill
Modern School 3Mr. H. G. SMITH May, 1949
Royston Modern School (B) Royston Modern School (G) 3Mr. H. R. NOLTIE May, 1949 Cudworth Modern School (B) Cudworth Modern School (G)
Batley Grammar School . 3Mr. S. G. RICHARDSON . Oct., 1947
Batley Girls' Grammar School . Batley Princess Royal Modern School . Batley Purlwell Modern School .
Bentham—Collingwood and Baynes Foundation
Modern School
Cleckheaton Grammar School 3Professor BRODETSKY Coxwold Charity 3Mr. FRANK HOLMES . Oct., 1947 Dewsbury—Wheelwright
Grammar School. 3Professor DURWARDNov., 1945Drax-Reade Grammar School3Professor PASSEYFeb., 1949Easingwold Grammar School.3Mr. L. G. JOHNSONMar., 1949Elland Grammar School.3Dr. T. V. BENNMay, 1949Giggleswick School.3Professor SMITHMar., 1949Halifax—Crossley and Porter Schools2Professor WoodDec., 1947Halifax—Heath Grammar School.5Professor Wood.School.5Professor Wood.Mair, Robert Constantine One vacancyDec., 1946

Appoint	ntment expires
	Nov.,1946
Harrogate Grammar School . 3Professor J. H. RICHARDSON	
Harrogate Secondary Tech-	
nical School 3Professor G. W. CARTER .	May, 1949
Harrogate Starbeck Modern	
School	
Harrogate Western Modern School 3Professor J. H. RICHARDSON	May TOAO
Knaresborough Modern	May, 1949
School	
Boroughbridge Modern.	
School	
Hebden Bridge Grammar	3.6
School	May, 1949
Heckmondwike Grammar School 3Professor M. J. STEWART	June, 1949
Hemsworth Grammar	June, 1949
	May, 1949
Hemsworth Modern School	112009 , 1 949
Kinsley Modern School	
Hipperholme Grammar School 3Mr. C. W. GILHAM	June, 1949
Honley Secondary School 3Vacant	Mar., 1948
Holme Valley Grammar	
School	
Holmfirth Modern School	
Kirkburton Modern School	May, 1949
Skelmanthorpe Modern School	
Colne Valley Marsden .	
Modern School	
Ilkley Grammar School. , 5Mr. R. S. Dower	Nov., 1948
Keighley-Drake and	
Tonson's Foundation .3Mrs. CHALLENGER	Apl., 1949
Keighley Girls' Grammar	
School	Nov., 1948
Keighley Boys' Grammar	
	Nov., 1946
Knaresborough King James'	1
	May, 1949
Leeds Allerton High	
School	Oct., 1947
Leeds Grammar School 3Professor FRANK SMITH 3Professor FRANK SMITH	May, 1949
Leeds Grammar School {3Professor M. J. STEWART}	
Leeds Girls' High School . 3Professor SPEAKMAN	June,1948
Leeds Mount St. Mary's	Ang -0.0
	Aug., 1948
Leeds Modern School Lawnswood High School ^r Professor MANTON	Oct., 1947
Lawnswood Migh School J (-1 10165501 MANTON +)	In malabar

Appointm	nent expire	e
Leeds—Roundhay Schools { IDr. CURTIS Miss ROBSON } O	ct., 194	7
Leeds—West Leeds High		
School Professor A. V. WILLIAMSON OC	t., 194	7
	eb., 194	8
	ct., 194	-
	p t ., 194	9
Morley Grammar School Morley Bridge Street	1 4+	
	ay, 194	9
Normanton Grammar School . 3Professor A. V. WILLIAMSON No.	v., 1940	6
Northallerton Grammar School M.	ay, 194	-
	ily, 194	
Otley Grammar School . 3Emeritus Professor BARBIER A		
	v., 194	
0	ay, 194	·
The King's School,		<i>.</i>
	ay, 1949	9
Pontefract Modern School J Pontefract Girls' High		
School		
Pontefract Willow Park (3Miss Bosworth Ma	ay, 1949	9
Modern School		
	ay, 1949	9
South Kirkby Common Road Modern School		
South Kirkby Moorthorpe		ŧ.
	ay, 1949	9
South Elmsall Modern School		
Pudsey Grammar School		
Pudsey Littlemoor Modern		
School	y , 1949	9
Pudsey Primrose Hill Modern School		
	c., 1947	7
Richmond High School for		
	ar., 1949)
Ripon Grammar School . 3Sir J. N. BARRAN, Bart. Ma	y, 1948	3
	ne, 1949	
Pothwall Crammar School)		
Stanley Modern School } 3Mr. R. M. GABRIEL Ma	194 9)

Saltburn High School for	opointment expires
Girls 3Mr. S. G. RAYBOULD	. Mar., 1949
Sedbergh School 5Professor Wood .	. July, 1950
Selby High School for Girls . 3Mrs. R. D. PASSEY .	. June, 1948
Settle Girls' High School . 3Miss LORNA I. SCOTT	. Mar., 1949
Silcoates School Dr. J. W. BAKER .	
Skellfield School . Vacant	
Skipton—Ermysted's Gram- mar School 3Mr. A. H. DAINTON .	Jan., 1947
Skipton Girls' High School , 3Miss HIBGAME	. May, 1948
Slaithwaite Endowed School	i li u contra
Foundation 3Mr. W. R. ATKIN	. May, 1948
Sowerby Bridge Grammar	
Sowerby Bridge Bolton	Mar
Brow Modern School	May, 1949
Sowerby Bridge New Road Modern School	
Tadcaster Grammar School . 3Professor PASSEY	. Oct., 1947
Thirsk Grammar School . 3Mr. J. C. DICKINSON .	Mar., 1949
Todmorden Grammar	and the second
Todmorden Roomfield Modern School	. May, 1949
Wakefield Grammar School . 3Professor HARVEY	July, 1947
Whitby Grammar School . 3Dr. J. E. HEMINGWAY	Mar., 1949
Wortley Free Trust 3Emeritus Professor Cobb	May, 1949
Yarm Grammar School . 3Dr. M. P. APPLEBY .	Mar., 1949
York—St. Peter's School .3Vacant	Dec., 1948
F. Other Bodies	dise
Abrowd Foundation (5Professor Hughes .	1 .
Akroya Foundation . SProfessor Whiddington	} June, 1950
Adult Education—Advisory (The VICE-CHANCELLOR	
Committee for Co-opera-{ Professor J. W. HARVEY	*
tion in Professor A. N. SHIMMIN	·
University Council for Adult / Professor A. N. SHIMMIN Education Mr. S. G. RAYBOULD	
Advisory Council of British Legion on Adult Education Dr. S. J. CURTIS	
Ministry of Education Adult	
Education Committee . Professor SHIMMIN .	. Dec., 1948
Advisory Committee of the	
City and Guilds of London	
Institute (Dyeing of Textiles) Professor Rowe	
do. (Leather Manufacture) Professor McCandlish	

	Appointment expires
Central Council of the Fed-	
erated Superannuation	-
System Mr. E. J. BROWN	Jan., 1947
East Riding County Agri- cultural Committee Professor J. McGrego:	R . Mar., 1947
Educational Research-Coun-	
cil of the Foundation for . Professor SMITH	
General Medical Council . 3Professor STEWART .	Aug., 1948
Hull University College,	
Court of Governors Professor Gillies .	. Nov., 1948
Standing Consultative Com-	
mittee on I.C.I. Fellowships Professor R. WHIDDING	TON .
T int A musinterante Advis C	
Committee for Con-) The VICE-CHANCELLOR	Cot., 1946
sultant Staffs Professor STEWART	J,,+-
Leeds College of Technology . Professor SPEAKMAN .	. Oct., 1947
Leeds College of Art Professor DoBrée	. Oct., 1947
	. Oct., 194/
Leeds "Carnegie Hall" Ad-	200
visory Committee Professor J. W. McLi	SOD
Leeds-Lille Friendship Com- mittee Professor J. W. HARV	EX
•	
Leeds Maternity Hospital . +Professor HUGHES .	June, 1950
City of Leeds Young Men's	
Christian Association	
Board of Management . Mr. S. G. RICHARDSO	
Leeds-Swarthmore	} Sept.,1947
Settlement Council .] 3Dr. RUSHBROOKE	J
The VICE-CHANCELLO	
Leeds Cancer Committee { DEAN OF THE FACULT	XX }
OF MEDICINE	J
Bradford and County Joint	
Cancer Committee Professor STEWART	• •
do. (Professional and	
Scientific Committee) . Professor PASSEY	
Morley Technical and Branch	
Technical Institutes 3Dr. WHEWELL .	. July, 1947
National Council for	
Domestic Studies . Miss HIBGAME .	
National Poultry Diploma	
Examination Board . Professor COMBER	
Pickering Museum of	
Antiquities Professor Edwards	
Committee on Religious Edu-	
cation (Ripon Diocese) . 3Professor BROWNE	May, 1947
Royal Anthropological Insti-	
tute	Dec., 1947

Appointment expires
Teachers' Registration Council . 5Professor SMITH Mar., 1947
Central Joint Advisory Committee on Tutorial Classes 2 Professor HARVEY 2Professor SHIMMIN } Dec., 1947
Joint University Council for { Professor A. N. SHIMMIN Social Studies . { One vacancy
West Riding Territorial Army Association
West Riding Consultative Committee for Education . 3Professor FRANK SMITH . Mar., 1949
Central Examinations Council of the West Riding 3Professor SMITH June, 1947
Yorkshire Board of Legal { THE VICE-CHANCELLOR Studies { Professor HUGHES . } June, 1947
Yorkshire Training Colleges -Board for the Final Examination of Students in 3Professor Evans 3Professor HEMINGWAY 3Professor SMITH
Yorkshire Rural Commun- ty Council {3Mr. A. H. DAINTON . 3Mr. R. H. DRUMMOND } May, 1948
Yorkshire Council for Further Education 3Professor McCandlish Mar., 1947
do. (Reference Committee) . 3 ,, , , , Mar., 1947
do. (Coal Mining Advisory Committee) 3Professor J. T. WHETTON , Mar., 1947
do. (Coke and By-Products Advisory Committee) . 3Mr. H. J. HODSMAN Mar., 1947
do. (Advanced Chemistry Advisory Committee) . 3Professor Speakman Mar., 1947
do. (Leather Industry County Advisory Committee). Professor McCandlish Mar., 1947
do. (County Advisory Com- mittee for Educational Act- ivities among Adults) . Professor FRANK SMITH . Mar., 1947
York (Holgate Hill) Settle- ment
Yorkshire Cancer Committee { Dean of the Faculty of Medicine Professor MACADAM
Yorkshire Council for Agricultural Education

External Examiners

Faculty of Arts, Economics and Commerce, and Law

Greek : Professor]. TATE, The University, Sheffield.

Latin: (To be appointed).

English Literature : L. C. KNIGHTS, M.A., The University, Manchester.

English Language : (To be appointed).

French: (To be appointed).

German : Professor W. H. BRUFORD, Edinburgh.

Hebrew : Professor S. A. COOK, Cambridge.

Russian : Vacant.

Spanish : (To be appointed).

Italian : Vacant.

History (Modern) : (To be appointed).

History (Ancient and Medieval) : (To be appointed).

Philosophy: Professor L. A. REID, King's College, Newcastleon-Tyne.

Philosophy and History of Religion : Dr. A. C. BOUQUET, Cambridge.

Old Testament History and Religion : Dr. S. A. COOK, Cambridge.

New Testament: Professor T. W. MANSON, The University, Manchester.

Ecclesiastical History : Dr. ARTHUR DAKIN, Bristol.

Biblical and Historical Theology : Dr. H. ROBERTS, London.

Biblical Studies : Professor H. H. ROWLEY, Manchester.

Economics: (To be appointed).

Geography: (To be appointed).

Education : Professor M. V. C. JEFFREYS, The University, Durham.

Law : Professor D. J. LLEWELYN DAVIES, University College of Wales, Aberystwyth.

Music: (To be appointed).

Anthropology: Dr. R. U. SAYCE, The University, Manchester.

Faculty of Science

Mathematics: (To be appointed). Statistics: Dr. M. S. BARTLETT, Cambridge.

External Examiners

Physics : Professor M. L. E. OLIPHANT, The University, Birmingham.

Chemistry: (To be appointed).

Zoology: (To be appointed).

Botany : R. D. GOOD, University College, Hull.

Geology: (To be appointed).

Faculty of Technology

Civil and Mechanical Engineering: (To be appointed).

Electrical Engineering: Professor WILLIS JACKSON, The University, Manchester.

Mining Engineering: (To be appointed).

Gas Engineering : (To be appointed).

Fuel and Metallurgy : (To be appointed).

Colour Chemistry: (To be appointed).

Leather Industries : (To be appointed).

Textile Industries : (To be appointed).

Agriculture : Professor E. J. ROBERTS, Aberystwyth.

Agricultural Chemistry : (To be appointed).

- Agricultural Botany: Dr. E. W. WYLIE FENTON, The University, Edinburgh.
- Agricultural Zoology: (To be appointed).
- Agricultural Economics : (To be appointed).
- Agricultural Bacteriology : Dr. JAMES F. MALCOLM, West of Scotland Agricultural College, Glasgow, C.2

Faculty of Medicine

- Anatomy: Professor H. A. HARRIS, School of Anatomy, Cambridge.
- Physiology : Professor H. P. GILDING, The University, Birmingham.
- Therapeutics : Professor E. J. WAYNE, The University, Sheffield, 10.

Pharmacy and Therapeutics: (To be appointed).

Pharmacology: Professor J. H. BURN, Department of Pharmacology, Oxford.

External Examiners

Pathology : Professor J. B. DUGUID, Welsh National School of Medicine, Cardiff.

Bacteriology: Professor E. M. DUNLOP, King's College, Newcastle-on-Tyne.

Medicine : Professor J. W. McNEE, Glasgow.

Surgery: L. R. BROSTER, O.B.E., M.A., M.D., M.Ch., F.R.C.S.

Obstetrics and Gynæcology: Professor DUGALD BAIRD, The University, Aberdeen.

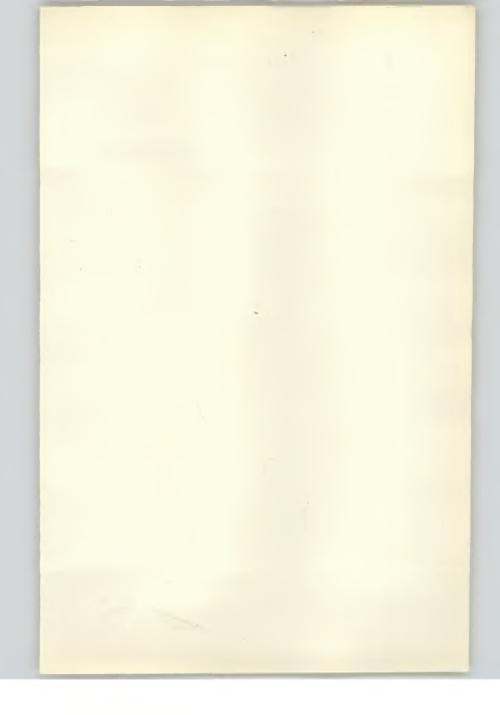
Forensic Medicine : Dr. GILBERT FORBES, Sheffield.

Public Health : Professor THOMAS FERGUSON, The University, Glasgow.

Nursing : Miss R. M. DARROCH, Liverpool.

Psychological Medicine : (To be appointed).

Dental Subjects : Professor H. STOBIE, Royal Dental Hospital, London, W.C. 2.









THE

UNIVERSITY OF LEEDS

Session 1946-1947

Faculties of Arts, Economics and Commerce, Law, Science and Technology

UNIVERSITY TERMS

The University session, or academic year, is divided into three terms as follows:

First Lerm .	. Tuesday, 1	ist October,	1946, t o
	Wednesday,	11th Decem	per, 1946.
Sacond Tana	Wednesday	Oth Tonnomy	TOUR to

Second Term Wednesday, 8th January, 1947, to Friday, 21st March, 1947.

Third Term .. Wednesday, 23rd April, 1947, to Friday, 4th July, 1947.

Nore.—In each case the vacation begins the day after the last day of term.

ADMISSION OF STUDENTS

The classes and laboratories are open to men and women on the same terms.

Except in cases approved by the Vice-Chancellor, students must have reached the age of 17 before coming to the University.

All candidates for admission to the University are required to give a reference of whom inquiry may be made. Those who are under 19 years of age and have been at a school or other educational institution within one year of their application for admission are required to produce a certificate of good conduct and of fitness for entrance to the University from the Head Master or Head Mistress of the School, or from the Head of the Institution, which they have last attended.

Applications for admission to the University from persons residing out of the United Kingdom should be sent in not later than May 31st of each year, and must in all cases be accompanied by certificates of good conduct duly authenticated. Overseas students are, in addition, required to produce certificates of identity. 2

Students are required, prior to admission, to sign a declaration that they will observe the statutes, ordinances, and regulations of the University for the time being in force.

The Vice-Chancellor will admit students on TUESDAY, OCTOBER 1st, and the following day or days. Students will be informed individually of the times at which they should attend for enrolment. The Professors and Lecturers will be present to confer with intending students and to give them advice respecting their courses of study. Women students are requested to consult the Tutor of Women Students as to their studies. The Bursar will be in attendance to receive the fees and to register students whose courses of study have been duly approved.

All students are expected to register their names on one of the days mentioned above.

REGULATIONS TO BE OBSERVED BY STUDENTS

1. All students in regular attendance who are not living with their parents, or with relatives or personal friends, will be required to reside at some Hall of Residence or Hostel approved by the University, or in registered lodgings,[†] or in lodgings which, if not registered when taken by the student, shall receive the approval of the University. Students taking lodgings which have not been registered are required to report immediately to the Warden of Non-resident Men Students for approval the address of such lodgings. Students who have taken registered lodgings are required to inform the Supervisor of Lodgings beforehand if they desire to move into other registered lodgings.

2. Students who do not return or enter punctually at the beginning of the term are liable to be refused permission to keep the term. In case of delay in entering, due to illness or other unavoidable cause, a communication must be made to the Vice-Chancellor.

3. Regular, punctual, and orderly attendance at lectures, laboratories and departmental examinations is required of every student, in order to obtain certificates of attendance. In the case of persistent neglect of work, repeated failure at

t Women students are not normally expected to live in lodgings. Any student wishing to do so should first consult the Assistant Warden of Women Day Students (see also p. 37).

examinations, or unreasonable delay in presenting himself for such examinations, a student may be required to withdraw from the University.

4. When a student is absent through illness or other sufficient cause a written explanation must at once be sent to the Registrar, who will communicate it to the heads of the departments concerned. Students desiring leave of absence must obtain it from the Vice-Chancellor.

5. Students are required to keep the Registrar informed of their addresses. Any alteration of address must be communicated without delay.

6. A student dismissed for idleness or misconduct will forfeit all fees and privileges.

7. Students are required to replace or repair any apparatus or other property destroyed or damaged by their fault.

8. The Students' Common Rooms are under the management of the University Union, and the Committee of the Union are empowered to impose fines in case of damage done to the property in their charge. An appeal against any decision of the Union may be made to the Vice-Chancellor.

9. All students of the University who are reading for degrees are required to produce a certificate of having passed the examination for Matriculation or of having been exempted therefrom.

10. No student is permitted, except with the leave of the Vice-Chancellor, to attend any lecture course or laboratory work until he has received from the Bursar his class ticket, which must be presented, before his course of study is begun, to the heads of the departments which he enters.

11. All students are required to present themselves for the departmental examinations in the subjects which they have been taking, and if they fail in these examinations they may be required to repeat their courses of study. In cases of repetition of courses the full fees will be charged.

12. Students are not at liberty to publish, except with the specific consent of the head of the department, the results of research work done in the University, or to publish any matter given in the lectures.

Vacation Study

Arrangements are made by which the laboratories are open during a portion of the vacations to students capable of independent work. A nominal fee is charged (see Fees, section (c) (iv). Application for admission in such cases must be made to the heads of departments, with whom the decision as to the suitability of students for admission rests.

QUALIFICATIONS FOR ENTRY UPON A DEGREE COURSE

I. A candidate for a degree in any Faculty of the University must satisfy the requirements of the Joint Matriculation Board. Enquiries should be directed to "The Secretary, Joint Matriculation Board, 315, Oxford Road, Manchester, 13."

2. The University imposes the following additional requirements for entry into the Faculties of Arts and Medicine :---

Arts :

Candidates will not be admitted to the course of study for the degree of Bachelor of Arts unless they have satisfied the examination requirements for entry upon degree courses as laid down by the Joint Matriculation Board. All intending students must comply with any special requirements of the Honours School which they propose to enter; in some of these a previous knowledge of certain subjects is a prerequisite for admission.

Candidates who have passed the examination for persons of mature years are exempted from this requirement.

Medicine :---

Except in cases specially approved by the Senate, candidates for a degree in the Faculty of Medicine (M.B., Ch.B. or B.Ch.D.) are required to present

Qualifications for Entry upon Degree Courses

evidence of possessing a knowledge of Mathematics at least equivalent to that of the "Pass" standard at a School Certificate examination.

3. Special matriculation examinations :

(a) Examination for candidates of Mature Years.— This examination is to meet the case of the exceptional candidate who has been unable to qualify at the normal time but shows promise of obtaining more than ordinary success in a University course. A candidate must be not less than 23 years of age on May 1st of the year of examination. Further details may be obtained from the Secretary, Joint Matriculation Board, 315, Oxford Road, Manchester, 13.

(b) Examination for candidates who have been engaged in industry.—The examination is only for candidates who desire to proceed to a degree course in one of the constituent Universities and have been engaged in full time industrial employment for a period of at least three years, have attended systematic courses of instruction satisfactory to the Board for a period of at least three years and are not less than 19 years of age on July 31st of the year of examination. Further details may be obtained from the Secretary, Joint Matriculation Board, 315, Oxford Road, Manchester, 13.

DEGREE COURSES

Fees

Full particulars of the requirements for degrees will be found in the Departmental Prospectuses.

FEES*

All Fees are payable to the Bursar. Cheques should be made payable to "The University of Leeds," and crossed.

The University reserves the right to revise the fees specified below at any time, whether in the case of new students or those who have already begun their courses.

Students attending a degree or diploma course should note that normally the following fees are payable:— Registration fee; Composition fees (including Union fees); Examination fees; Graduation fee; Deposits (in the case of students in Medicine, Dentistry, Science and Technology). In order to ascertain the total fees payable, therefore, reference should be made to the appropriate sections below.

I. Registration Fee

All students proposing to attend at the University for more than six hours a week, or to attend a course for which a composition fee is charged, are required to pay a Registration Fee of $\pounds 2$ when their application for admission to the University is accepted; provided that the Registration Fee payable by overseas students will be $\pounds 5$ except in the case of Research and Ph.D. students who will pay $\pounds 2$.

2. Library Fee

Students who have paid a composition fee for the year, or have paid class fees of $\pounds 4$ or upwards, are entitled to the use of the Library during a session without further payment. All other day students will be admitted to the use of the Library on payment of 2s. 6d. a term or 5s. a session, in addition to their class fees.

3. University Union Fee

The annual subscription to the University Union is $\pounds 4$. Unless otherwise stated, the Union subscription is included in the Composition Fees. The subscription

^{*}For Medical and Dental Course fees see separate prospectuses.

is payable by all students reading for degrees and also, except in special cases to be determined by the Vice-Chancellor, by all students attending the University for more than six hours a week who have not paid the composition fee for the year. The subscription entitles students to the use of the New Union Building (which is supplied with daily papers, periodicals, &c.), to free instruction in the University gymnasium, and to the use of the athletic grounds, fives courts and tennis courts.

Students and members of the staff who have paid five annual subscriptions or the equivalent thereof, shall become Life Members of the Union and shall have all the privileges of ordinary members, but shall not take part in games and athletic sports unless they pay an annual fee of one guinea.

The Union Fee for students who attend for only part of a session and who do not pay a Composition Fee shall be $\pounds 2$ 16s. od. for two normal terms and $\pounds 1$ 8s. od. for one normal term.

4. Lecture and Laboratory Fees

(a) General Regulations.

The composition fees for lecture and laboratory courses may be paid either sessionally, in advance, or (with certain exceptions) terminally by instalments. Fees paid by instalments are at a slightly higher rate than those paid in advance. The terminal instalment scales of fees are not applicable to students ordinarily resident outside the British Isles; such students must pay fees sessionally in advance.

A student ceasing, for any reason whatsoever, to attend at the University during the session has no claim to a return of fees.

A student who elects to pay composition fees by instalments and who withdraws from the University before the end of a session, must pay the whole of the remaining instalments of the session's fees.

On presentation of a form signed by the Dean of the Faculty authorising attendance upon courses of study, and upon payment of the requisite fees, the Bursar will issue a class ticket entitling the student to attend such courses. This class ticket must be presented by the student, before commencing a course, to the Professors or Lecturers whose classes or lectures he is authorised to attend.

(b) Composition Fees for Complete Courses.

Any student attending a degree course, or any other course which is regarded as a full course, will be required to pay the composition fee appropriate to the Faculty in which he is a student.

The composition fees include the subscription to the University Union unless otherwise stated.

Students in the Faculty of Arts who take classes or laboratory work or both in the Faculty of Science for more than nine hours a week will be charged the composition fee for Science.

The composition fee for Applied Science (Technology) will be applicable to all students whose courses of study entail an average attendance of six hours a week or more per session in one or more of the Technological departments.

Students of the Engineering, Mining, Fuel, and Colour Chemistry Departments will be charged the Technological composition fee for each year of the course.

Subject to the foregoing, students paying a composition fee of \pounds_{35} or upwards will be admitted without further charge to any additional classes for their attendance at which they have obtained the sanction of the Vice-Chancellor and the Head of the Department.

Students who have paid the composition fee, and who have been allowed to work in one of the laboratories during the vacation, will be charged an additional fee (see Section 4 (c) (iv)).

Fees

SCALE OF COMPOSITION FEES.

(To be read in conjunction with Fees regulations).

	Fee when paid				terminal instalments on the 1st day of each term			
	sessionally in advance.		1st Term	and Term	3rd Term			
(i) Arts	E		E	É	E			
For each of first		h accession	-6					
three sessions	35 eac	ch session	16	12	9			
4th session	29*		14	9	7			
(ii) Science								
For each of first								
three sessions	431		20	15	IO			
4th session	35*		16	12	8			
(iii) Technology‡								
For each of first								
three sessions	47		22	17	10			
4th session	39*		19	12	9			

Department of Education.

(I) Recognised Students in Training.

(a) Undergraduate Courses-Arts and Science.

The fee, as stated on the previous pages for Arts and Science, will be reduced by the amount of grant paid to the University by the Ministry of Education.

• Applicable only in the case of a student who for three successive years has paid the composition fee appropriate to any one Faculty.

 \dagger Students working in the Laboratories of the Chemistry and/or Fuel Departments will pay (a) a rental of 15/- for the use of a set of apparatus and (b) a deposit of 30/- to cover the cost of replacing broken apparatus, eta. The rental and the deposit will be paid at the same time as the Composition Fee. The deposit will be refunded at the end of the session after deduction of cost of breakages. When a student's breakages exceed the sum of 30/-, a further deposit of 30/- will be payable.

‡ Students from overseas admitted to the Textile Department will be required to pay, in addition to the Technological composition fee, a special fee of f to a session for the use of technical equipment and apparatus. This special fee will be payable at the same time as the composition fee.

- (b) Year of professional training.
 - The fee is paid to the University by the Ministry of Education.
- (2) Non-Recognised Students in Training.
 - Arts and Science.
 - Fees as stated for Arts and Science on the previous pages.
 - Diploma in Education.

£40 for 3 terms if paid in one sum. If paid in terminal instalments—Ist term £20; 2nd term £13; 3rd term £9.

Agriculture. Degree Course :	Fee when paid sessionally in advance. £	termin on the ist ist		lments each term 3rd
ist session	43 ••	20	15	IO
2nd, 3rd & 4th sessions	47	. 22	17	IO
Diploma Course :				
ist session	32	. 15	12	7
2nd and 3rd sessions				
(two Winter terms) £20	/13/4	•		*

Students who enter upon a four years' course may elect to pay in their first year $\pounds 47$, being the composition fee for the Faculty of Technology, instead of $\pounds 43$, which is the composition fee for the Faculty of Science. They will then be entitled in their fourth year to a reduction of the fee from $\pounds 47$ to $\pounds 39$. (For terminal instalment scale see Section 4 (b)).

Students in the department of Agriculture, in addition to purchasing a recognised set of apparatus, will also pay a deposit of 20s. at the beginning of each session, to cover the cost of replacing broken apparatus. This deposit will be paid with the tuition fee, and will be repaid at the end of each session after deduction of the cost of breakages.

*Terminal scale not applicable.

Commerce. Degree Course: The Arts fee as given on page 9 will be payable, unless:—

- (I) one of the subjects under v. (a, b, c or d) is offered (see Final B.Com. Regulations), in which case the fee to be paid will be the *Technology* fee for each session devoted to the study of that subject; or
 - (2) the course taken necessitates attendance of more than 9 hours a week in one or more of the Science Departments, when the Science fee will be payable.
- Mathematics. Candidates for the degree of B.Sc. with Honours in Mathematics :

					nai instaln	
		e when p			st day of ea	ch term
	sessionally in advance.			ıst Term	2nd Term	3rd Term
		£		£	£	£
1st session	• •	43		20	15	IO
2nd session	• •	43		20	15	IO
3rd session	••	35		16	12	9
4th session		29		14	9	7

Theology.

Course for B.D. degree :--

(I) Candidates who have not graduated in the University of Leeds :---

Registration fee : f_2 (if not previously paid).

Fees at the scale set out in Section 4 (c) (i) (separate fees scale) for any attendance at lectures or classes in the University, provided that the minimum fee payable by any candidate (in addition to the registration fee) shall be f_8 8s. per session (including Union Fee).

(2) Candidates who are graduates of the University of Leeds :---

Fees at the scale set out in Section 4 (c) (i) (separate fees scale) for any classes attended.

B.Sc. (Physiology or Bacteriology). Students who combine a course in Physiology or Bacteriology with the Medical course will be required to pay the usual Medical composition fee, and at the commencement of the year in which a student enters upon the Physiology or Bacteriology course for the Honours degree, a supplementary composition fee will be payable, namely, $\pounds 43$ if paid in one sum, or if paid in terminal instalments, 1st term $\pounds 23$, 2nd term $\pounds 21$. This supplementary fee will cover all necessary attendance in the subjects of the course.

Diploma in Social Organisation and Public Service.

- (I) Two Sessions' Course (including practical work), Fee if paid in one sum in advance £30 each session (including fee of £1 IS. for work in the long vacation).
 (If paid in terminal instalments : Ist term £14, 2nd term £11, 3rd term £7).
- (2) One Session's Course (including practical work) :
 - (a) Payable by a student who during three successive sessions has paid to this University a composition fee of £35 or more :—
 - Fee if paid in one sum in advance f_{32} .

Fee if paid in terminal instalments : 1st term \pounds_{15} , 2nd term \pounds_{10} , 3rd term \pounds_{8} .

(b) Payable by other students :---

Fee if paid in one sum in advance f_{38} .

Fee if paid in terminal instalments: 1st term f_{17} , 2nd term f_{13} , 3rd term f_{10} .

Note.—Non-Diploma students taking advantage of the facilities for practical social work will be charged a fee of $\frac{1}{43}$ a session in addition to any other fee paid by them.

Diploma in Geography.

(1) In the case of candidates who are graduates of the University of Leeds, and who have previously paid

to this University three composition fees of not less than f_{35} each.

- (a) If the course is completed in one year: f_{29} .
- (b) If the course is spread over two years: £17 a year.
- (2) Other candidates :
 - Registration Fee: f_2 (if not previously paid).
 - (a) If the course is completed in one year: f_{35} .
 - (b) If the course is spread over two years: £20 a year.

Diploma in Biology.

- (1) In the case of candidates who are graduates of the University of Leeds, and who have previously paid to this University three composition fees of not less than \pounds_{35} each, a fee of \pounds_{16} a session will be payable.
- (2) Other candidates :

A fee of f_{19} a session will be payable.

- Diploma in Animal Biology. Fee for a sessional course,
 - (1) if paid in one sum, £36; (2) if paid in terminal instalments: 1st term, £16, 2nd term, £13, 3rd term, £9.
- Law. Course for degree of LL.B., £15 IIS. per session, payable in advance; Course for Final examination of the Law Society, £11 IIS. per session (excluding Union fee), payable in advance; Statutory course for Certificate under the Solicitors Act, 1932, £11 IIS., payable in advance for the full course if taken during three consecutive terms. (An additional fee calculated at the separate fee rate (see Section 4 (c) (i)) will be charged if the course is spread over a longer period than three consecutive terms).
- Medical and Dental. For Medical and Dental Course fees, see separate prospectuses.

Master of Arts in the Department of Education or Master of Education.

- (I) Candidates who are not graduates of the University of Leeds :---
 - (a) Candidates who combine the Diploma and Degree Courses :--
 - 1st Year .. Tuition fee, f_{40} (including Union fee).
 - 2nd Year .. Do. £26 (including Union fee). 3rd Year .. Do. £16 (including Union fee).

(b) Candidates who do not combine the Diploma and Degree Courses :

1st Year .. Tuition fee, £16 (including Union fee).

2nd Year .. Do. £16 (including Union fee). 3rd Year .. Do. £16 (including Union fee).

- Fees for lectures and laboratory work not expressly recommended by the Professor of Education will be charged at two-thirds the scale set out in Section 4 (c) (i).
- (2) Candidates who are graduates of the University of Leeds :---

Fees calculated at the scale set out in Section 4 (c) (i) for any classes attended.

Master of Laws.

- (1) Candidates who have not graduated in the University of Leeds :---
 - Fees at the scale set out in Section 4 (c) (i) for any attendance at lectures or classes in the University, provided that the minimum fee payable by any candidate (in addition to the registration fee) shall be $\pounds 8$ 8s. per session (including Union Fee).
- (2) Candidates who are graduates of the University of Leeds :---

Fees at the scale set out in Section 4(c) (i) for any classes attended.

Master of Arts or Commerce (other than M.A. in the Department of Education).

(I) Candidates who have not graduated in the University of Leeds:----

Ist Year .. Tuition fee, £16 (including Union fee). 2nd Year .. Do. £16 (including Union fee).

- 3rd Year .. Do. f_{16} (including Union fee).
- (2) Candidates who are graduates of the University of Leeds:---

Fees at the scale set out in Section 4 (c) (i) for any classes attended.

Master of Science.

(I) Candidates who have not graduated in the University of Leeds or who have not been awarded a Diploma in Applied Science under the conditions stated in paragraph (2) below :—

(a) M.Sc. (Maths.) :---

- Fees at the scale set out in Section 4 (c) (1) for any attendance at lectures or classes in the University, provided that the minimum tuition fee payable by any candidate (in addition to the Registration fee), shall be $\pounds 8$ 8s. per session (including Union fee).
- (b) Candidates for M.Sc., in Departments other than Mathematics :—

Fees at the scale for Research Students under Section 4 (d) (ii).

(2) Candidates* who are graduates of the University of Leeds; or

Candidates* who have been awarded a Diploma in Applied Science in the University of Leeds not less than two years before proceeding to the degree, and whose candidature has been approved by the Senate :—

> If Research is undertaken in the University, fees will be payable at the scale for Research Students under Section 4 (d) (ii).

1:5

^{*}Including candidates for M.Sc. Maths.)_

If Research is undertaken outside the University, under the supervision of a member of the Staff of the University, or if the candidate attends the University for lectures, fees will be payable at the scale set out in Section 4 (c) (i), provided that the minimum fee payable in respect of supervision or lectures shall be f_8 8s. per session, including Union Fee.

Doctor of Philosophy (Ph.D.). Faculty of :	Graduates of Leeds University. Sessional Fee.* £	Other candidates. Sessional Fee.*
Arts	15	17
Science (Maths.)	15	17
Science (other than Maths.)	IQ	22
Technology†	19	22

Fees

Fees for lectures and laboratory work not expressly recommended by the head of the department concerned will be at two-thirds the scale set out in Section 4 (c) (i).

(c) Fees for lectures and laboratory work when paid for separately.[†]

(i) The following fees, payable in advance, will be charged for lectures and laboratory work when paid for separately, except in the case of classes for which a special fee has been fixed.

First lecture hour per week in a class \pounds_4 per session. Each hour per week beyond the first \pounds_2

Each hour per week of laboratory work f_2

For two terms three quarters of these amounts will be charged. For one term half of these amounts will be charged.

(ii) Students who have taken a degree or a diploma in the technological departments, and who desire to fill in time at the University while waiting for an appointment

^{*}These fees will be proportionately reduced where a candidate is in attendance for only a part of a session having received permission to pursue part of the cours, in another University or Institution. A Supervision fee will be payable by such candidates while not in attendance at this University at the nominal rate of f_2 a session.

 $[\]dagger$ Students from overseas admitted to the Textile Department will be required to pay, in addition, a special fee of $\pm x$ a session for the use of technical equipment and apparatus. This special fee will be payable at the same time as the somposition fee.

Fees

shall, on approval by the heads of the departments concerned, be permitted to attend for short periods in these departments at a fee of \pounds I per week plus any cost entailed for special material.

(iii) Students who are deemed by the head of the department concerned to be capable of independent work may be admitted to work in vacations only (during such times as the laboratories are open), on the following scale of fees :—

I day a week			£I	10	0	per	month.
2 days "				0			**
3			£4	10	0		
4 ,, ,,	and up	wards	£6	0	0		

(iv) For students who have paid a Composition Fee in the same session, and who are admitted to vacation work the fee will be one pound per month.

(d) Fees for Research Students*

Persons desiring to pursue original research may be admitted as research students upon the following conditions :---

(i) Applications for admission as research students must be made to the head of the department concerned. The admission is subject to the approval of the Senate.

(ii) Graduates and advanced students will, if admitted as research students, be charged fees at the following rates:

lonowing rates		eeds luates		L	er than eeds luates.	
Sessional	 £15	0	0	 £18	0	0
Terminal	 £5	5	0	 £6	IO	0
One month	 £2	IO	0	 £3	0	0

These fees will include any University lectures or laboratory work recommended by the head of the department. The fee for any other lectures or laboratory work will be

^{*}In certain special cases, Research Students may pay the fees mentioned under Section 4 (c) (i).

 $[\]dagger$ Plus the Union Fee if a student attends the University for more than six hours a week, unless exemption from payment of the Union Fee is granted by the Vice-Chancellor. In the case of overseas students admitted to the Textile Department, a special fee of f to a session for the use of technical equipment and apparatus will also be payable.

charged at two-thirds the scale set out in Section 4 (c) (i). The sessional research fee will in no case apply to students preparing for a Bachelor's degree unless they have completed the third year course of study in the University, and have paid the appropriate composition fee for three years.

(iii) Persons prosecuting private industrial investigations will, if admitted as research students, be charged $\pounds 6$ a month with additional charge for any special expenditure incurred by the University in connexion with the research.

(iv) Research students who attend for short periods only will not be charged the library fee unless they wish to use the library.

(v) Research students will pay a deposit, as stated below, at the beginning of each session. The deposit, less cost of breakages, will be repayable at the end of the session :---

Department of :---

Inorganic and Physical Chemistry, f10;

Organic Chemistry, Physics, Fuel, Textile, Colour Chemistry and Dyeing, Leather, Agriculture, £5; Mining, Zoology, Botany, £2.

5. Examination Fees

No fee will entitled candidate to admittance to more than one examination. Unless otherwise stated, the fee for a second or subsequent examination is the same as that for the first. Where a student is exempt from an examination the normal examination fee is payable. All fees are payable in advance.

For Ordinary B.A., a total examination fee of $\pounds 6$, payable in two instalments, $\pounds 3$ on presentation for first examination, and $\pounds 3$ at the end of the second session.

For Honours Schools with no first year qualifying examination (Modern Languages, Classics), $\pounds 6$ for Honours examination.

For Honours Schools with a qualifying examination, \pounds_3 for qualifying examination, and \pounds_3 for Honours examination.

For the Intermediate examination for the degree of LL.B., or B.Com., f_3 .

For the Final examination for the Ordinary or Honours degree of LL.B., or B.Com., f_3 .

B.Sc. degree :--

- (1) A fee of $\pounds 6$ to be payable; $\pounds 3$ to be paid when the candidate presents himself for examination at the end of the first session in the University, $\pounds 3$ upon the second occasion on which he presents himself for examination.
- (2) In cases where no examination is taken at the end of the first session, a fee of $\pounds 6$ to be payable on the first occasion on which the candidate presents himself for examination.

Pre-Registration examination for Medical Course*, f_{3} .

B.D. degree :---

Qualifying examination, $\pounds 5$.

Degree examination, $\pounds 5$.

For the examination or report upon dissertation for the degree of M.A., M.Sc., M.Ed., M.Com., or LL.M., $\pounds 5$.

For the examination or report upon dissertation for the degree of Litt.D., LL.D., or D.Sc., \pounds_{15} ; Ph.D., \pounds_{10} .

For the examination in Education for the Government Certificate, f_{I} .

For the Final examination for any Diploma in the Faculties of Arts, Economics and Commerce, $f_{,3}$.

For the Diploma in Biology, \pounds_3 .

- Diplomas in Technology, £6, with the following exceptions :—
- (1) The fee for graduates of this University (or for candidates who have paid the full degree examination fee of $\pounds 6$) or for the holders of a diploma of this University, $\pounds 3$.
- (2) If a diploma be granted in addition to the degree on the results of the degree examination, the extra fee entitling to the diploma is f_{I} .

*For Medical and Dental Courses examination fees see Medical and Dental Prospectuses.

(3) No additional diploma fee is charged to a candidate who has paid for the degree examination and has been awarded a diploma in place of a degree on the results thereof.

Candidates who are allowed to take any examination in two or more parts will be required to pay the full fee for such examination when entering for the first part.

6. Re-examination Fees

- (i) B.A. degree :--
 - $\pounds I$ for each re-examination in each subject; but the aggregate fees for the *first* re-examination in all subjects shall not exceed $\pounds 8$.
- (ii) B.Com. degree :--15/- for a Subsidiary subject.
- (iii) B.Sc. degree :--

 $\pounds I$ for an Introductory (or one year) subject $\pounds 2$ for a Subsidiary (or two year) subject $\pounds 3$ for a Principal (or three year) subject but the aggregate fees for the *first* re-examinations in all subjects shall not exceed $\pounds 8$.

Agriculture in the Ordinary degree shall rank as a three-year subject for this purpose.

- (iv) Diplomas in Technology :-Fee for re-examination, f.3.
- (v) Diploma in Education :---

Fee for re-examination in either part taken separately, £1 105.

Medical and Dental Course Examination Fees. See Medical and Dental Prospectuses.

7. Graduation Fees and Convocation Fees

On conferment of a first degree in this University, $\pounds 7$ (including Convocation fee); on conferment of a further degree, $\pounds 6.*$

^{*£12} in the case of persons graduating Litt.D., D.D., LL.D., or D.Sc., who have not already graduated Ph.D., M.A., B.D., LL.M., or M.Sc.

University Library

SCHOLARSHIPS

The University offers a certain number of Entrance, Senior and Graduate Scholarships, full particulars of which are given in the Scholarship Prospectus and the Calendar.

Scholarships tenable at the University of Leeds in scientific and technical subjects, (including Agriculture) as well as in Arts subjects, are also offered by the Leeds City Council and the County Councils of the North, East, and West Ridings of Yorkshire.

For further information application should be made as follows :---

For Leeds City Council Scholarships: To The Director of Education (Higher Section), Education Department, Leeds.

For West Riding Scholarships : To The Education Officer, Education Department, County Hall, Wakefield. Applicants should ask for Section X of Part II of the Handbook of the Education Committee.

For North Riding Scholarships: To The Secretary, Education Offices, County Hall, Northallerton.

For East Riding Scholarships : To The Secretary, East Riding County Council, Beverley.

UNIVERSITY LIBRARY

The University Library contains the following constituent parts :---

- I. The Brotherton Library.
- 2. The Medical Library.
- 3. The Agricultural Library.
- 4. Certain Departmental Libraries.

The Brotherton Library, erected by the generous gift of the late Lord Brotherton, contains the great majority of the books in arts and science. It also houses the Brotherton Collection, the private library of Lord Brotherton, presented to the University in 1935 by Mr. Charles Brotherton and Mrs. Dorothy Una McGrigor Phillips in accordance with Lord Brotherton's desire.

The University Library, apart from the Brotherton Collection, contains 328,050 volumes and pamphlets. The Brotherton Collection contains 37,798 volumes and pamphlets, 472 manuscripts, 4,105 deeds and 31,806 letters. The income of Lord Brotherton's legacy of £100,000 is used towards the upkeep of the Brotherton Library and the Brotherton Collection.

The income of Mr. Denison Lumb's gift of $\pounds 324$ is used for the purchase of books of an antiquarian character published not less than 250 years before the date of purchase.

For some time past the North Midland Branch of the Institution of Electrical Engineers has contributed $\pounds 25$ a year towards the upkeep of the electrical engineering section of the Library.

The books in the Brotherton Library are arranged on three floors. On the main ground floor and in the gallery are the author and subject catalogues, such classes of books in most subjects as are suitable for open access, a room for current and unbound periodicals, and a room for pamphlets.

The lower ground floor is devoted to the following purposes :--the Law Library; rooms for British and continental history sources and English local history; the library presented by the Leeds Philosophical and Literary Society to the University in 1936; a Newspaper Room; a series of rooms devoted to the Icelandic Collection of 11,991 volumes and pamphlets formed by Mr. Bogi Melsted and since augmented by many gifts from Iceland ; the Anglo-French collection of 2,600 volumes on the influence of Great Britain over France, mainly translations into French from English before the rineteenth century; the Blanche Leigh collection of 1,600 books on cookery and household management, including Babylonian tablets and many early printed books; the Chaston Chapman collection of 1,116 books on the history of science, including many early works on alchemy; the All Souls gift of 1,100 volumes of early science and theology; the Roberts gift of books on contemporary fine art and fine printing; the Ogden collection of Babylonian and Assyrian tablets and other relics and books on fine art and Biblical studies ; books on nineteenth century travel and topography from Ripon Cathedral; the Adar Mitrecey books on magic; a long series of French cartularies; the C. F. Tetley mountaineering books; the very complete Denison Roebuck collection of British postage stamps; 5,000 gramophone records presented by Mr. Pritchard; and many other gifts. One of the most important gifts ever made to the University, the Harold Whitaker atlases of the British Isles, about 400 in number, is for the time being housed in Dr. Whitaker's home near Halifax.

The Brotherton Collection is housed ir a series of rooms on the first floor of the Brotherton Library, the principal room being the Brotherton Room. The Collection includes mediæval manuscripts, 249 incunabula, a large number of other early printed books, the four Folios of Shakespeare, some hundreds of Civil War and other seventeenth century political pamphlets, and numerous seventeenth and eighteenth century plays and poems. Lord Brotherton acquired the early printed books collected by Lord Howard de Walden with their elaborate modern bindings. The strongest section of the Collection is in nineteenth century English literature, especially in such authors as the Brontës, Browning, Byron, Cobbett, William Morris, Sir Walter Scott, Shelley, Swinburne and Tennyson. The letters include the whole of the correspondence of Sir Edmund Gosse from such persons as Lord Haldane, Thomas Hardy, Henry James, Lord Balfour, Austin Dobson, Oliver Wendell Holmes, and very many others. The Bram Stoker letters also number many thousands. The French section includes the manuscripts of D'Eon de Beaumont, and the letters written to Victor Hugo by Juliette Drouet. There are extensive music and Yorkshire sections and also the late Alf Mattison's books and manuscripts on the history of the Labour Party.

The Medical Library, consisting of 21,417 volumes and pamphlets, is housed in the School of Medicine, the Agricultural Library of 24,634 volumes and pamphlets is housed in the Department of Agriculture, and there are small departmental libraries, mainly in the Faculty of Technology. The special regulations governing the Medical Library will be found in the Medical Prospectus. The Medico-Chirurgical Society of Leeds and the West Riding has given long sets of periodicals to the Medical Library and now contributes f_{100} a year towards the purchase of books.

BROTHERTON LIBRARY

Hours of Opening*

The Library is open on

- (a) Monday, Tuesday, Thursday and Friday during term from 9 a.m. to 9 p.m., except during the period of the Annual Inspection and the last fortnight of the third term, when it is open from 9 a.m. to 5.30 p.m.
- (b) Wednesday during term from 9 a.m. to 5 p.m.
- (c) Saturday during term from 9 a.m. to 1 p.m.
- (d) From Monday to Friday during vacation from 9 a.m. to 5 p.m.
- (e) Saturday during vacation from 9 a.m. to 12.30 p.m.

It is closed during one week at Christmas, and on the public holidays.

General Regulations

I. Members of the University, Associates of the Yorkshire College and holders of Diplomas of the University are entitled to the use of the Library subject to the following regulations.

^{*}The hours of opening are meantime subject to alteration.

Persons not members of the University may be allowed by the Librarian to consult books on stating the subject of their studies and on producing a satisfactory recommendation. In special cases and on payment of 5/- for twelve months they may also be allowed to borrow books subject in particular, *mutatis mutandis*, to Regulations 23-26 and 28-29.

2. No book shall be removed from the Library unless the borrower shall have first filled in the form provided.

3. No mark of any kind shall be made in the Library books or periodicals. Any loss of, or injury to, a book shall be reported to the Librarian, who shall require the person responsible to pay a sum not exceeding that which will be necessary to make good the loss or injury. Should it be impossible to make good the loss or injury, such fine shall be imposed as the Library Committee may determine.

4. The Librarian has power to suspend the Library privileges of any person who breaks the rules of the Library. All such cases shall be reported to the Library Committee.

5. Reference books marked with a yellow label may, subject to the permission of the Librarian, be taken out of the Library, but only after 4 p.m. on Monday, Tuesday, Thursday and Friday, and after 12 (noon) on Wednesday and Saturday. They must be returned before 10 a.m. on the next day on which the Library is open.

6. Certain books of exceptional importance or rarity, labelled "Not to be taken out of the Library," including dictionaries, encyclopædias and current numbers of periodicals, may not be removed from the Library without the authority of the Librarian. Theses cannot be consulted or borrowed without the consent of the head of the appropriate department.

7. No person shall borrow a book from the Library if he has in his possession any book which he has kept beyond the time allowed by the regulations, or if any fine or charge which he has incurred has not been paid.

8. The Librarian shall be at liberty to grant special facilities for the use of books during a limited time to any person entitled to the use of the Library.

9. No smoking shall be permitted within the precincts of the Library and the rooms appertaining thereto.

10. Readers requiring books from the lower ground floor must reserve them or apply for them before 5 p.m. after which time this portion of the Library will be closed.

11. No bag, attache case or parcel may be taken into the Library. Provision has been made for depositing such articles in the vestibule.

Brotherton Library

12. In view of the fact that very large numbers of books are available to readers by direct access to the shelves, all books whether University Library books or not, are examined and checked at the exit before they are removed from the building.

13. If classes are held in any of the recesses opening out of the main reading room, the door to any recess so used shall remain closed only during the session of the class. The Librarian and his staff shall at all times have the right of access to the books in such a recess.

14. Books shall not be sent through the post to individual borrowers save in exceptional circumstances.

15. Books may not be taken abroad without the special permission of the Librarian.

16. No member of the Academic Staff shall be entitled to have at one time more than twenty-five books borrowed from the Library, save with the special permission of the Librarian.

17. Any member of the Academic Staff shall be entitled to take out such books as he requires up to the prescribed number and to retain them until such time as he may receive a notice that any of these books are overdue, in which case such book or books shall be returned without delay to the Library. A book shall be regarded as overdue when it has been in the possession of the borrower for a fortnight and is required by some other person.

18. Postgraduate research students shall have the same privileges and be subject to the same regulations in respect of borrowing from the Library as members of the Academic Staff, save that they may not borrow more than ten books from the Library at one time.

Annual Inspection

19. All books must be returned to the Library by 5 p.m. on Monday in the last week but one of the second term. No book shall be borrowed again until the books on the shelves in the section involved have been checked.

20. A fine of twopence per book shall be imposed, up to the limit of the price of the book, for every day that it is detained beyond the time for its return for the inspection. The same shall apply to books lost, when the loss shall not have been notified to the Librarian before the days of inspection.

Regulations affecting present and past Students of the University

21. Students who have paid a composition fee for the year, or have paid class fees of $\pounds 4$ or upwards, are entitled to the use of the Library during a session without further payment. All other day students will be admitted to the use of the Library on payment of 2s. 6d. a term or 5s. a session, in addition to their class fees.

22. All evening students and all past students who are neither graduates nor holders of Diplomas of the University are entitled to the use of the Library on payment of a fee of 2s. 6d. a session.

23. No present or past student shall have the right to borrow more than three books at one time. Any such student desiring to borrow more than this number of books shall make application to the Librarian.

24. Every book must be returned to the Library on or before the fourteenth day following that on which it was taken out. A book may, however, be renewed for a further fortnight until four weeks have elapsed since its first issue, provided that no application for the use of the book by another person has been received in the meantime.

25. All books must be brought to the Librarian for renewal, except when an application for renewal has been made and granted on the day before that on which the return of the book falls due. Applications for renewal may be made personally or by post.

26. All books must be returned to the Library before the end of the second term in accordance with Regulations 19 and 20.

27. Students provided with a written recommendation from a Professor or Lecturer shall be entitled with the permission of the Librarian to borrow the books specified in Regulation 6, but books taken out under this rule must be returned to the Library before the borrower leaves the University buildings.

28. Any person borrowing a book under Regulation 5, and failing to return it by the time therein specified, shall be fined 2d. a day, and any person who does not comply with Regulation 24, shall be fined 2d. if the book is returned within seven days following the day on which it is due and 4d. a week for each week or portion of a week after that period. A notice shall be posted to the borrower on the week-day following that on which the return of the book was due, informing him that a fine is being incurred.

29. Books may be taken out at the beginning of, or during. any of the vacations, and may be retained until the borrower has received notice that they are overdue. A book shall be regarded as overdue when, having been in the possession of the borrower for a fortnight, it is required by some other person. It shall be returned to the Library within seven days following the day on which a notice is posted to the borrower informing him that it is overdue, subject to a fine of 2d. for the first week or portion of a week thereafter and 4d. a week for each successive week or portion of a week. All books taken out during any of the vacations shall be returned within the first three days of the ensuing term, subject to a fine of 2d. for the first week or portion of a week thereafter and 4d. a week for each successive week or portion of a week. A notice shall be posted to the borrower on the fourth day of term informing him that a fine is being incurred.

Agricultural Library

Regulations respecting Special Libraries and Libraries on the Lower Ground Floor

I. The lower ground floor is devoted to the following purposes:—(a) the Law Library; (b) a room for Record Publications; (c) the library presented by the Leeds Philosophical and Literary Society; (d) a Newspaper Room; (e) the Icelandic Collection; (f) rooms for the Anglo-French Collection and for other special collections.

2. General Status.—Special Libraries are subject to the regulations of the University Library, except in so far as modified by the following Regulations.

3. Law Library.—All members of the University shall have the right to consult the books in this Library, but students other than law students may not use the room unless they are consulting the books on the shelves.

4. Admission to Special Libraries other than the Law Library.-

(a) Academic Staff.—Members of the Academic Staff requiring direct access to the room on the main floor containing pamphlets or to the Special Libraries on the lower ground floor shall apply to the Librarian for admission.

(b) Students.—The Librarian may give permission to students to read in any of the Special Libraries upon the recommendation of the Head of the Department concerned.

Students thus given permission shall apply to the Librarian for admission to the room required and shall sign a register kept for that purpose.

5. General use.—In all other respects the books in the Special Libraries shall be under the same regulations as all other books and may be consulted on application to the Librarian by all who are entitled to use the University Library.

Regulations for the Agricultural Library

I. General Reference Books.—These books may not be removed from the library until after 5 p.m., except by members of the staff. They must be returned by 10.15 a.m. next day. They may be removed from the library on Saturdays after 11.45 a.m., and must then be returned by 10.15 a.m. on the following Monday. Members of the staff borrowing books before 5 p.m. must not take them out of the building until after that time.

2. Advisory Reference Books, i.e., books which may be required urgently at very short notice in connection with advisory work.— Conditions to be the same as for General Reference Books with the exception that students may not borrow the books.

3. Serials.—Current numbers may be borrowed under the same conditions as Advisory Reference Books.

Regulations for the Brotherton Collection

A. General Conditions affecting access to the Brotherton Collection Rooms

1. The rooms containing the Brotherton Collection are reserved exclusively for the purposes of the Collection and for persons having the right of access to the rooms.

2. Entrance to the Collection shall be only by way of the main entrance to the Brotherton Library building.

3. No attaché case may be brought into the Brotherton Library building.

4. Exit from the Brotherton Library building by the main entrance will be subject in every way to the regulations imposed by the University on all readers, the attendant being instructed to examine all books and parcels that are taken past the barrier.

5. Smoking is strictly forbidden.

6. The rooms are open to authorised readers from 9 a.m. to 1 p.m., and from 2.30 to 5 p.m. from Monday to Friday; on Saturday from 9 a.m. to 12 noon.

7. The rooms are closed for one week at Christmas, on the public holidays, and on all occasions when the Brotherton Library is closed.

B. Access to the Brotherton Collection

I. Members of the Court, Council and the Senate of the University, members of the academic staff of the University and such administrative officers as the Council of the University may decide, and, with special permission, graduates and undergraduates of the University shall be allowed to visit the rooms during any of the statutory hours when the rooms are open, always provided that such persons shall have no access to the shelves or cases unless accompanied by the Keeper. They shall sign the register upon entering.

2. Members of the Court, Council, Senate and academic staff may have access to the Collection for purposes of research and reference subject to the permission of the Keeper, and upon signing the register.

3. Graduates and undergraduates of not less than 18 years of age may be admitted as readers (a) on the recommendation of a member of the professorial staff and/or the Vice-Chancellor, (b) on receiving the ticket issued for that purpose, defining the object of the research or the books of reference to be consulted, and (c) after signing the register. Each ticket shall be available for such period as may be decided in each case, but not longer than three months at a time.

4. Persons other than members of the University may be admitted as Readers on the following conditions :---

(a) Every application shall normally be made two days at least before admission is required.

Holden Library

- (b) Applicants must apply to the Keeper and state in writing their place of residence, occupation, age and qualifications and the object for which they wish to use the Collection. The application must be accompanied by a written recommendation from a person of recognised position having personal knowledge of the applicant and certifying his fitness, reliability and competence to make proper use of the Collection.
- (c) The application must receive the approval of the Keeper and the Librarian. All applications shall be reported to the Vice-Chancellor and to the Brotherton Collection Committee.
- (d) On permission being granted the applicant will receive a ticket, which must be presented to the attendant on entering the building and to the Keeper on entering the Brotherton Collection, and shall be available for such time as may be decided in each case. He shall sign the register each day. Such tickets shall not be transferable and shall be returned when expired.

5. Individual persons not being members of the University may be given special permission to visit the Collection accompanied by the Keeper.

6. Groups of persons not being members of the University may be admitted to visit the Collection at such times as may be prescribed.

7. In the absence of the Keeper, the Librarian or his accredited deputy shall act in his place.

C. Rules applicable to all Readers

1. Readers admitted to use the Collection shall be subject to the general regulations of the University Library so far as relevant.

2. No books, MSS. or other articles in the Collection may be removed from the Brotherton Collection Rooms.

3. Books of exceptional value or rarity may be consulted only in the presence of the Keeper.

4. The use of fountain pens or ink while consulting the books or MSS. is forbidden, and no tracing, copying or reproduction shall be allowed without the express permission of the Keeper.

5. No mark of any kind may be made by a reader on any book or MS.

6. The Keeper, in consultation with the Librarian, may cancel or suspend the use of a reader's ticket at any time when deemed necessary. Such cancellation or suspension shall be reported to the Committee.

HOLDEN LIBRARY

Particulars of the Regulations governing the Holden Library can be obtained on application to the Librarian.

University Parliamentary Constituency

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UNIVERSITY PARLIAMENTARY CONSTITUENCY

By the provisions of the Representation of the People Act, 1918, the University of Leeds forms part of the English University Constituency, which returns two members to Parliament.

Section 2 of the Act states: "A man shall be entitled to be registered as a Parliamentary elector for a University constituency if he is of full age," *i.e.* 21 years, "and not subject to any legal incapacity, and has received a degree (other than an honorary Degree) at any University forming, or forming part of the constituency."

Section 4 states: "A woman shall be entitled to be registered as a Parliamentary elector for a University constituency if she has attained the age of thirty years* and . . . would be entitled to be so registered if she were a man."

The University Court, in the exercise of powers conferred upon it by section 19 of the Act has laid down the following conditions of registration :—

- (a) Persons who have graduated before the passing of the Act (February 6th, 1918), and who are otherwise qualified, will only be entered on the register if
 - i. they make written application to the University.
 - ii. they have paid a registration fee of £1 if they are not members of Convocation, or of 9s. 6d. if they became before August 1st, 1918, members of Convocation.
- (b) Persons who graduate at or after Midsummer, 1918, will if they have paid before graduation a special combined fee of \mathcal{L}_{I} , be entered on the roll of Convocation and also entered on the Parliamentary Register as soon as they have completed the qualifying age. If this special fee is not paid at the time of graduation, they will be charged a fee of \mathcal{L}_{I} for registration as Parliamentary electors.
- (c) All persons who graduate on or after June 1st, 1926, having already paid, in accordance with Ordinance XXV, a Convocation fee of £1, will be entered on the Parliamentary register without further fee as soon as they have completed the qualifying age.

"Under the Equal Franchise Act, 1928, the qualifying age is now 21 years.

Claims may be made up to the 31st July in each year and the Register will come into effect from the 1st October following.

Application for registration must be made on the official form, which may be obtained from

The Registration Officer,

The University, Leeds.

Change of address on the part of an elector should be notified promptly to the Registration Officer.

All communications requiring a reply should be accompanied by a stamped addressed envelope.

APPOINTMENTS BOARD

The Board has been set up for the purpose of assisting present and past students of the University who desire help in obtaining posts. A detailed register is kept of all students who enrol, and notices of suitable appointments are sent out regularly. The Secretary is in touch with the Ministry of Labour, the Universities Bureau, the Federation of British Industries, and all Government Departments. Many Education Authorities now notify their vacancies direct to the Secretary, and the number of enquiries from private employers is steadily increasing.

It is desirable to emphasise the fact that registration with the Board is permanent, and the Secretary endeavours to keep up to date information regarding the whereabouts and nature of employment of all Old Students who are registered with the Board.

No fees are charged either for registration or for negotiations conducted between students and prospective employers.

The Board will welcome the views of employers on matters relating to the employment of University graduates in business houses, and will at all times be glad to hear of suitable vacancies.

All communications should be addressed to the Secretary, Appointments Board, The University, Leeds.

Academic Dress

ACADEMIC DRESS

All Hoods are to be of a Green shade, combined with Black, White, Scarlet, or with one another, to produce the variations required for the several Degrees, namely:

B.A., a self-coloured Hood of Dark Green shade.

B.D., a Dark Green Hood, with White Lining and Band one inch of Scarlet laid on the White Silk.

B.Com., a Light Green Hood, lined with Dark Green.

B.Sc., a self-coloured Hood of Middle Green shade.

LL.B., a self-coloured Hood of Light Green shade.

M.B. and Ch.B., a Dark Green Hood, lined with Light Green.

B.Ch.D., a Dark Green Hood, lined with Middle Green. M.A., a Dark Green Hood, with White Lining.

M.Sc., a Middle Green Hood, with White Lining.

M.Ed., a Dark Green Hood, with White Lining and Band one inch of Middle Green laid on the White Silk.

LL.M., a Light Green Hood, with White Lining.

M.Com., a Light Green Hood with White Lining and Band one inch of Dark Green laid on the White Silk.

- M.Ch., a Dark Green Hood, edged with Light Green, and lined with White.
- M.Ch.D., a Dark Green Hood, edged with Middle Green and lined with White.

All Bachelors' Hoods are to be lined, and all Bachelors' and Masters' Hoods are to be of the single or Oxford pattern.

The Gown of a Doctor (other than a Doctor of Divinity or a Doctor of Philosophy) is to be of Scarlet, with facings and sleeve linings of the shade of Green distinctive of his faculty. The Hood is to be of Scarlet, lined with the distinctive shade or shades of Green. The Full Dress Cap is to be of the usual pattern, with a Gold Cord, and a lining of the shade of Green distinctive of the faculty.

The Gown of a Doctor of Divinity is to be of Scarlet with sleeve linings of Dark Green and facings of White. The Hood is to be of Scarlet, lined with Dark Green, and bound with White.

Robemakers to the University

The Gown of a Doctor of Philosophy is to be of Green, with sleeve linings of Green, and facings of Green bound with Scarlet. The Hood is to be of Green, lined with Green, and with narrow bindings of Scarlet. The Full Dress Cap will be Black Velvet of the usual pattern.

The academic dress of a Licentiate in Dental Surgery is to comprise a gown without hood. The gown is to be of black with facings and yoke of middle green. The sleeves are to be of elbow length bordered with green outside and with white inside.

The Senate of the University has laid down the following definitions of correct academic dress for ceremonial occasions :---

(a) Academic undress : Black gown.

(b) Academic dress :---

Bachelor	•••	Black Bachelor's gown with appro- priate hood.
Master		Black Master's gown with appro- priate hood.
Ph.D.		Black Master's gown with Ph.D. hood.
Doctor		Black Master's gown with Doctor's
(c) Full academ	nic d	hood.

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	Bachelor	Black Bachelor's gown with appro-
		priate hood.
	Master	Black Master's gown with appro-
		priate hood.
	Ph.D	Ph.D. gown without hood.
	Doctor	Scarlet gown, without hood if the
		gown is faced with the distinctive
		colour of the specific Doctor's
		degree.

ROBEMAKERS TO THE UNIVERSITY

Ede & Ravenscroft, 93 and 94, Chancery Lane, London. Representatives of the firm attend on Degree Days to robe those who are to be presented for degrees.

The Year Book of the Universities

ARMS OF THE UNIVERSITY

The Arms of the University are "Vert an open Book proper edged and clasped Gold inscribed with the words 'Et Augebitur Scientia' between in chief three Mullets Argent and in base a Rose of the last seeded proper, and for the Crest on a Wreath of the Colours A Greek Sphinx sejant Gules."

SENIOR TRAINING CORPS

A contingent of the Senior Division of the Officers' Training Corps (now known as the Senior Training Corps) was formed at the University in July, 1909, and was accepted by the War Office.

Information as to conditions of membership, &c. may be obtained from the Commanding Officer.

THE YEAR BOOK OF THE UNIVERSITIES OF THE EMPIRE.

This volume is published annually in March and contains an epitome of the Calendars of the Universities of the British Empire and a brief record of the developments in each University, together with a number of Appendices which include among other useful information particulars relating to professions and careers for which University studies are a fitting preparation, qualifications for admission to a first degree in the Universities of Great Britain and Ireland. details of open Fellowships, Postgraduate Scholarships and Grants for advanced study and research and short descriptions of the centres of scientific research and information within the Empire. Copies (15/- and postage) may be obtained from the Universities Bureau of the British Empire, 88a, Gower Street, London, Universities which are Ordinary Members of W.C. I. the Universities Bureau and university colleges and institutions connected therewith, as well as Associate and Additional Members, and members of the staffs of all such institutions, may obtain copies direct from the Bureau at a reduced price of 10/- net. infine-

STUDENTS' SOCIETIES

The University Union comprises the Cricket, Football (Rugby and Association), Tennis and other athletic Clubs, and undertakes the management of the Gymnasium, and the Debating Society.

The Colours of the University Union are Green, White and Maroon.

The formation of all Societies is subject to the final approval of the Union Committee. Such Societies are divided as follows :---

INCORPORATED UNION SOCIETIES.

- I. The Union shall accept full financial responsibility for all such Societies.
 - 2. All members of the Union shall be members of such a society without further fee.
 - 3. The President of the Union shall be *ex-officio* President of such societies.
 - 4. The other officers and members of the Committee shall be elected at the Annual General Meetings of such societies.
 - 5. The Constitution of all such societies shall be approved individually by the Union Committee.

UNION SOCIETIES.

- 1. Such Societies shall have the right to use a room in the University Union for the purpose of assembly.
- 2. Such Societies shall conform to the Drafted Constitution for Societies.
- Note.—The Union is free to support any Union society by any means within its power, such as financial assistance, the use of Union Rooms, and publication of information concerning the Society in the Handbook.

RECOGNISED BODIES.

The Union Committee has authority to extend the official recognition of the Union to such organised bodies as it may consider worthy. This recognition will be extended to those bodies whose nature and objects preclude their being included in the preceding two paragraphs. The constitution of bodies seeking recognition must be submitted to the Union Committee for consideration. Recognition does not necessarily imply that the Union accept any responsibility for the body recognised, but the Union Committee may, at its own discretion, assume a limited amount of responsibility. It may also grant money. Recognised bodies are not entitled to use the name "Leeds University Union."

Lodging and Boarding Houses

PHYSICAL TRAINING

It is hoped that students will participate in some form of physical education (physical training, gymnastics, athletics, games or organised outdoor activities), and they are advised to consult the Director of Physical Education at the time of enrolment.

The Gymnasium is free to all members of the University Union, except when reserved for students taking special courses of study.

LOCKERS FOR COATS AND BOOKS

The use of a coat locker may be obtained for the session, or a part of it, by depositing 7s. 6d. with the Head Porter, who will lend the student a key, which will, however, remain the property of the University. A charge of 4s. per session will be made, the balance of the deposit money being repaid when the key is returned, provided the return be made not later than one week after the end of the session.

A student will be charged for any damage done to the lockers while in his possession, or for loss of keys. The loss of a key should be immediately reported to the Head Porter.

LODGING AND BOARDING HOUSES

(i) MEN STUDENTS.

A Register of approved lodging-houses is kept at the University.

If a student takes lodgings which are not already on the register, he must immediately apply to the Warden of Non-resident Men Students for a form of application for registration of lodgings. This form must be filled in and returned at once, when the lodgings will be visited on behalf of the University, and if they do not satisfy the prescribed conditions the student will be required to leave them.

Students must consult the Warden of Non-resident Men Students concerning any proposed change of lodgings, and any change of address must be notified immediately it becomes effective. All communications with regard to lodgings should be addressed to Warden of Non-resident Men Students, The University, Leeds, 2.

(ii) WOMEN STUDENTS.

Women Students are not normally expected to live in lodgings but under wartime circumstances this regulation has had to be relaxed. Any student wishing to do so should first consult the Assistant Warden of Women Day Students who will help her to find suitable accommodation. Letters should be addressed to the Assistant Warden of Women Day Students, the University, Leeds, 2.

THE UNIVERSITY HALLS OF RESIDENCE

The University has provided a number of Halls of Residence for men and women respectively. Students from all departments of the University are admitted, and the residents of each Hall are encouraged to take an active part in the social as well as the academic life of the University, and to maintain within the Halls the necessary discipline for themselves. Places are reserved in the Halls of Residence for Women for Recognised Students who are accepted by the Department of Education and cannot reside at home.

For Women

OXLEY HALL Warden : Miss H. J. McLaren, M.A. WEETWOOD HALL .. Warden : Mis. Redman King, B.Sc.

> These Halls are situated in their own grounds, adjacent to the University Athletic Grounds and tennis courts.

For Men

DEVONSHIRE HALL .. Warden : Professor FRANK SMITH. LYDDON HALL .. Warden : Mr. C. A. SMITH. WOODSLEY HOUSE .. Warden : Mr. W. W. CHAMBERS. Refectory

Fees.

if p sum c	for 3 t aid in at begin of period	one ning l of	begir İ	ning o f fee p instalr	ayable at f each term aid in nents.	
1	esidence	11		20		
Women's Halls-			Terr		m Term	
women's naus-	£		£	£	£ s. d	-
Single study-bedroom	74		30	25	20 5 0)
Shared study-bedroom	71		29	24	1950)
Men's Halls—						
Uniform fee	75		38	38	-	

NOTES.

(1) Where permission is granted to a student who has already paid a full session's fee to be in residence for a further period different from, or additional to, the normal terms, the charge will be at the rate of $\pounds 2$ 5s. a week.

(2) The fees payable by Recognized Students in Training are reduced by grants from the Ministry of Education.

(3) A deposit of $\pounds I$ will be payable at the beginning of each Session by students in Women's Halls to cover cost of possible breakages, &c., the balance not called upon being refunded at the end of the session. This deposit will be payable with the Hall of Residence Fee.

Recognised Students in Training.

The fees as stated above, are reduced by the amount of grant paid to the University by the Ministry of Education. (The conditions of award and the rate of grants are given in the prospectus of the Department of Education).

REFECTORY

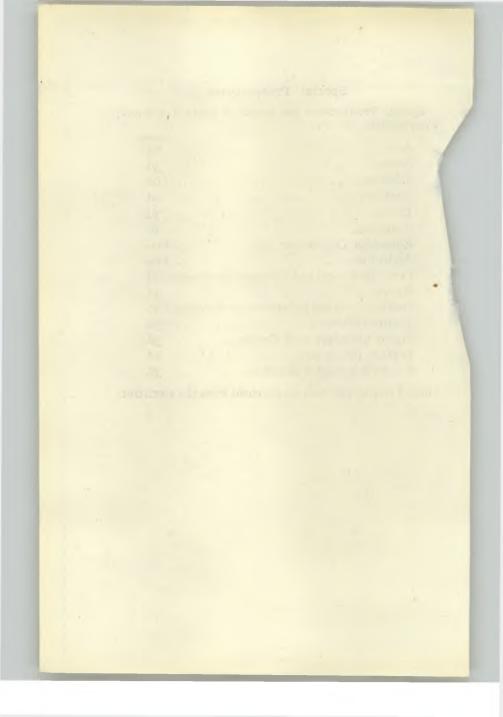
For the convenience of students, lunches are served daily in the University Refectory, from 12.30 to 2 p.m. Cold meats, tea, coffee, and other light refreshments may also be obtained up to 6 p.m.

Special Prospectuses

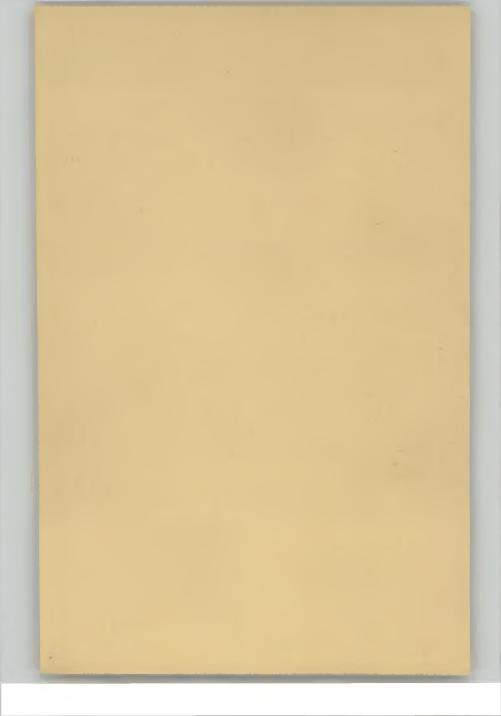
Special Prospectuses are issued of courses of study, examinations, &c. in-

ŀ	RICES.
	6d.
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These Prospectuses may be obtained from the Registrar.







DEGREES IN ARTS

ORDINANCE II

Ordinance

 The degrees in Arts shall be: Bachelor of Arts (B.A.). Bachelor of Music (B.Mus.). Bachelor of Divinity (B.D.). Master of Arts (M.A.). Master of Education (M.Ed.). Doctor of Philosophy (Ph.D.). Doctor of Letters (Litt.D.). Doctor of Divinity (D.D.).

DEGREE OF BACHELOR OF ARTS

2. The degree of Bachelor of Arts shall be conferred, either (i) as an Ordinary degree or (ii) as an Honours degree.

3. All candidates for the degree of Bachelor of Arts shall be required to have passed the examination for Matriculation or to have obtained a certificate of exemption therefrom, and thereafter to have pursued approved courses of study for not less than three academic years.

Candidates will not be admitted to the courses of study Regulations for the degree of Bachelor of Arts unless they have satisfied the examination requirements for entry upon degree courses as laid down by the Joint Matriculation Board.

All intending students must comply with any special requirements of the Honours School which they propose to enter; in some of these a previous knowledge of certain subjects is a pre-requisite for admission.

Ordinary Degree of Bachelor of Arts

4. All candidates, other than those proceeding to the Ordinance degree of B.A. in Theological Studies, shall be required to attend approved courses of study, and to pass the prescribed examination or examinations in *either* :—

(a) Three subjects for three years each; or

2

- (b) Two subjects for three years each, one other subject for two years, and one other subject for one year; or
- (c) One subject for three years, and three other subjects for two years each; or
- (d) One subject for three years, two other subjects for two years each, and two other subjects for one year each.

5. Candidates proceeding to the degree of B.A. in Theological Studies shall be required to attend approved courses of study, and to pass the prescribed examination or examinations in *either* :—

- (a) Three subjects for three years each, and one other subject for two years; or
- (b) Three subjects for three years each, and two other subjects for one year each; or
- (c) Two subjects for three years each, two other subjects for two years each, and one other subject for one year.

6. All candidates shall select their subjects from those specified in the Regulations for the Ordinary degree.

7. All candidates, other than those proceeding to the degree of B.A. in Theological Studies, shall be required to comply with the following :—

- (a) Either three or four approved courses shall be attended in the first year. If three approved courses are attended, not more than two of these may be languages other than English. If four approved courses are attended, not more than three of these may be languages other than English.
- (b) One language other than English shall be included for not less than two years.
- (c) Not more than one of the Sciences specified in the Regulations shall be included.

8. Candidates proceeding to the degree of B.A. in Theological Studies shall be required to comply with the following :—

- (a) Not less than four¹ approved courses, one of which shall be Greek or Latin, shall be attended in the first year, and not more than three of these may be languages other than English.
- (b) One language other than English shall be included for not less than three years.
- (c) One of the following one year courses shall be included : General Economics or Philosophy I.
- (d) Not more than one of the Sciences specified in the Regulations may be included.

9. Candidates shall not be permitted to present themselves for examination in any subject unless they have regularly attended the prescribed course of study, and performed the work of the class to the satisfaction of the Professor or Lecturer.

10. Candidates, other than those proceeding to the degree of B.A. in Theological Studies, may be awarded Honours (without division into classes) in General Studies, if their performance is considered by the Committee of Examiners to be of sufficient merit.

II. Candidates proceeding to the degree of B.A. in Theological Studies shall be awarded Distinction, if their performance is considered by the Committee of Examiners to be of sufficient merit.

I. The subjects in which courses are approved for Regulations the Ordinary Degree are as follows :---

(a) Greek, Latin, Hebrew, French, German, Spanish, Russian, Italian, English, History, Philosophy, Economics, Anthropology, History of Religion, Biblical Studies, Geography, Mathematics, Music, Icelandic.[†]

1Candidates for the degree of B.A. in Theological Studies may take three subjects instead of four in the first year and an additional subject in the third year.

flcelandic at present can only be taken as a one year or a two years course.

Approved courses in these subjects extend over either one year, two years, or three years.

(b) Philosophy of Religion.

4

For students proceeding to the degree of B.A. in Theological Studies (Approved courses in this subject extend over one or two years).

(c) Sciences :- Physics, Chemistry, Zoology, Botany, Geology, Statistics.

Approved courses in these subjects extend over one year only.

(d) Old Testament History, Literature and Religion; New Testament Language and Literature; Biblical and Historical Theology.

Approved courses in these subjects, which will extend over one or two years, may be taken only by students reading for the degree of B.A. in Theological Studies.

2. Candidates proceeding to the degree of B.A. in Theological Studies must, in addition to conforming with the terms of the Ordinance for the Ordinary Degree of Bachelor of Arts and the relative Regulations, satisfy the following conditions:—

- (a) The first year courses must be selected in terms of Article 8 of the Ordinance from groups (a), (b) and (c) of Section I of the Regulations for the Ordinary Degree of Bachelor of Arts, and must be taken at the University.*
- (b) The second and third year courses must be selected from the following subjects :---
 - (1) Old Testament History, Literature and Religion.
 - (2) New Testament Language and Literature.
 - (3) Hebrew Language and Literature.
 - (4) Ecclesiastical History.
 - (5) History of Religion.
 - (6) Philosophy of Religion.
 - (7) Biblical and Historical Theology.

^{*}As a temporary measure, pending further consideration, Hebrew will be a compulsory subject in the first year in the Session 1946-7.

Ordinary Degree of B.A.

- (c) Candidates who have taken the course in Classical Greek in the first year and the courses in New Testament Language and Literature in the second and third years will be regarded as having satisfied the requirements of the Ordinance, Article 8 (b). This combination of courses will constitute a three years course for the purpose of the Ordinance, Article 5.
- (d) Hebrew may be combined with Old Testament History, Literature and Religion to constitute approved *two* or *three* years courses for the purposes of the Ordinance, Article 5.
- (e) Ecclesiastical History may be combined with Biblical and Historical Theology to constitute an approved *two* years course for the purposes of the Ordinance, Article 5.
- (f) Philosophy I may be combined with Philosophy of Religion to constitute an approved two or three years course for the purposes of the Ordinance, Article 5.

3. Candidates proceeding to the degree of B.A. in Theological Studies will be required to attend at the University for not less than four hours a week during the second and third sessions and to pass the relevant examinations in the subjects attended. If they select Hebrew or Old Testament History, Literature and Religion, or History of Religion, in the second and third sessions, or in one of those sessions, they must take at least one year's lectures in these subjects in the University, either in their second or in their third year.

4. Any course extending over one year for the degree of Bachelor of Arts with Honours in any School, may, with the sanction of the Board of the Faculty of Arts, be accepted as a *one* year course for the Ordinary degree.

5. Candidates holding a Higher School Certificate in any subject selected for the Ordinary Degree may, subject to the approval of the Board of the Faculty of Arts, substitute for the course and examination for the first year in that subject those of the second year, and for the course and examination for the second year those of the third year. If the subject is studied for three years a more advanced course may then be attended in the third year, success in the examination in such course being recorded on the graduation certificate.

6. Subject to such other restrictions as are set forth in the Ordinances and Regulations, approved one year or two years courses may be attended at any period subsequent to Matriculation.

7. Candidates may present themselves for examination in any subject when they have satisfactorily completed the course. Where subjects are studied for two years or three years candidates must pass the examination in the course appropriate to each year before proceeding to the course for the next year.

8. The examination in each modern foreign language shall include an oral examination.

9. The examinations will ordinarily be held in June of each year, but supplementary examinations in one year subjects will also be held in September. Candidates will be accepted for the supplementary examination in any subject only with the special permission of the Senate.

N.B.—The latest date of entry and payment of fees for B.A. degree examinations (ordinary and honours) held in June, will be MARCH 1st in each year.

Prescribed Courses

(The texts prescribed and the periods selected for study in certain subjects will be found set out in subsequent pages under "Courses in Arts").

GREEK.

ORDER.			
One Year Course :		Greek I	
Two Years Course :	1st year :	Greek I	
	2nd year :	Greek II	
Three Years Course :	ist year :	Greek I	
	2nd year :	Greek II	
	3rd year :	Greek II	I
LATIN			
One Year Course :		Latin I	
Two Years Course	1st year:	Latin I	
	2nd year :	Latin II	
Three Years Course :	1st year :	Latin I	
	2nd year :	Latin II	
	3rd year :	Latin II	I

Ordinary Degree of B.A.

HEBREW		TT bas f
One Year Course :		Hebrew I
Two Years Course:	1 st year :	Hebrew I
	2nd year :	Hebrew II
Three Years Course :	1st year :	Hebrew I
	2nd year :	
	3rd year:	Hebrew III
English		
One Year Course:		English IA and IB
Two Years Course :	1st year :	English IA and IB
	2nd year :	English IIA, IIB and IIC
Three Years Course :	ist year :	English IA and IB
	2nd year :	English IIA, IIB and IIC
	3rd year :	English IIIA and IIIB
	5	
ICELANDIC.		
One Year Course :		Icelandic IA and IB
Two Years Course :	1st year :	Icelandic IA and IB
ino reals coulde.	2nd year :	Icelandic IIA and IIB
	zna your .	roomandie in and in
FRENCH.		
One Year Course :		French IA or IB and Ic
Two Years Course :	1st year:	
I wo Tears Course.		French IIA and IIB
Three Years Course	1st year:	
Three Tears Course	2nd year:	French IIA and IIB
	3rd year :	French IIIA and IIB
	3ra year.	FIGHCH THA and THE
ITALIAN.		
One Year Course :		Italian I
Two Years Course :	1st year :	Italian I
The Tours course.	2nd year :	Italian II
Three Years Course :	ist year :	Italian I
Three Tears Course .	2nd year :	
	3rd year :	Italian III
	gra year .	I CONTAIN III
GERMAN.		
One Year Course :		German I and IIB
Two Years Course :	ist year :	German I and IlB
two rears courset	2nd year :	
Three Years Course :	ist year :	German I and IIB
intes rears course.		German IIA and IIB
	3rd year:	German IIIA and IIB
	J'u your.	oorman iiin and iie
RUSSIAN.		
One Year Course:		Russian IA and IIB
Two Years Course :	ist year:	
		Russian IIA and IIB
Three Years Course :	ist year :	Russian IA and IIB
the second se		Russian IIA and IIB
	3rd year :	

SPANISH.		
One Year Course :		Sponish I
Two Years Course :	ist year :	Spanish I Spanish I
I WO I Cars COUISE .	2nd year:	
Three Years Course :	1st year :	
Three Tears course.	2nd year :	
	3rd year :	
HISTORY.	3/10 900/1	spentin 11
One Year Course :		Any one of History I to VI
Two Years Course :	1st year :	Any two of History I to VI
	2nd year :	Any two of History I to VI
Three Years Course :	1st year :	Two courses selected from
	-	History VIII to X
	2nd year :	Two courses selected from
	2	History VIII to X
	3rd year :	Two courses selected from
		History VIII to X
Philosophy.		
One Year Course :		Philosophy I.
Two Years Course :	1st year :	Philosophy I.
	2nd year :	Philosophy II.
Three Years Course :	1st year :	Philosophy I.
	2nd year :	
	3rd year :	
		IIIB and IIIC or IIIA and
ANTHROPOLOGY.		IIIB.
One Year Course :		Anthropology I.
Two Years Course :	1st year :	Anthropology I.
	2nd year :	Anthropology II.
Three Years Course :	Ist year :	Anthropology I.
	2nd year :	
	3rd year :	Anthropology III.
HISTORY OF RELIGION.	5	F85
One Year Course :		History of Religion I.
Two Years Course :	ist year :	History of Religion I.
	2nd year :	
THEOLOGY :		
Old Testament Histo	ry, Literat	ure and Religion.
New Testament Lang	uage and	Literature.
Ecclesiastical History		
Philosophy of Religio	n.	
Biblical and Historica	al Theology	7.
Courses extend over	r one or t	wo years.
BIBLICAL STUDIES.		9.4
One Year Course:		Biblical Studies I
Two Years Course :	1st year :	
	2nd year :	
Three Years Course :		
	2nd year :	
	3rd year :	Biblical Studies II

LCONO	MICS.					
One	Year (Course :				
Two	Years	Course	:	Ist ·	year	:
				and	110/14	, .

Economics I

Economics I

and year: Economics II and one of the following: IIE, IIF, IIH, IIJ, or Economics II and two of the following: IIE, IIC, IID

Three Years Course : 1st year :

Economics I

2nd year: Economics II and one of the following: IIE, IIF, IIH, IIJ, or Economics II and two of the following: IIB, IIC, IID

3rd year :

Either (a) Any two of the following: IIE, IIF, IIH, IIJ, or (b) One of the following: IIE, IIF, IIH, IIJ, together with two of the following: IIB, IIC, IID, IIG, or (c) IIB, IIC, IID, IIG provided that any course chosen in the third year has not already been taken in the second year.

GEOGRAPHY.

One Year Course:		Geography	I
Two Years Course :	ist year:	Geography	I
	2nd year :	Geography	II
Three Years Course :	1st year :	Geography	Ι
	2nd year:	Geography	II
	3rd year :	Geography	III

MUSIC.

N

One Year Course :		Music I	
Two Years Course :	1st year : 2nd year :		
Three Years Course :	1st year : 2nd year : 3rd year :	Music II	
ATHEMATICS.			
One Year Course:		Mathematics	Intro.
Two Years Course:		Mathematics Mathematics	
Three Years Course:	2nd year :	Mathematics Mathematics Mathematics	F1 and F2

SCIENCES.

Physics Chemistry Zoology Botany Geology Statistics

The Introductory course in these subjects forms the prescribed one year course.

Degree of Bachelor of Arts with Honours

Ordinance

12. Candidates for the degree of Bachelor of Arts with Honours shall, except as hereinafter stated, be required to furnish certificates of having attended courses of instruction approved by the University and extending over not less than three academic years in one of the Honours Schools of the University hereafter enumerated.

13. Every candidate for the degree of Bachelor of Arts with Honours shall be required to present himself for examination at the end of the third or fourth academic year from the time when he has entered upon one of the courses of instruction approved by the University for such degree, unless he shall present a medical certificate of illness satisfactory to the Senate. This examination shall ordinarily be held in June of each year.

14. Candidates for the degree of Bachelor of Arts with Honours may present themselves for examination in any of the following Honours Schools on furnishing certificates of having pursued, to the satisfaction of the Senate, the courses required for such Honours Schools in the University, viz:

> Greek Latin Hebrew Language and Literature Biblical Studies English Language and Literature French Language and Literature German Language and Literature Russian Language and Literature Spanish Language and Literature History Geography Philosophy Economic and Political Science Mathematics

15. Candidates for the degree of Bachelor of Arts with Honours may present themselves for examination in any of the following Combined Honours Schools on furnishing certificates of having pursued, to the satisfaction of the Senate, the courses required for such Combined Honours Schools in the University, viz. :---

> Classics Greek-English Latin-English Latin-French Latin-Spanish Modern Languages and Literatures.

Subject to the approval of the Heads of the Departments concerned and of the Board of the Faculty of Arts, any other two subjects in which Honours courses are given may be combined, together with one one-year subject at Pass standard.*

16. Candidates who have completed the courses and passed the final examinations prescribed for the Ordinary degree of Bachelor of Arts may, with the sanction of the Senate, proceed to the degree of Bachelor of Arts with Honours in any School after one or two years attendance in such School, provided that the attendance is given in the year or years immediately following the completion of their courses and examinations for the Ordinary degree.

17. No candidate for a degree of Bachelor of Arts with Honours shall be admitted more than once to examination in the same Honours School; but students who have passed the Final examination in any of the Honours Schools may be admitted to the Final examination in any other Honours School after the expiration of one or two years, on presenting certificates of having attended during the period in question courses approved by the University.

Provided that in the said other Honours School selected, candidates shall not present themselves for

[•] The following combinations of Honours courses have been approved for individual students in the past : Geography-Spanish; Geography-Economics ; Philosophy-French.

the Final examination more than two academic years after the Final examination in Honours already passed by them, and also that no candidate be admitted to examination in any Honours School after a longer period than five years has elapsed since the date of his first entrance upon a prescribed course of study for an Honours School.

18. Names of candidates who have passed the examination for the degree of Bachelor of Arts with Honours shall be published in such form as to distinguish the Honours School in which severally they may have passed; the names of those who have passed in Honours being drawn up in three classes, and each class being arranged in alphabetical order.

19. Candidates who have not acquitted themselves so as to deserve Honours may be excused the whole or such part of the examinations for the Ordinary degree as the Senate may determine.

20. Candidates for the degree of Bachelor of Arts with Honours who at the end of their first year are unable to continue their Honours course may proceed to the Ordinary degree of Bachelor of Arts; and it shall be in the power of the Senate to accept their attendance on the courses prescribed for the first year in any Honours School in place of the attendance prescribed in Ordinance II, Article 7 (a).

Regulations

In Honours schools for which a qualifying examination at the end of the first year of study is prescribed such examinations will ordinarily be held in June of each year; but candidates who do not pass in all of the required subjects of a qualifying examination may be admitted to supplementary examinations held in September in the subject or subjects in which they have failed. No candidate will be admitted to a supplementary qualifying examination in any subject who has not already presented himself in his first year at the ordinary June examination in that subject, except with the special permission of the Senate.

Honours Schools

Classics

Candidates for the degree of Bachelor of Arts with Honours in Classics shall be required to pursue courses of study and to submit themselves for examination in the following subjects :---

Translation from prescribed Greek and Latin books. Translation at sight from Greek and Latin authors. Greek and Latin Composition.

Greek and Latin Literature.

Two of the following:

Ancient History.

Ancient Philosophy.

A special subject connected with Greek or Latin literature.

Attendance in the subjects of the School shall be required as follows: Not less than ten hours a week in the first and second years, and eight hours a week in the third year.

The attendance on courses required for the first year for the Ordinary degree of Bachelor of Arts may also be accepted by the Senate in place of the above attendance for the first year, provided that the subjects chosen by the candidate are substantially and to the satisfaction of the Board of the Faculty of Arts those required for the Course for the first year in the Honours School of Classics.

Examination

Greek prose composition (1 paper).

Latin prose composition (I paper).

Greek unprepared translation (I paper).

Latin unprepared translation (I paper).

Translation from prescribed Greek books, with questions arising out of them (2 papers).

Translation from prescribed Latin books, with questions arising out of them (2 papers).

General paper (Greek), including questions on Greek literary criticism, antiquities, language and metre.

General paper (Latin), including questions on Latin literary criticism, language and metre, and on Roman antiquities. *Two* of the following:

Ancient History (I paper).

Ancient Philosophy (I paper).

Special subject in Greek or Latin Literature (I paper). Greek and Latin verse composition (I paper) (optional). Honours Classics :

GREEK:

Books prescribed for 1946-47.

Homer, Odyssey i-vi; Iliad I, vi, xxiv; Aeschylus, Prometheus Vinctus, Agamemnon; Sophocles, Oedipus Rex; Euripides, Bacchae; Aristophanes, Frogs; Herodotus viii; Thucydides iii; Plato, Phaedo; Greek Lyric and Elegiac Poetry (selections); Demosthenes, De Corona, In Midiam; Aristotle, Poetics; Theocritus i, ii, vii, xv.

LATIN :

Books prescribed for June, 1947

Plautus: Rudens ed. Sonnenschein (Clarendon Press).

Terence : Adelphi.

Lucretius, III.

Catullus (ed. Simpson, Macmillan).

Cicero: de Officiis III; Selected Letters (Pritchard and Bernard). Pro Caelio.

Livy, IX.

Virgil: Georgics I, IV; Aeneid II, IV, VI, XII.

Horace : Odes I, III ; Epistles I.

Ovid, Fasti III (ed. Bailey, Clarendon Press).

Seneca, Selected Letters (ed. Summers, Macmillan).

Juvenal, I, III, X, XIII.

Tacitus, Annals XIV, XV.

Books prescribed for June, 1948, are the same as for June, 1947, except that Lucretius V is substituted for Lucretius III, and Livy II for Livy IX.

Greek

Candidates for the degree of Bachelor of Arts with Honours in Greek shall be required to pursue courses of study and to submit themselves for examination in the following subjects :—

- 1. The Greek books prescribed for Honours in Classics (2 papers).
- 2. Translation from further Greek authors. (I paper).
- 3. General paper as for Honours in Classics. (I paper).
- 4. Greek unprepared translation. (I paper).

5. Greek prose composition. (I paper).

6. A period of Greek history studied in connexion with the original authorities. (I paper).

Honours Schools

- 7. Development of the Greek language with an elementary knowledge of the dialects. (1 paper).
- 8. One of the following (I paper) :---
- (a) History of Greek language.
 - (b) Outlines of Greek philosophy.
 - (c) Greek life and manners (with some reference to inscriptions).
 - (d) The special study of an author or one of the following types of literature:—(1) Homeric poems; (2) Greek lyric poetry; (3) Greek drama in the 5th century: (4) Greek oratory, with special reference to Demosthemes.
 - (e) Greek sculpture or vase painting.
 - (f) Greek art and architecture.
 - (g) Greek verse composition.

Attendance in the subjects of the school shall be required as follows:—During the first year not less than 7 hours a week, during the second year not less than 9 hours a week and during the third year not less than 7 hours a week.

Candidates (other than those who have already completed the course for an Honours degree in Latin) may, in place of a certain number of the books prescribed in Greek, be permitted to substitute a certain number of the books prescribed for the course in Honours in Latin to be specified from year to year.

Special requirements .---

- (I) Candidates are required to attend the Three Years course in Latin as prescribed in the Regulations for the Ordinary degree and to pass the prescribed examination in that subject.
- (2) Candidates are required to attend the One Year course in Ancient History and to pass the prescribed examination in that subject.

Some modification of the special requirements may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

Greek-English

Candidates for the degree of Bachelor of Arts with Honours in Greek—English shall be required to pursue courses of study and to submit themselves for examination in the following subjects :—

A. GREEK.

- 1. The Greek books prescribed for Honours in Classics. (2 papers).
- 2. General paper, including questions on Greek history, literary criticism, antiquities, language and metre. (1 paper).

- 3. Greek unprepared translation. (I paper).
 - 4. Greek prose composition. (I paper).
 - 5. One of the following (I paper) :--
 - (a) The Poetics of Aristotle and history of the Greek drama.
 - (b) The development of the Greek language with an elementary knowledge of the dialects
 - (c) Outlines of Ancient philosophy.
 - (d) Greek Art and Architecture.
 - (e) Greek life and manners.
 - (f) Latin unprepared translation to the Three Years course standard.

B. ENGLISH, as for English (Modern Languages Honours).

Attendance in the subjects prescribed for the above degree shall be required as follows :—Not less than 10 hours a week in the first and second years and 8 hours a week in the third.

Special requirement :--

Students will be required to attend a one year course in one additional subject as prescribed in the Regulations for the Ordinary degree of Bachelor of Arts, and to pass the prescribed examination in that subject, which shall normally be Latin.

Some modification of the special requirement may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

Latin

Candidates for the degree of Bachelor of Arts with Honours in Latin shall be required to pursue courses of study and to submit themselves for examination in the following subjects :---

- I. The Latin books prescribed for Honours in Classice (2 papers).
- 2. Translation from further Latin authors. (I paper).
- 3. General paper as for Honours in Classics. (I paper).
- 4. Latin unprepared translation. (I paper).
- 5. Latin prose composition. (I paper).
- 6. A period of Roman history studied in connexion with the original authorities. (I paper).
- 7. Development of the Latin language with an elementary knowledge of the Italic dialects. (I paper).
- 8. One of the following (I paper) :--
 - (a) History of Latin language from Plautus to Tacitus.
 - (b) Stoicism and Epicureanism in Roman life and thought.

Honours Schools

- (c) Roman life and manners (with some reference to inscriptions).
- (d) A special study of an author or part of an author or one of the following types of literature :--(i.) epic poetry, with special knowledge of the fragments of Livius Andronicus, Naevius and Ennius; (ii.) satire, with special knowledge of the fragments of Lucilius; (iii.) dramatic poetry, with special knowledge of the fragments of Latin dramatic poetry; (iv.) oratory, with special knowledge of the fragments of Latin oratory.
- (e) Latin verse composition.
- (f) Greek Art and Architecture.

Attendance in the subjects of the school shall be required as follows:—During the first year not less than 7 hours a week, during the second year not less than 9 hours a week, and during the third year not less than 7 hours a week.

Candidates (other than those who have already completed the course for an Honours degree in Greek) may, in place of a certain number of the books prescribed in Latin, be permitted to substitute a certain number of the books prescribed for the course in Honours in Greek to be specified from year to year.

Special requirements :--

- (I) Candidates are required to attend the Three Years course in Greek, as prescribed in the Regulations for the Ordinary degree and to pass the prescribed examinations in that subject.
- (2) Candidates are required to attend the One Year course in Ancient History and to pass the prescribed examination in that subject.

Some modification of the special requirements may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

Latin-English, Latin-French, Latin-Spanish

Candidates for the degree of Bachelor of Arts with Honours in any one of the above-mentioned groups of subjects shall be required to pursue courses of study and to submit themselves for examination in the following subjects :---

I. LATIN-ENGLISH.

A. Latin.

- I. Latin prose composition. (I paper).
- 2. Latin unprepared translation. (I paper).

- 3. The Latin books prescribed for Honours in Classics. (2 papers).
- 4. General paper as for Honours in Classics. (I paper).
- 5. One of the following (I paper) :--
 - (a) Colloquial Latin and inscriptions.
 - (b) Development of the Latin language with an elementary knowledge of the Italic dialects.
 - (c) A period of imperial history.
 - (d) Outlines of Ancient Philosophy.
 - (e) Roman life and manners (with some reference to inscriptions).
 - (f) Latin literary criticism.
 - (g) Greek unprepared translation to the Three Years course standard.

B.-English, as for English (Modern Languages Honours).

II. LATIN-FRENCH.

A.-Latin, as under I.

B.-French, as for French (Modern Languages Honours).

III. LATIN-SPANISH.

A .- Latin, as under I.

B.-Spanish, as for Spanish (Modern Languages Honours).

Attendance in the subjects prescribed for the above degrees shall be required as follows:—Not less than IO hours a week in the first and second years and 8 hours a week in the third.

Special requirement :--

Students will be required to attend a One Year course in one additional subject as prescribed in the Regulations for the Ordinary degree of Bachelor of Arts, and to pass the prescribed examination in that subject. For candidates in the Latin-English group this subject shall normally be Greek.

Some modifications of the special requirement may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

Hebrew Language and Literature

Candidates for the degree of Bachelor of Arts with Honours in Hebrew Language and Literature shall be required to pursue courses of study and to submit themselves for examination as follows :---

The course of study for the first academic year shall normally include the following four subjects: Hebrew language and literature; a second Semitic language; two other approved subjects.

A qualifying examination in all these subjects must normally be passed by candidates before they proceed to further study.

Some modification of the course and examination required for the first year may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

In the second and third years there shall be alternative schemes of study: Scheme A in which special attention is given to literature; Scheme B in which more attention is given to language. Candidates under Scheme B will normally spend one term at a University where the medium of instruction is Hebrew or another Semitic language.

Candidates may be required in any year to attend courses of study given in other departments which may be helpful to their studies in the subjects of the School.

In addition to the subjects of the school each candidate will be required to pursue for two further years a prescribed course in one of the approved subjects chosen for the first year; the prescribed course for candidates under Scheme A will be Greek I in the first year and New Testament Language and Literature in the second and third years. At the end of his third year, he must present himself for examination in this subsidiary subject as for a three years subject for the Ordinary degree of Bachelor of Arts. The Class obtained by him in the Honours School will not be published until he has satisfied the examiners in this subsidiary subject; but in the event of his failure to do so, he may present this subject alone at any subsequent examination.

Final Examination.

The examination shall consist of an oral examination and of the following papers :---

SCHEME A.

Specified and unspecified texts of Biblical and Mishnaic Hebrew (2 papers).

Specified and unspecified texts of Aramaic, including Syriac (I paper).

Specified and unspecified texts of the Old Testament in Greek, and selected Greek papyri (I paper).

Biblical History and Archaeology (1 paper).

Growth of religious ideas and institutions in the Bible (r paper).

Critical introduction to the literature of the Old and New Testaments (2 papers).

SCHEME B.

Specified and unspecified texts of Biblical and Post-Biblical Hebrew (2 papers).

- Specified and unspecified texts from a second Semitic language (I paper).
- Specified and unspecified texts of medieval and modern Hebrew (2 papers).

Comparative grammar of the Semitic languages and specified inscriptions (I paper).

Composition and Essay (1 paper).

History of Hebrew Literature (1 paper).

Biblical Studies

Candidates for the degree of Bachelor of Arts with Honours in Biblical Studies shall be required to pursue courses of study and to submit themselves for examination as follows :—

The course for the first academic year shall normally include Hebrew I, Greek I, two other approved subjects.

A qualifying examination in these subjects will be held at the end of the first year, which must normally be passed by candidates before they proceed to further study.

Some modification of the course may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who obtained a Higher School Certificate.

Candidates may be required in any year to attend courses of study given in other departments which may be helpful to their studies in the subjects of the School

In addition to the subjects of the School each candidate will be required to pursue for two further years a prescribed course in one of the approved subjects chosen

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for the first year. At the end of the third year, he must present himself for examination in this subsidiary subject as for a three year subject for the Ordinary degree of Bachelor of Arts. The Class obtained by him in the Honours School will not be published until he has satisfied the examiners in this subsidiary subject; but in the event of his failure to do so, he may present this subject alone at any subsequent examination.

Final Examination

The examination shall consist of an oral examination and of the following papers.

Specified and unspecified texts of Biblical Hebrew (2 papers).

- Specified and unspecified texts of New Testament Greek (2 papers).
- The Historical, Geographical and Archaeological Background of the Bible (1 paper).

Growth of religious ideas and institutions in the Bible (I paper). Critical introduction to the literature of the Old and New Testaments (2 papers).

English Language and Literature

Candidates for the degree of Bachelor of Arts with Honours in English Language and Literature shall be required to pursue courses of study and to submit themselves for examination as follows :—

There shall be alternative schemes of study, A and B: Scheme A, in which special attention will be paid to Literature; and Scheme B, in which special attention will be paid to Language.

Under both schemes the course of study for the first academic year shall normally include Greek or Latin or a Modern Language; English Literature; English Language and Early English Literature; and any one of the following:—Modern History, Philosophy, Music four subjects in all.

A qualifying examination in these subjects will be held at the end of the first year which must normally be passed by candidates before they proceed to further study.

Some modification of the course and examination required for the first year may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

The attendance on courses required for the first year for the Ordinary degree of Bachelor of Arts, and the prescribed examinations in such courses, may also be accepted by the Senate in place of the above course and qualifying examination, provided that candidates must satisfy the Head of the Department of English that they possess a sufficient knowledge of English Language to enable them to profit by the subsequent courses in that subject.

Scheme A

Candidates shall be required to attend the following courses in the subjects of the School: (I) during three academic years courses in English Literature, such courses amounting to not less than three hours a week for the first year and not less than four hours a week for the second and third years; (2) during the first academic year courses of three hours a week on Old English Texts; during the second academic year courses of two hours a week on Old English Texts and one hour on Middle English Texts; and during the third academic year courses of two hours a week on Middle English Texts.

For details of the first year courses in literature and language, see under Courses in Arts, in subsequent pages.

At the end of their second academic year candidates will be examined as follows :---

Honours Examination Part I

Old English Literature with selected texts (I paper).

Chaucer and the fifteenth century or Shakespeare and the Elizabethan drama (in alternate years) (I paper).

At the end of the third academic year candidates will be examined as follows :---

Honours Examination Part II

- I. Middle English Literature with selected texts (I paper).
- 2 Shakespeare and the Elizabethan drama or Chaucer and the fifteenth century (in alternate years) (I paper).

- 3. Prose and the Novel (1 paper).
 - 4. Poetry (I paper).
- 5. Two selected periods (I paper).
 - 6. Essay on a selected author (1 paper).
 - 7. Special subject (1 paper).

In place of either 3 or 4 (according to the year) and of one of the periods in 5, students may take a course in the drama. The essay on a selected author (6), will be replaced for these students by an essay on some aspect of the drama, or the work of some selected dramatist.

In place of 7, a candidate may pursue a prescribed course in a subject included in the Faculty of Arts and approved by the Professor of English Literature, for a period extending over three years. At the end of his third year he must present himself for examination in this subject as for a three years subject for the Ordinary degree of Bachelor of Arts. The Class obtained by him in the Honours School will not be published until he has satisfied the examiners in this subject; but in the event of his failure to do so, he may present this subject alone at any subsequent examination.

> The selected texts for the Old English paper in Part I in June 1947 will be *Beowulf* and the Heroic Fragments (3rd ed. Klaeber, Heath and Co.); *The Dream of the Rood* (ed. Dickins and Ross); *The Parker Chronicle* 832-900 (ed. A. H. Smith); Wyatt's Anglo-Saxon Reader (specified sections).

> The selected texts for the Middle English paper in Part II in June 1947 will be The Owl and the Nightingale (ed. Wells); The Lay of Havelok the Dane (ed. Skeat and Sisam); Sir Gawain and the Green Knight (ed. Tolkien and Gordon); Sisam's Fourteenth Century Verse and Prose.

Candidates will be required to translate passages from these texts and from unprescribed texts, and to answer literary and historical questions suggested by them. Questions involving a detailed knowledge of linguistic features will not be set.

> Chaucer (for Part I in June 1947): general knowledge of the complete works, and of their language and metre, with special study of *Troilus and Criseyde* (and Henryson's *Testament of Cresseid*), *The House of Fame*, *The Reves Tale*, *The Kinghtes Tale*.

Shakespeare and the Elizabethan diama in June 1948 for Part I. Part II Candidates will be expected to have read widely in Shakespeare and in the chief Elizabethan dramatists. Plays for special study in 1948 will be announced in next year's Calendar.

Special subject. One of the following (by arrangement with the head of the department concerned) :---(i) Old Icelandic; (ii) English Literature in relation to Latin Literature; (iii) English philosophy in the seventeenth and eighteenth centuries; (iv) Italian Literature; (v) Spanish Literature; (vi) Music.

Scheme B

Candidates shall be required to attend the following courses in the subjects of the School: (i) during three academic years courses in English Language, including the History of the Language and Early English prose and verse, such courses amounting to not less than three hours a week for the first year and not less than four hours a week for the second and third years; (ii) during three academic years courses of three hours a week on periods of English Literature.

Candidates shall also be required to attend an approved course in *one* of the following subjects : Gothic, Old Icelandic, Modern Icelandic, Old High German, Old French, Vedic Philology, Mediaeval Welsh, Russian and Old Bulgarian, Greek Philology, Latin Philology, Elementary Old and Middle English Palæography.

First year courses in English Language: as for Scheme A.

At the end of their second academic year candidates will be examined as follows :---

Honours Examination Part I.

- I. Old English Literature with selected texts (as for Scheme A, but with an additional section of linguistic questions).
- 2. Chaucer and the fifteenth century or Shakespeare and the Elizabethan drama (in alternate years) (I paper).

At the end of the third academic year candidates will be examined as follows :—

Honours Examination Part II

- 1. Translation of unseen passages in Old and Middle English with literary, historical and linguistic questions (1 paper).
- 2. Middle English Literature with selected texts (as for Scheme A, but with an additional section of linguistic questions) (I paper).
- 3. Chaucer and the fifteenth century or Shakespeare and the Elizabethan drama (in alternate years) (I paper).
- 4. Two selected periods (1 paper).
- 5. History of the English Language, with references to allied languages and to the general principles of linguistic study (I paper).
- 6. A paper on one of the following: Gothic, Old Icelandic, Modern Icelandic, Old High German, Old French, Vedic Philology, Mediaeval Welsh, Russian and Old Bulgarian, Greek Philology, Latin Philology, Elementary Old and Middle English Palæography.
- 7 In addition Candidates shall be required to offer one of the above subjects (Gothic, Old Icelandic, &c.) not already taken, or to present a dissertation on a subject approved by the Board of the Faculty of Arts.

Oral examination.

NOTE :—Students are requested to give notice of their choice of subject, or subjects, not later than the beginning of their second year. Courses in Old Icelandic and Gothic are given in the department each year; courses in any other of the above subjects may be arranged through the Professor of English Language.

Texts for 1946-47

- The selected texts for the Old English paper in Part I in June, 1947 will be as for Scheme A.
- The selected texts for the Middle English paper in Part II in June 1947 will be as for Scheme A.
- For additional reading in preparation for the unseen paper the following are recommended :---
- Andreas (ed. G. P. Krapp); Exodus (ed. F. A. Blackburn); The Anglo-Saxon Chronicle (ed. C. Plummer); Sawles Warde (ed. R. M. Wilson); Middle English Metrical Romances (ed. W. H. French and C. B. Hale); Morte Arthure (ed. E. Björkman); Pearl (ed. I. Gollancz).

- Chaucer and the fifteenth century (for Parts I and II in June 1947) : as for Scheme A.
- The history of the English language : knowledge of language of all English texts prescribed in other courses, with Sweet's Second Anglo-Saxon Reader and Hall's Selections from Early Middle English. The following books are recommended for reference and amplification of the outline given in lectures: Jespersen, The Philosophy of Grammar; Bloomfield, Language; L. H. Gray, Foundations of Language; Brugmann, Kurze vergleichende Grammatik (or trans, into French as Abrege de Grammaire comparée). Meillet Introduction à l'Étude comparative des Langues indoeuropeennes (6th ed.): A. Meillet, Caracteres generaux des Langues germaniques : Hirt, Indogermanische Vokalismus (vol. 2 of his Indogermanische Grammatik) : Streitberg Urgermanische Grammatik ; Schrijnen, Einführung in das Studium der indogermanische Sprachwissenschaft; Kluge, Urgermanisch; Wright, Old English Grammar (3rd ed.); Sievers. Grammar of Old English, trans. Cook: Bülbring, Altenglisches Elementarbuch; Jordan, Handbuch der mittelenglischen Grammatik; Luick, Historische Grammatik der englischen Sprache : Bjorkman. Scandinavian Loanwords in Middle English; Vising, Anglo-Norman; The Place-Name Society's Introduction to the Survey of English Place-Names; Mawer, Problems of Place-Name Study; Sievers, Altgermanische Metrik.
- Shakespeare and the Elizabethan drama in June 1948 : as for Scheme A.

Two periods of English Literature: as for Scheme A.

Old Icelandic: Gordon, Introduction to Old Norse (Oxford); Gunnlaugssaga Ormstungu; Guðrúnarkviða ii, Veglamskviða; Zoega, Old Icelandic Dictionary; Noreen, Altisländische und altnorwegische Grammatik (4th ed.) and Geschichle der nordischen Sprachen; Ker, Epic and Romance; Phillpotts, Edda and Saga.

The more important of the Icelandic sagas should be read in translation.

Modern Icelandic: Jónsson, A Primer of Modern Icelandic; Nordal, Íslenzk Lestrarbók; Thoroddsen, Maður og Kona; Jóhann Sigurjónsson, Fjalla-Eyvindur; Brynjúlfur Jónsson, Saga Natans Ketilssonar og Skáld-Rósu; Zoega, Íslenzk-Ensk Orðabók.

Old Saxon and Old High German.

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- Gothic: Wright, Gothic Grammar (Oxford); Streitberg, Gotische Bibel; Gotisches Elementarbuch (5/6 ed.); Kieckers, Handbuch der vergleichenden gotischen Grammatik; Bradley, The Goths; Cambridge Medieval History, Vol. i (relevant chapters).
- Vedic Philology: Macdonell, A Vedic Grammar for Students (Oxford); A Vedic Reader for Students (Oxford).
- Mediaeval Welsh: Strachan, An Introduction to Early Welsh; Mabinogion, ed. Ivor Evans, 1930.
- Greek Philology: Meillet, Aperçu d'une histoire de la langue grecque (Paris, 1930); Meillet, Traité de grammaire comparée des langues classiques (Paris, 1927); Buck, Greek Dialects (Boston, 1927); Thumb, Handbuch der griechischen Dialekte (Heidelberg, 1900).
- Latin Philology: Meillet, Esquisse d'une histoire de la langue latine (Paris, 1928), Lindsay, Short Historical Latin Grammar (Oxford); Ernout, Recueil de textes latins archaigues (Paris, 1916).
- Russian and Old Bulgarian: Forbes, Russian Grammar (Oxford); Meyer, Historische Grammatik der russischen Sprache (Bonn, 1923); Leskien, Handbuch der altbulgarischen Sprache; Dearmer and Tananevich, First Russian Reader (Oxford), Duff, Russian Lyrics (Cambridge).
- Old and Middle English Palaeography: Keller, Angelsāchsische Palaeographie; Maunde Thompson, Introduction to Greek and Latin Palaeography; Johnson and Jenkinson, English Court Hand 1066-1500.

Modern Languages and Literatures

Candidates for the degree of Bachelor of Arts with Honours in Modern Languages shall be required to pursue courses of study and to submit themselves for examination in any *two* of the following subjects :----French, German, English, Spanish, Russian.

Candidates shall also be required to study auxiliary subjects, of which Latin or Greek shall ordinarily form part. Exemptions may be granted to specially qualified candidates. The names of candidates, who, being placed in the First or Second Class, have shown conspicuous merit shall be distinguished in the class list by some mark to indicate the subject or subjects in which they have shown such merit.

I. FRENCH OR SPANISH OR RUSSIAN.

The attainment of S.C. credit standard in Latin is required of students proposing to read for a Bachelor of Arts Degree with Honours in which French or Spanish forms a principal part.

The course of study and subjects of examination in French or German or Spanish or Russian shall be : Prescribed texts of various periods, studied from a literary and linguistic standpoint; literature; history of the language; translation; institutions.

Candidates taking French or German or Spanish or Russian shall be required to attend all the lectures in the two subjects selected from the Honours School.

II. GERMAN.

For students taking German in the Honours School of Modern Languages there shall be in the second and third years alternative schemes of study, A and B, related to the schemes of study in the Honours School of German. In Scheme A special attention will be paid to literature, in Scheme B to philology.

III. ENGLISH :

For students in the Honours School of Modern Languages there shall be in the English portion of their course alternative schemes of study, Aand B, related to the schemes of study in the Honours School of English. In Scheme A, special attention will be paid to Literature. In Scheme B, special attention will be paid to Language (including the literary and linguistic study of Old and Middle English).

Honours Schools

Candidates will be required to attend :--

- During their first year, courses of not less than three hours a week in English Language, and three hours a week in English Literature and Composition;
- (ii) During their second and third years, courses of not less than five hours a week in English Language and Literature, the proportion to be determined by the candidate's choice of scheme and of subjects within the scheme.

Examination

Composition and essay (I paper). Unprepared translation (I paper). Language (I paper). Literature and prescribed texts (3 papers).

GERMAN. SCHEME A. Literature and modern texts (3 papers). Middle High German (1 paper). Composition (1 paper). Unprepared translation (1 paper).

GERMAN. SCHEME B. Old and Middle High German, and History of the Language (2 papers).

Literature and modern texts (2 papers).

Composition (1 paper).

Unprepared translation (I paper).

RUSSIAN :

Composition and essay (I paper).

Unprepared translation (I paper).

Prescribed texts of before 1500, with literary and linguistic questions (I paper).

Prescribed texts of after 1500, with literary and linguistic questions: The history of the language (1 paper).

Prescribed texts of XIX century literature, with literary questions (I paper).

Russian history and the history of Russian literature (I paper).

SPANISH :

Composition and essay (I paper).

History and institutions of Spain and unprepared translation (I paper).

Prescribed texts of before 1500, with literary and linguistic questions (1 paper).

Prescribed texts of after 1500, with literary and linguistic questions (I paper).

Literature (I paper).

Grammar: history of the language and versification (I paper).

ENGLISH. SCHEME A.

Honours Examination Part I

(at end of second academic year).

Old English literature with selected texts (as for Honours English Scheme A) (I paper).

One *paper selected from the following :--

Chaucer and the fifteenth century (I paper).

Shakespeare and the Elizabethan drama (I paper).

*This may be taken either in Part I of the Examination or in Part II Students are advised to take it in Part I.

Honours Examination Part II

(at end of third academic year).

Middle English literature with selected texts (as for Honours English Scheme A) (1 paper).

Three papers selected from the following :--

Poetry (1 paper).

Prose and the Novel (1 paper).

Two selected periods (I paper).

Essay on a selected author (I paper).

ENGLISH. SCHEME B.

Honours Examination Part I

(at end of second academic year).

Selected texts in Old English, with literary, historical and linguistic questions suggested by them (as for Honours English Scheme B) (I paper).

*One paper selected from the following :---

Chaucer and the fifteenth century (I paper).

Shakespeare and the Elizabethan drama (I paper).

*This may be taken either in Part I of the Examination or in Part II Students are advised to take it in Part I.

Honours Examination Part II

(at end of third academic year).

Selected texts in Middle English with literary, historical and linguistic questions suggested by them (as for Honours English Scheme B) (I paper).

History of the English Language (as for Honours English Scheme B) (I paper).

Two selected periods (as for Honours English Scheme A) (I paper).

A paper on one subject selected from the following :— Germanic Philology, with special reference to Old English; Old and Middle English Philology (as for Honours English Scheme B); or any of the special subjects laid down for English Honours Scheme B, except that candidates taking French may not select Old French, and candidates taking German may not select Old High German, and candidates taking Russian may not select Russian and Old Bulgarian.

French Language and Literature

Candidates for a Degree of Bachelor of Arts with Honours in French Language and Literature shall be required :—

- (i) Before entering upon the Course to have attained S.C. credit standard in Latin.
- (ii) To pursue courses of study and submit themselves for examination as follows :—

The course of study for the first academic year shall normally include the following subjects: (I) French Language and Literature; (2) French History and Institutions, (3) a language (other than English). (4) another approved subject.

A qualifying examination in all these subjects must normally be passed by candidates before they proceed to further study.

Some modification of the course and examination required for the first year may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

During the second and third years candidates shall be required to attend courses in the subjects of the school (see I and 2), and in addition, a prescribed course in one of the subjects chosen under (3) and (4) shall be taken during both years. At the end of his third year, the candidate must present himself for examination in this subsidiary subject as for a three years subject for the Ordinary degree of Bachelor of Arts. The Class obtained by him in the Honours School will not be published until he has satisfied the examiners in this subsidiary subject; but in the event of his failure to do so, he may present this subject alone at any subsequent examination.

The third term of the second year will normally be spent at an approved French University.[†]

Candidates may be required in any year to attend courses of study given in other departments which may be helpful to their studies in the subjects of the School.

Final examination.

The examination shall consist of an oral examination and of the following papers :---

Essay and composition (I paper).

Unprepared translation (I paper).

Language (I paper).

Literature and prescribed texts (3 papers).

History and institutions of France, and special subjects (2 papers).

In addition, candidates shall be required to present a dissertation on a subject approved by the Head of the department.

German Language and Literature

Candidates for the degree of Bachelor of Arts with Honours in German Language and Literature shall be required to pursue courses of study and to submit themselves for examination as follows :---

The course of study for the first academic year shall normally include the following four subjects : (1) German Language and Literature; (2) Latin, French, English Language or Spanish; (3) a second subject from (2), or English Literature, Philosophy, Music, or another approved subject; (4) Modern History with special reference to Germany.

A qualifying examination in these subjects will be held at the end of the first year which must normally be passed by candidates before they proceed to further study.

 $[\]dagger$ Students taking an Honours Course in French or German are normally required to spend the third term of the second year of their course at an approved University in France or Germany. Such students must therefore be prepared to face additional expenditure in that year over and above the full sessional composition fee. The cost of travelling and of residence abroad varies from f_{20} to f_{30} a term according to the University selected. Tuition fees at the foreign University to a maximum of f_{3} , together with a small grant towards the cost of travelling, are paid by the University of Leeds. The remainder of the cost must be met by the student.

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Some modification of the course and examination required for the first year may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate, but all candidates will be required to attend the lectures on Modern History with special reference to Germany.

In the second and third years there shall be alternative schemes of study: *Scheme A*, in which special attention will be paid to literature; and *Scheme B*, in which special attention will be paid to philology.

All candidates shall continue the study of composition, and attend a course on German life and thought.

Candidates under Scheme A shall also be required to present a special subject from modern German literature, together with an extended essay; and candidates under Scheme B Gothic (or Old Saxon) and Old Icelandic.

The third term of the second year will normally be spent at some University where the medium of intercourse is German.[†]

Candidates may be required in any year to attend courses of lectures given in other departments which may be helpful to their studies in the subjects of the School.

In addition to the subjects of the School, each candidate will be required to pursue a prescribed course in one other subject included in the Faculty of Arts and approved by the head of the department of German for a period extending over three years. At the end of his third year, he must present himself for examination in this subsidiary subject as for a three years subject for the Ordinary degree of Bachelor of Arts. The Class obtained by him in the Honours School will not be published until he has satisfied the examiners in this subsidiary subject; but in the event of his failure to do so, he may present this subject alone at any subsequent examination.

 $[\]dagger$ Students taking an Honours Course in French or German are normally required to spend the third term of the second year of their course at an approved University in France or Germany. Such students must therefore be prepared to face additional expenditure in that year over and above the full sessional composition fee. The cost of travelling and of residence abroad varies from $\pounds 20$ to $\pounds 30$ a term according to the University selected. Tuition fees at the foreign University to a maximum of $\pounds 3$, together with a small grant towards the cost of travelling, are paid by the University of Leeds. The remainder of the cost must be met by the student.

Final Examination

The examination shall consist of an oral examination and of the following papers :--

SCHEME A.

Literature and modern texts (3 papers).

Special subject (1 paper).

Old and Middle High German (1 paper).

Essay (1 paper).

Composition (1 paper).

Unprepared translation (1 paper).

General paper (I paper).

SCHEME B.

Gothic (or Old Saxon), Old and Middle High German, Special subject (Old Icelandic) and History of the Language (3 papers). Literature and modern texts (2 papers).

Essay (1 paper).

Composition (1 paper).

Unprepared translation (1 paper).

General paper (1 paper).

Russian Language and Literature

Candidates for the degree of Bachelor of Arts with Honours in Russian Language and Literature shall be required to pursue courses of study and to submit themselves for examination as follows :—

The course of study for the first academic year shall normally include the following four subjects: (1) Russian Language and Literature; (2) Greek, Latin, French, German, or English Language; (3) a second subject from (2), or English Literature, Economics, or another approved subject; (4) Modern History with special reference to Russia, the history and geography of Russia.

A qualifying examination in these subjects will be held at the end of the first year which must normally be passed by candidates before they proceed to further study.

Some modification of the course and examination required for the first year may be made, subject to the approval of the Board of the Faculty of Arts, for candi-

Honours Schools

dates who have obtained a Higher School Certificate, but all candidates will be required to attend the lectures on Modern History with special reference to Russia.

During the second year candidates shall be required to attend courses in the subjects of the School of not less than eight hours a week, such courses to include lectures on (a) Old Church Slavonic, (b) the History of Literature up to 1800.

The third term of the second year will normally be spent at some University where the medium of intercourse is either Russian or any other Slavonic language.[†]

During the third year candidates shall be required to attend courses in the subjects of the School of not less than eight hours a week.

Candidates may be required in any year to attend courses of lectures given in other departments which may be helpful to their studies in the subjects of the School.

In addition to the subjects of the School, each candidate will normally be required to pursue a prescribed course in one other subject included in the Faculty of Arts and approved by the head of the department of Russian, for a period extending over three years. The candidate must present himself for examination in this subsidiary subject as for a three years subject for the Ordinary degree of Bachelor of Arts. The Class obtained by him in the Honours School will not be published until he has satisfied the examiners in this subsidiary subject ; but in the event of his failure to do so, he may present this subject alone at any subsequent examination.

Final Examination

The examination shall consist of an oral examination and of the following papers :---

Old Church Slavonic :

Prescribed texts from Ostromirov Evangelie to be translated into Russian; Philology (I paper).

The History and philology of the Russian Language :

An outline of the Slavonic group of languages in Europe and their geographical distribution (I paper).

[†]The cost of residence abroad is not included in the normal fee for an Arts course.

Prescribed texts of after 1500 with literary and linguistic questions (1 paper).

Essay and composition (I paper)

Unprepared translation (1 paper).

Literature (2 papers).

History, especially social history, of Russia (I paper).

(Candidates will be required to show such a knowledge of the outlines of Social History of Russia as is necessary to the understanding of the Literature; also the influence of English, French and German Philosophy and Literature on the Russian Literature and Social Ideals.)

In addition, candidates shall be required to present a dissertation on a subject approved by the Board of the Faculty of Arts.

Spanish Language and Literature

Candidates for a Degree of Bachelor of Arts with Honours in French Language and Literature shall be required :—

- (i) Before entering upon the Course to have attained S.C. credit standard in Latin.
- (ii) To pursue courses of study and submit themselves for examination as follows :—

The course of study for the first academic year shall normally include the following four subjects : (1) Spanish Language and Literature; (2) Latin, French, or English Language; (3) a second subject from (2), or English Literature, Economics, or another approved subject; (4) Modern History with special reference to Spain.

A qualifying examination in these subjects will be held at the end of the first year which must normally be passed by candidates before they proceed to further study.

Some modification of the course and examination required for the first year may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate, but all candidates will be required to attend the lectures on Modern History with special reference to Spain.

During the second year candidates shall be required to attend courses in the subjects of the School not less than eight hours a week, such courses to include lectures on (a) Spanish Institutions, (b) the Geography of Spain.

The third term of the second year will normally be spent at some University where the medium of intercourse is Spanish.[†]

During the third year candidates shall be required to attend courses in the subjects of the School of not less than eight hours a week.

Candidates may be required in any year to attend courses of lectures given in other departments which may be helpful to their studies in the subjects of the School.

In addition to the subjects of the School, each candidate will be required to pursue a prescribed course in one other subject included in the Faculty of Arts and approved by the head of the department of Spanish for a period extending over three years. At the end of his third year, he must present himself for examination in this subsidiary subject as for a three years subject for the Ordinary degree of Bachelor of Arts. The Class obtained by him in the Honours School will not be published until he has satisfied the examiners in this subsidiary subject; but in the event of his failure to do so, he may present this subject alone at any subsequent examination.

Final Examination.

The examination shall consist of an oral examination and of the following papers -

Prescribed texts of before 1500 with literary and linguistic questions (1 paper).

Prescribed texts of after 1500 with literary and linguistic questions (1 paper).

Essay and composition (1 paper).

Unprepared translation (1 paper).

History of the language and versification (1 paper).

Literature (2 papers).

History and institutions of Spain (1 paper).

In addition candidates shall be required to present a dissertation on a subject approved by the Board of the Facult. of Arts.

+ The cost of residence abroad is not included in the normal fee for an Arts course.

History

Candidates for the degree of Bachelor of Arts with Honours in History shall be required to pursue courses of study and to submit themselves for examination as follows :—

The course of study for the first academic year shall normally include the following: (a) two languages other than English; (b) two approved History courses; (c) any one of Economics, Geography, Philosophy, or other approved subject.

A qualifying examination in these subjects will be held at the end of the first year, and must normally be passed by candidates before they proceed to further study.

Some modification of the course and examination required for the first year may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

The attendance on courses required for the first year for the Ordinary degree of Bachelor of Arts, and the prescribed examinations in such courses, may also be accepted by the Senate in place of the above course and qualifying examination.

At the end of the second academic year candidates will be examined as follows:

Honours Examination (Part I) Outlines of European History (2 papers). Colonial History (1 paper).

Sources of English History (1 paper).

Candidates must satisfy the examiners in this examination before proceeding with further study.

At the end of the third year candidates will take the following examination :

Honours Examination (Part 11)

General Paper.

English (including Constitutional) History (2 papers).

Special period, studied in connection with the original authorities (2 papers).

Political theory (I paper).

- In addition candidates shall be required to present a dissertation on some approved subject.
- Candidates shall also be required to show in the examination some knowledge of at least one foreign language (ancient or modern).

Oral Examination.

Special Periods for 1946-47

 (I) Roman History (44 B.C.-I4 A.D.); (2) The Norman Conquest; (3) (a) The Reign of James I; (3) (b) (1946-8) Commonwealth and Restoration; (4) English History.

The following is the list (subject to revision) of the original authorities set for the Honours periods :

- 1. Selections from Cicero's Letters and Speeches; Suetonius, Augustus; Velleius Paterculus, Historia Romana, book ii; Res Gestae Divi Augusti; selected Inscriptions illustrating the period.
- A selection from the following: Anglo-Saxon Chronicles
 C. D. and E. (in translation); Domesday Book:
 Ordericus Vitalis, Historia Ecclesiastica; William of
 Poitiers, Gesta Willelmi; H. W. C. Davis, Regesta
 Regum Anglo-Normannorum (1913); D. C. Douglas,
 Feudal Documents from the Abbey of Bury St. Edmunds
 (1931).
- 1946-7 Reign of James I. Selections from Calendar of State Papers (Domestic), 1603-10; ditto (Venetian) 1617-19; Selected items in Tanner: Constitutional Documents of the Reign of James I; Hardwicke State Papers, vol. 1, pp. 377-566; Somers Tracts (ed. 1809-15), vol. ii, pp. 97-117; 262-304; 408-458; 492-555; vol. iii, pp. 259-304; Sully, Economies Royales (ed. Michaud) cc. 114-122.

- 4. Selections from Gardiner, Constitutional Documents of the Puritan Revolution; Grant Robertson, Select Statutes, Cases and Documents; Ludlow, Memoirs; Thurloe, State Papers; Clarendon, Life; Burnet, History of My Own Time; Calendars of State Papers, Domestic; Jusserand, Angleterre (Instructions données aux ambassadeurs).
- 5. Selections from *Documents diplomatiques francais*, première serie, t.2; *Slavonic Review*, vols. iii-vi, "Russo-British Relations during the Eastern Crisis."
- 6. Selections from British Documents on the Origins of the War, 1898-1914; Documents diplomatiques francais, première série.

Geography

Candidates for the degree of Bachelor of Arts with Honours in Geography shall be required to pursue courses of study and to submit themselves for examination as follows :—

The course of study for the first academic year shall normally include the following four subjects: (I) Geography; (2) A language other than English; (3) Economics or History; (4) any approved subject in the Faculties of Arts or Science.

A qualifying examination in these subjects will be held at the end of the first year which must normally be passed by candidates before they proceed to further study.

Some modification of the course and examination required for the first year may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

The attendance on courses required for the first year for the Ordinary degree of Bachelor of Arts, and the prescribed examinations in such courses, may also be accepted by the Senate in place of the above course and qualifying examination.

During the second year of their course, candidates shall be required to attend an approved course in the Faculty of Arts.

Honours Schools

At the end of the second academic year, candidates will be examined as follows :----

	Honours	Examination		(Part I)		
Geom	orphology				(1	paper).
Regio	nal Geogr	aphy			(I	paper).
Huma	an Geograp	ohy			(2	papers).
An ac	ditional A	irts s	ubject		(r	paper).

Candidates must satisfy the examiners in this examination before proceeding with further study.

At the end of the third year, candidates will be examined as follows :---

Honours Examination (Part 11)

Essay			(1	paper).
General Geography			(2	papers).
Regional Geography			(2	papers).
Human Geography			(2	papers).
Oral and practical e	xamina	tion.		

- In addition candidates shall be required *either* to submit a thesis on an approved topic *or* to present themselves for examination in an approved special aspect of the subject.
- N.B.—Candidates shall be required to show in the examination a knowledge of at least one modern foreign language.

Philosophy

Candidates for the degree of Bachelor of Arts with Honours in Philosophy shall be required to pursue courses of study, and to submit themselves for examination as follows :---

The course of study for the first academic year shall normally include the following four subjects:—(I) Philosophy I; (2) A second philosophical subject; (3) Greek or Latin; (4) a second non-philosophical subject.

A qualifying examination in these subjects will be held at the end of the first year, which must normally be passed by candidates before they proceed to further study.

Some modification of the course and examination required for the first year may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

Subject to the approval of the Board of the Faculty of Arts, suitably qualified candidates may be permitted to vary the course of study required for the first year.

During the second and third years candidates shall be required to attend approved courses in Philosophy of not less than five hours a week in each year.

They shall also be required to attend, during the second and third years, approved courses of lectures on subsidiary subjects, the number of lectures amounting to not less than two hours a week in each year.

Examination

Essay (1 paper).

General Questions (I paper).

Logic (1 paper).

Psychology (1 paper).

Ethics (I paper).

Advanced Psychology or Moral and Political Philosophy, (I paper).

Oral examination.

Either History of Ancient Philosophy (I paper), and 2 papers on one of the following:

Medieval Philosophy.

Descartes, Malebranche, Spinoza.

Spinoza and Leibniz.

English Philosophy from Locke to Hume, with reference to Bacon and Hobbes and to Reid and the Scottish Philosophy.

Kant.

Philosophy of Religion.

- Some other subject approved by the Board of the Faculty of Arts.
- Or, History of Modern Philosophy (I paper), and 2 papers on one of the following:

Greek Philosophy before Socrates.

Socrates and Plato.

Aristotle.

Medieval Philosophy.

Philosophy of Religion.

Some other subject approved by the Board of the Faculty of Arts.

Economic and Political Science

Candidates for the degree of Bachelor of Arts with Honours in Economic and Political Science shall be required to pursue courses of study and to submit themselves for examination as follows :—

The courses of study and the examinations for the first academic year shall normally be the same as for the Ordinary degree of Bachelor of Arts, provided that at least one of the following subjects must be included : (r) Economics; (2) Philosophy.

Some modification of the courses and examinations required for the first year may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

During the second and third years candidates shall be required to attend approved courses in the subjects of the school of not less than five hours a week in each year.

They shall also be required to attend, during the second and third years, approved courses of lectures on subsidiary subjects, the number of lectures amounting to not less than two hours a week in each year.

Examination

Essay (I paper).

Economics (including Industrial and Commercial Organis ation and Industrial Relations) (2 papers). History of Economic Theory (I paper).

Economic History (I paper).

Political Theory (I paper).

Constitutional Law (I paper).

A special Economic subject (I paper).

Mathematics

Candidates for the degree of Bachelor of Arts with Honours in Mathematics shall be required to pursue courses of study and to submit themselves for examination as follows :---

The course of study shall include, in addition to the Special Honours courses in Mathematics, not less than *two* of the subjects, other than Mathematics, approved under Regulation I(a) for the Ordinary B.A. degree, at least one of which shall be Greek or Latin. Candidates shall attend courses and present themselves for examination in *one* of these additional subjects taken as a one-year subject, and in the *second* taken as a two-years subject, as approved for the Ordinary degree of Bachelor of Arts. The study of each subsidiary subject shall commence in the first academic year.

Candidates who have obtained a Higher School Certificate in any of these subsidiary subjects may, subject to the approval of the Board of the Faculty of Arts, substitute for the course and examination for the first year in that subject, those for the second year; and for the course and examination for the second year, those for the third year.

The Class obtained by any candidate shall not be published until he has satisfied the examiners in these subsidiary subjects, but in the event of his failure to do so in any of these subsidiary subjects, he may present that subject alone at a subsequent examination.

DEGREE OF BACHELOR OF MUSIC

21. The degree of Bachelor of Music shall be conferred upon candidates who have attended satisfactorily the required courses and have passed the prescribed examinations.

22. All candidates for the degree of Bachelor of Music shall be required to have passed the examination for Matriculation or to have obtained a certificate of exemption therefrom, and thereafter to have pursued approved courses of study for not less than three academic years.

Honours Schools

23. Every candidate for the degree of Bachelor of Music shall be required to present himself for examination at the end of the third or fourth academic year from the time when he has entered upon one of the courses of instruction approved by the University for such degree, unless he shall present a medical certificate of illness satisfactory to the Senate. This examination shall ordinarily be held in June of each year.

24. All candidates for the degree of Bachelor of Music shall be required to attend approved courses of study and to pass the prescribed examination or examinations in—

(a) Music studied for three years.

(b) One other subject studied for three years.

(c) One other subject studied for one year.

25. The subjects selected for study shall be selected from among those defined in the Regulations for the degree of Bachelor of Music.

26. Candidates holding a Higher School Certificate in one of the subjects selected under Clause 23 (b) and (c) may, subject to the approval of the Board of the Faculty of Arts, substitute for the course and examination for the first year in that subject those of the second year, and for the course and examination for the second year those of the third year. If the subject is studied for three years a more advanced course may then be attended in the third year.

27. Candidates shall not be permitted to present themselves for examination in any subject, unless they have regularly attended the prescribed course of study and have performed the work of the Class to the satisfaction of the Professor of Lecturer.

28. The names of candidates who have passed the examinations for the degree of Bachelor of Music shall be published, the list being arranged in alphabetical order.

29. A candidate for the degree of Bachelor of Music who is not able or who is not allowed to proceed with the prescribed courses may apply to Senate for permission to transfer to courses leading to another Bachelor's degree and to be given credit for any examinations passed in the subjects of his course.

30. The examinations will normally be held in June of each year, but supplementary examinations in one year subjects will also be held in September. Candidates will be accepted for the supplementary examination only with the special permission of Senate.

Regulations.

I. Candidates will not be admitted to the courses of study for the degree of Bachelor of Music unless they have satisfied the examination requirements for entry upon degree courses as laid down by the Joint Matriculation Board.

2. Only those applicants who are suitably qualified will be accepted as candidates for the degree of Bachelor of Music. A preliminary test in (a) Musical Theory and (b) performance on a musical instrument will be held shortly before the opening of the session; a pass in Music in the H.S.C. examination will be accepted as exempting a candidate from (a).

3. Candidates for the degree of Bachelor of Music shall be required to pursue courses of study and to submit themselves for examination as follows :---

The course for the first year shall normally include Music and two other approved subjects in the arts or sciences; these may with advantage include a modern foreign language.

At the end of the first year, a qualifying examination in these three subjects will be held which must normally be passed by candidates before they proceed to further study.

In addition to musical subjects each candidate will be required to pursue for two further years a prescribed course in one of the subjects approved for the first year course. The examination appropriate to the second year course must be passed before proceeding to the third year, and at the end of the third year, he must present himself for examination in this subject as for a three years subject

Master of Arts

for the Ordinary degree of Bachelor of Arts or Science. The Final examination in Music shall consist of five papers in musical subjects (Harmony, Counterpoint, Fugue, Orchestration, History of Music since 1880) and an oral examination. In addition an original musical exercise must be submitted in the third year.

In the first and second years candidates shall be required to attend courses in musical subjects for not less than five hours each week and in the third year for not less than four hours each week throughout the session.

DEGREE OF MASTER OF ARTS

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Graduates of the University

31. The degree of Master of Arts may be conferred, on payment of the proper fee, upon registered Bachelors of Arts, subject to the conditions contained in the following paragraphs.

32. Bachelors of Arts who have graduated with Honours, including those who have graduated with Honours in General Studies, and are of not less than one year's standing may proceed to the degree of Master of Arts either (a) by presenting a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculty of Arts, or (b) in special cases by examination on a course of study approved by the Board of the Faculty of Arts.

33. Bachelors of Arts who have obtained the Ordinary degree and are of not less than two years' standing may proceed to the degree of Master of Arts either (a) by presenting a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculty of Arts, or (b) in special cases by examination on a course of study approved by the Board of the Faculty of Arts.

Candidates accepted under Article 23 shall normally be required to pass a qualifying examination in a subject upon which instruction is given in the Faculty of Arts not less than one year after the date of their acceptance, provided (i) that in special cases it shall be in the power

Ordinance

of the Senate, on the application of the candidate and on the special recommendation of the Board of the Faculty of Arts, to waive the qualifying examination, and (ii) that it shall be in the power of the Senate to permit a candidate proceeding by dissertation to take the qualifying examination concurrently with the presentation of the dissertation.

34. Bachelors of Arts who have shown outstanding merit in the examinations for the Ordinary degree may; on the special recommendation of the Board of the Faculty of Arts, be permitted to proceed to the degree of Master of Arts after not less than one year from the date of their graduation as Bachelors either (a) by presenting a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculty of Arts, or (b) in special cases by examination on a course of study approved by the Board of the Faculty of Arts.

35. Graduates of the University other than Bachelors of Arts may become candidates for the degree of M.A. under the conditions laid down in Article 23 for Bachelors of Arts who have obtained the Ordinary degree, provided that they attend for not less than two years such courses of lectures as the Board of the the Faculty of Arts may require.

36. Any person who has qualified for the degree of M.A. in one subject and proceeded to the degree and has subsequently fulfilled to the satisfaction of the Senate the regulations for the degree of M.A. in another subject, shall be entitled to have a statement to that effect endorsed on his certificate of graduation as Master of Arts.

37 All candidates who offer a dissertation either as sole test or in combination with other tests, may be required to present themselves for examination written, or oral, or both—in the subject of their dissertation.

38. Certificates of attendance on courses of study in the University shall not be required in the case of B.A. graduates of the University (Honours or Ordinary).

II

Graduates of other Universities

39. Graduates in Arts, or persons who have passed the Final examination for a degree in Arts, of other approved Universities may, if they present evidence satisfactory to the Senate that they are qualified to pursue a course of advanced study or research, be permitted to enter the University and to become candidates for the degree of Master of Arts after not less than two years of such advanced study or research.

40. Candidates admitted under the provisions of Article 29 shall be required to fulfil the following conditions :---

- (i) To be registered as students of the University.
- (ii) To pursue a course of advanced study or research extending over not less than two years under the supervision of the Head of the Department concerned.
- (iii) To attend such courses of lectures at the University as the Senate, on the recommendation of the Board of the Faculty of Arts, may require.

41. Such candidates may, at the end of their course of study, proceed to the degree of Master of Arts either (a) by presenting a dissertation satisfactory to the Senate upon a subject approved by the Board of the Faculty of Arts, or (b) in special cases by passing an examination upon the subjects included in their course of study, provided (I) that candidates who have graduated with Honours, or have passed the Final examination for a degree with Honours, shall further be required at the end of the first year of their course of study to give evidence to the Senate that their work has been satisfactory, and (2) that candidates who have obtained an Ordinary degree, or have passed the Final examination for an Ordinary degree, shall further be required at the end of the first year of their course of study, to pass a qualifying examination in a subject upon which instruction is given in the Faculty of Arts.

Candidates who present a dissertation may be required to satisfy such further test as the Senate shall deem expedient, and may be called upon to present themselves for examination—written, or oral, or both—in the subject of their dissertation.

III

Non-Graduates

42. Persons who are not graduates, or have not passed the Final examination for a degree of an approved University, may, if they satisfy the Senate that their educational attainments are adequate and that they are qualified to pursue a course of advanced study or research, be permitted to enter the University and to become candidates for the degree of Master of Arts after not less than three years of such advanced study or research.

43. Candidates admitted under the provisions of the preceding paragraph shall be required to fulfil the following conditions :—

- (i) To be registered as matriculated students of the University.
- (ii) To pursue an approved course of study under the supervision of the Head of the Department concerned.
- (iii) To attend such courses of lectures at the University as the Senate, on the recommendation of the Board of the Faculty of Arts, may require.

44. Such candidates may proceed to the degree of Master of Arts either (a) by passing an examination on a course of study approved by the Board of the Faculty of Arts, or (b) on the recommendation of the Board of the Faculty of Arts, by presenting a dissertation satisfactory to the Senate on a subject the title of which has already been approved by the Board of the Faculty of Arts, provided—

(a) that at the end of the first year of their course of study they have given evidence to the Senate that their work has been satisfactory, and (b) that at the end of the second year of their course of study, they have passed a general examination in the subject of their study, or in the case of candidates proceeding to the degree by dissertation, in the subject within which their dissertation is presented.

At the end of their course of study, if proceeding to the degree by means of a dissertation, they may be required to satisfy such further test as the Senate shall require and may be called upon to present themselves for examination—written, or oral, or both—in the subject of their dissertation.

45. The names of candidates who have satisfied the examiners shall be arranged in alphabetical order, and distinction may be awarded for work of exceptional merit at the discretion of the examiners.

N.B.—The latest date of entry and payment of fee for all candidates for the June examination is 1st February in each year. Candidates proceeding by dissertation must send in their dissertations not later than 1st MAY. It is desirable that all candidates who present a dissertation should furnish at least two copies of such dissertation.

Candidates are advised, before making application to the Registrar for acceptance for the M.A. degree, to consult the Head of the Department concerned with the subject they propose to study.

I. Subject to the provisions of Articles 31-45 of Regulations Ordinance II candidates for the M.A. degree must present a dissertation or pass an examination in any one of the following subjects :---

Greek, Latin, Hebrew, English Language and Literature, French, Italian, German, Russian, Spanish, History, Philosophy, Philosophy and History of Religion, Anthropology, Economics, Geography, Music, Mathematics, Education.

2. Candidates presenting a dissertation may be required to satisfy such further test as the Senate shall deem expedient and may be called upon to present themselves for examination—written, or oral, or both—in the subject of their dissertation.

3. A candidate shall not be permitted to submit as his dissertation one for which a degree has been awarded in this or any other University, or which is under consideration for the award of a degree in another University; but he shall not be precluded from incorporating in his dissertation any part of such work provided that he states his desire to do so at the time of his application for acceptance as a candidate and in the dissertation itself indicates the part of the work so incorporated.

Details of Examination.

Candidates proceeding to the degree of M.A. by examination alone will be required to take the following papers at their Final Examination :—

Greek

- 1. Translation from prescribed Greek books. (2 papers).
- 2. Translation from further Greek authors. (I paper).
- 3. General paper as for Honours in Classics. (1 paper).
- 4. Greek unprepared translation. (I paper).
- 5. Greek prose composition. (I paper).
- 6. Special subject (2 papers).

Latin

- 1. Translation from prescribed Latin books. (2 papers).
- 2. Translation from further Latin authors. (1 paper).
- 3. General paper as for Honours in Classics. (1 paper).
- 4. Latin unprepared translation. (I paper).
- 5. Latin prose composition. (I paper).
- 6. Special subject. (2 papers).

Hebrew

- 1. Comparative Semitic grammar, philology, epigraphy Hebrew composition (1 paper).
- 2. Prescribed books from the Old Testament; unprepared translation and pointing (I paper).
- 3. Prescribed portions of Aramaic and Post-biblical Hebrew; unprepared translation (I paper).
- 4. Prescribed portions of Medieval and Modern Hebrew; unprepared translation (1 paper).
- 5. Introduction to Hebrew literature (1 paper).
- 6. Syriac grammar, composition, and translation of prescribed books (1 paper).
- 7. Oral examination.

English Language and Literature

SCHEME A (Literature).

- I. Shakespeare; or Chaucer and the 15th Century.* (I paper)
- 2. Prose and the Novel (I paper).
- 3. Poetry (1 paper).
 - 4. Two selected periods (1 paper).
 - 5. Special subject.
 - 6. Criticism.

*These are taken in alternate years.

SCHEME B. (Language).

- I. Old English Texts (I paper).
- 2. Middle English Texts (1 paper).
- 3. Old English and Middle English Unseens (1 paper).
- 4. Linguistic Theory (I paper).
- 5. Gothic (I paper).
- 6. Old Icelandic (7 paper).

French

- Composition and essay (I paper).
 Prescribed texts in Old French (I paper).
- 3. Prescribed texts in Modern French (I paper).
- 4. Unprepared translation (1 paper).
- 5. Historical grammar (1 paper).
- 6. French literature (2 papers).
- 7. Oral examination.

Italian

- I. Composition and Essay (I paper).
- 2. Prescribed texts of before 1400 with linguistic questions (I paper).
- 3. Prescribed texts of after 1400 with linguistic questions (I paper).
- 4. Unprepared translation (1 paper).
- 5. The history of Italy (I paper).
- 6. Italian literature (2 papers).
- 7. Oral examination.

German

- I. Composition and essay (I paper).
- 2. Prescribed texts in Middle High German (I paper).
- 3. Prescribed texts in Modern German (I paper).
- 4. Unprepared translation (1 paper).
- 5. Historical grammar (I paper).
- 6. German literature (2 papers).
- 7. Oral examination.

Period of Literature prescribed for 1946-47 1740-1832.

Russian

- I. Composition and essay (I paper).
- 2. Prescribed texts in Old Bulgarian and in Old Russian, including literary and linguistic study (I paper).
- 3. Unprepared translation and historical grammar (I paper).
- 4. Russian literature (general outlines and special period or periods) (2 papers).
- 5. The history of Russia (I paper).
- 6. Oral examination.

Spanish

- Composition and essay (1 paper).
 Prescribed texts in Old Spanish (1 paper).
- 3. Prescribed texts in Modern Spanish (1 paper).
- 4. Unprepared translation (I paper).
- 5. Historical grammar (1 paper).
- 6. Spanish literature (2 papers).
- 7. Oral examination.

History

- I. General Paper. 2. English History, Medieval and Modern (2 papers).
- 3. Sources of English History.
- 4. Either Ancient History (to 337 A.D.); General (2 papers), with special period in Ancient History (2 papers).
- Or Medieval History (300 to 1500 A.D.); General (2 papers), with special period in Medieval History (2 papers)
- Or Modern History (since 1500 A.D.); General (2 papers), with special period in Modern History (2 papers).

Special Periods prescribed for 1946-47

(1) Roman History (44 B.C.-I4 A.D.); (2) The Norman Conquest; (3) The Reign of James I: (4) English History (1812-1837).

Philosophy

- 1. An essay (1 paper).
- 2. General Questions (1 paper).
- 3. Three of the following :
 - Logic (I paper)
 - Psychology (1 paper).

Ethics (I paper) or Moral and Political Philosophy (I paper) History of Philosophy, Ancient or Modern (1 paper).

- 4. One of the following special subjects (I paper) :
 - Greek Philosophy before Socrates.

Socrates and Plato.

Aristotle.

Post-Aristotelian Ancient Philosophy

Descartes, Malebranche, Spinoza.

Spinoza and Leibniz.

English Philosophy, from Locke to Hume, with reference to Bacon and Hobbes, and to Reid and the Scottish Philosophy.

Kant.

- Post-Kantian 19th century Idealism.
- 5. Oral examination.

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Philosophy and History of Religion

- I. An essay (I paper).
- 2. History of Religion (1 paper).
- 3. Philosophy of Religion (I paper).
- 4. Two papers on a selected religion and philosophical system with prescribed texts.
- 5. Oral examination.

Anthropology

- 1. Either General Ethnology (2 papers). Social Anthropology (2 papers).
 - or General Ethnology (I paper). Social Anthropology (I paper). Outlines of Prehistory (I paper). Racial Geography (I paper).

2. Special subject (1 paper).

3. Oral examination.

Economics

- I. An essay (I paper).
- 2. Principles of Economics (2 papers).
- 3. History of Economic Thought (1 paper).
- 4. Economic History (I paper).
- 5. Special subject (I paper).

Geography

- I. General Geography (I paper).
- 2. Regional Geography (3 papers).
- 3. Human Geography (3 papers).
- 4 Oral examination.

Music

- I. Harmony (I paper).
- 2. Counterpoint (I paper).
- 3. Fugue (I paper).
- 4. History of Music till 1700 (I paper).
- 5. History of Music from 1700 to 1900 (1 paper).
- 6. Unseen passages in two of the following languages for translation into English :---

French, German, Italian (1 paper).

Mathematics

Examination in the following subjects (4 papers) :---

- (a) Higher Algebra and Trigonometry (Plane and Spherical)
- (b) Analytical Geometry (Plane and Solid).
- (c) Calculus and Differential Equations.
- (d) Statics.
- (e) Hydrostatics.
- (f) Dynamics of a Particle
- (g) Rigid Dynamics.
- (h) Mathematical Analysis.
- (i) Elements of the Theory of Functions.
- (j) Potential Theory.
- (k) Hydrodynamics.

Education

I. An essay (I paper).

2. Four papers to be selected from two of the following groups :---

- (a) Theory of Education (2 papers).
- (b) History of Education (2 papers).
- (c) Experimental Psychology (2 papers).
- (d) Methodology (2 papers).

DEGREE OF MASTER OF EDUCATION (M.Ed.)

Ordinance

46. The degree of Master of Education (M.Ed.) may be conferred, upon payment of the proper tee, on graduates of the University of not less than two years' standing from the date of their graduation as Bachelors, who have obtained the Diploma in Education of the University, subject to the conditions contained in the following paragraphs.

47. Each candidate for the degree of M.Ed. shall be required to present a thesis, consisting of a record of original work or research, or independent study or criticism, on some educational subject approved by the Senate. Each candidate shall further be required to submit himself for examination (oral or written, or both) in the subject of his thesis, unless the Senate on application waives this requirement.

48. (a) Candidates who have obtained the Diploma in Education of the University shall be entitled to present

the thesis not less than one academic year after obtaining the Diploma with or without further attendance at the University.

(b) Graduates of the University who have satisfied the examiners in the subjects of Education at the Final examination for the degree of Bachelor of Arts or Bachelor of Science, may become candidates for the degree of M.Ed., notwithstanding that they have not obtained the Diploma in Education, provided that they have had, after graduation, either (I) not less than one year's approved study, or (2) not less than one year's experience in the practical work of education and have proved efficient therein, and, subsequently shall have pursued for an additional year an approved course of advanced study or research in Education.

(c) Graduates of the University, may, by permission of the Senate, substitute for the Diploma in Education of the University, the Diploma or Certificate in Education of another approved University. Such candidates shall be required to pursue a course of advanced study or research in Education in the University for one year.

49. Graduates, or persons who have passed the Final examination for a degree of other approved Universities shall, if they produce evidence satisfactory to the Senate that they are qualified to pursue a course of advanced study or research be permitted to enter the University and to become candidates for the degree of M.Ed. without having previously graduated in this University. Such candidates shall be subject to the requirements set forth in Article 37 above, and shall further be required to pursue a course of study and research in Education in the University for a period of two years, except in so far as the Senate approves of study and research conducted in some other institution during one of the required years.

A candidate shall not be permitted to submit as his Regulation thesis one for which a degree has been awarded in this or any other University, or which is under consideration for the award of a degree in another University; but -

Bachelor of Divinity

he shall not be precluded from incorporating in his thesis any part of such work provided that he states his desire to do so at the time of his application for acceptance as a candidate and in the thesis itself indicates the part of the work so incorporated.

N.B.—The latest date of entry and payment of fee for the June examination is 1st February in each year. The thesis (which must be submitted not later than 1st May) should be typewritten and at least two copies should be supplied.

DEGREE OF BACHELOR OF DIVINITY (B.D.)

I. Graduates of the University.

Ordinanc:

50. The degree of Bachelor of Divinity may be conferred on payment of the appropriate fee upon registered graduates of the University subject to the conditions contained in the following paragraphs.

51. Graduates of the University may proceed to the degree of B.D. not less than two years after graduation on presenting a thesis satisfactory to the Senate upon a subject approved by the Board of the Faculty of Arts, provided that they have passed the B.D. Qualifying Examination* not less than one year before the presentation of the thesis. Candidates may also be required to pass an examination—written or oral, or both—in the subject of their thesis.

Regulation

In all cases candidates wishing to present a thesis connected with Old Testament studies must, before acceptance as candidates for the degree, have passed an examination in Hebrew of a standard equivalent to that required of candidates taking Hebrew as a three years subject for the B.A. degree. Similarly, candidates wishing to present a thesis connected with New Testament studies, must before acceptance as candidates for the degree, have passed an examination in Greek of a standard equivalent to that required of candidates taking Greek as a three years subject for the B.A. degree.

* For details see under Courses in Arts (Theological Studies).

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Candidates for the B.D. Qualifying Examination will be excused those subjects or parts of subjects in which they have passed in their degree examination.

II Graduates of other Universities.

52. Graduates of other Universities may proceed to the Ordinance degree of B.D. :---

- (a) after becoming registered students of the University :
- (b) after attending for not less than two years such courses of lectures in the University as the Senate. on the recommendation of the Board of the Faculty of Arts, may require ;
- (c) after passing the B.D. Qualifying Examination*;
- (d) after presenting, not less than one year after passing the B.D. Qualifying Examination, a thesis satisfactory to the Senate upon a subject approved by the Board of the Faculty of Arts. Candidates may also be required to pass an examinationwritten, or oral, or both-in the subject of the thesis.

I. In all cases candidates wishing to present a thesis Regulations connected with Old Testament studies must, before acceptance as candidates for the degree, have passed an examination in Hebrew of a standard equivalent to that required of candidates taking Hebrew as a three years subject for the B.A. degree of the University. Similarly, candidates wishing to present a thesis connected with New Testament studies must, before acceptance as candidates for the degree, have passed an examination in Greek of a standard equivalent to that required of candidates taking Greek as a three years subject for the B.A. degree of the University.

2. Candidates for the B.D. Qualifying Examination will be excused those subjects or parts of subjects in which they have passed the equivalent in their degree.

^{*} For details see under Courses in Arts (Theological Studies).

3. A candidate shall not be permitted to submit as his thesis one for which a degree has been awarded in this or any other University, or which is under consideration for the award of a degree in another University; but he shall not be precluded from incorporating in his thesis any part of such work provided that he states his desire to do so at the time of his application for acceptance as a candidate and in the thesis itself indicates the part of the work so incorporated.

N.B.—The latest date of entry and payment of fee for the June examination is 1st February in each year. The thesis (which must be submitted not later than 1st May) should be typewritten and at least two copies should be supplied.

DEGREE OF DOCTOR OF PHILOSOPHY (Ph.D.)

Ordinance

53. The Degree of Doctor of Philosophy may be conferred on payment of the appropriate fee and subject to the conditions contained in Articles 54 and 55 :---

- (a) On persons who are registered graduates of the University of Leeds or graduates of an approved University:
- (b) On the holder of a Diploma awarded by an approved institution of university rank not empowered to confer degrees, provided that the course of study in the subject for which the Diploma has been awarded has extended over not less than three years of full-time study.
- (c) In exceptional cases on the holder of a Diploma of the University of Leeds, provided that the Senate is satisfied regarding the course of study towards such Diploma and the standard attained by the candidate in the examination for the Diploma :

54. Except as provided in Article 45, all candidates for the Degree of Doctor of Philosophy are required to pursue in the University for at least two Calendar years an approved full-time course of advanced study and research, under the direction of the Head of the Department concerned or of a member of the University staff

appointed by the Senate on his recommendation; provided that candidates may be permitted to devote such periods as may be deemed advisable by the Senate to fulltime study and research in other approved Universities or Institutions, while remaining under the direction of the University or of persons nominated by the University, subject to candidates in all cases spending in the University not less than one academic year or its equivalent as determined by the Senate.

55. When laboratory work is not required for the subject of the thesis, the normal requirement of two Calendar years of full-time study and research may, at the discretion of the Senate, be waived in the case of persons admitted under Article 53 (a). Such candidates will be required to pursue a part-time course of advanced study and research in the University for a minimum period of three Calendar years. Frequent personal contact between the supervisor and the candidate to the satisfaction of the relevant Committee will be required during the period.

NOTE .- Candidates wishing to avail themselves of the provisions of this Article should normally have previously obtained a Master's degree of this or of another approved University by the presentation of a thesis or dissertation. Only candidates with high qualifications who are strongly recommended by the Head of the Department concerned will be accepted under Article 45.

1. Before entering on the course of advanced study and Regulations research, candidates are required

- (a) To have attained the age of 21 years.
- (b) To submit to the Senate for its approval the course of advanced study and research proposed by them and to present evidence satisfactory to the Senate that they are qualified to undertake the proposed course.
- (c) To register as students of the University and to pay the prescribed fees for tuition.

2. On completing the course of advanced study and research candidates are required

(a) To present a thesis on the subject of their advanced study and research, and to satisfy the examiners that it contains original work worthy of publication, and that it is of a sufficient standard of merit to qualify for the degree of Doctor of Philosophy.

Doctor of Letters

(b) To submit themselves for an oral examination (except in the case of Mathematics) on matters relevant to their thesis and, if required, for a written examination and to satisfy the examiners in the examination as well as in the thesis presented.

3. The application of a candidate for admission to the course for the degree must give particulars of his educational career and qualifications as well as the subject of his proposed course of advanced study and research. The application should be addressed to the Registrar.

NOTE.—A candidate is advised, before making application to the Registrar, to consult the Head of the Department which is concerned with the subject he proposes to study.

4. A candidate is required during his course to devote his whole time to his advanced study and research; but in exceptional cases the Senate is prepared to allow the candidate to undertake a limited amount of outside work which, in its judgment, would not interfere with the prosecution of his proposed course of advanced study and research

5. A candidate will not be permitted to submit as his thesis one for which a degree has been conferred upon him in this or any other University; but he shall not be precluded from incorporating in his thesis any part of the work already submitted by him with a view to a degree for which he has been a successful candidate, provided that in his application to the University for admission to the course he states his desire to do so, and in the thesis itself indicates the part of the work which has been so incorporated.

6. It will be generally convenient that the candidate's course should begin either at the opening of the academic year in October, or during the previous Long Vacation; but the Senate is prepared to consider applications for leave to begin the course at some other time in the academic year. The course must in any case extend over two Calendar years or their equivalent.

7. Towards the completion of his course the candidate, giving if possible three months' notice to the Registrar, must make application to be examined and must

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submit, as soon as possible afterwards, two copies of a thesis, which must be accompanied by a short abstract. Theses must be bound in a standard form, particulars of which may be obtained from the Registrar. A copy of the thesis will be retained in the University Library.

DEGREE OF DOCTOR OF LETTERS (Litt. D.)

56. The degree of Doctor of Letters shall be conferred by the University upon Graduates of the University who shall be deemed by the Senate, after considering a report from the Board of the Faculty of Arts, to have distinguished themselves by special research or learning.

57. A Graduate of the University may make application for the degree of Doctor of Letters in the sixth or any subsequent year from the date of graduation.

58. If the application be approved by the Senate, the degree may be conferred at the first convenient date thereafter.

I. All applications shall be made in writing to the Regulations Registrar, and shall contain a full statement of the grounds on which the claim for the degree is based, together with one or more copies of any thesis, whether in print or in manuscript, which the applicant may desire to submit in support of the application. A copy of the thesis submitted will be retained in the University Library.

2. A candidate shall not be permitted to submit in chief or sole support of his application for the degree a thesis for which a degree has been awarded in this or any other University, or which is under consideration for the award of a degree in another University; but he shall not be precluded from submitting in additional support of his application a thesis for which a degree has already been awarded or from incorporating (in whole or in part) such work in the thesis submitted, provided he clearly indicates the work thus submitted or incorporated.

N.B.—The latest date for application and payment of fee is 1st FEBRUARY in any year.

Ordinance

DEGREE OF DOCTOR OF DIVINITY (D.D.)

Ordinance 59. The degree of Doctor of Divinity shall be conferred by the University upon Graduates of the University who shall be deemed by the Senate, after considering a report from the Board of the Faculty of Arts, to have distinguished themselves by special research or learning.

> 60. A Graduate of the University may make application for the degree of Doctor of Divinity in the sixth or any subsequent year from the date of graduation.

> 61. If the application be approved by the Senate, the degree may be conferred at the first convenient date thereafter.

Regulations

I. All applications shall be made in writing to the Registrar, and shall contain a full statement of the candidate's academic record and any other qualifications on which the application for the degree is based, together with two or more copies of the published work or works submitted whether in print or in typescript which the candidate may desire to submit in support of the application. A copy of the work or works approved for the degree shall be retained in the University Library.

2. A candidate shall not be permitted to submit in chief or sole support of his application for the degree a thesis for which a degree has been awarded in this or any other University, or which is under consideration for the award of a degree in another University; but he shall not be precluded from submitting in additional support of his application a thesis for which a degree has already been awarded or from incorporating (in whole or in part) such work in the thesis submitted, provided he clearly indicates the work thus submitted or incorporated.

N.B.—The latest date for application and payment of *iee* is 1st February in any year.

DIPLOMAS IN ARTS

62. Diplomas shall be granted by the University, in such subjects as the Council may from time to time determine, to students who pursue the courses of study and pass the examinations prescribed.

63. The Council is empowered to make from time to time Regulations under which such Diplomas shall be awarded.

64 The award of Diplomas under the provisions of this Ordinance is delegated to the Senate.

Candidates for Diplomas are required to give satisfactory Regulations attendance upon all the subjects which form part of their course of study, and to present themselves for any class examinations that may be held in the same. Those who do not pass satisfactorily in these examinations in any year will be disqualified for the Diploma unless they repeat the course in whole or in part, as may be required by the Senate.

At the close of the course, candidates will be required to present themselves for such examination in the main subject of study as may be prescribed.

Some deviation from these courses may be sanctioned in special cases, and students who on entering upon a Diploma course produce evidence that they possess a sufficient knowledge of the work done during a part of the course will be allowed to dispense with a certain amount of attendance. Applications for exemption from attendance should be made to the head of the department concerned, who shall bring them before the Standing Committee of the Senate appointed to deal with such matters.

Diploma in Education

Candidates for the diploma in Education must be graduates of some University in the United Kingdom or must have obtained such other academic qualifications as shall be approved by the Senate of the University.

The session for students in this department will open about the beginning of September and will close about the middle of July.

The course is both theoretical and practical. Normally at least sixty days will be devoted to class work in school. т

Ordinance

Candidates who have had adequate experience of class teaching may be permitted to substitute for this period of practical training an approved course of visits to educational institutions.

Students will attend the following lectures :

- (a) The principles and methods of education and teaching.
- (b) The psychological bases of education.
- (c) Physical, intellectual, and moral development of the child.
- (d) The history of education (with selected work or works).
- (e) Educational systems.
- (f) Experimental education (with laboratory practice).
- (g) Modern problems in education.
- (h) Phonetics.
- (i) Physical Development, Hygiene and Physical Training.

In addition there are various optional courses.

Practical Work

This will be carried on under the immediate supervision of members of the staff, and of certain teachers of special subjects in the practising schools.

Students who wish to specialise in one or more subjects of the school curriculum will be definitely attached throughout the year to certain selected schools which provide special opportunities for the required training.

For some time previous to the opening of the ordinary University session at the beginning of October, students may be in continuous attendance at selected schools for the purpose of observing methods of organisation, teaching, discipline, &c.

Throughout the University session systematic observation and teaching in school will be done by each student.

The written examination for the diploma will take place in June.

The tests in practical skill will consist in the delivery of lessons and in an inspection of records of the candidates' practical work in school. Importance will be attached

Barrister and Barrist

to reports on the candidates' work and skill from the teacher of the school under whom they have worked, and from the staff of the University Education department.

Graduates in Arts or Science of this University who have included Education in the Final examination for their degree may obtain the diploma in Education after a further year's attendance on a course approved by the Board of the Faculty in which the degree was taken. Such course must include:

- (a) Attendance in schools as specified above;
- (b) Attendance on course (g) above;
- (c) Attendance on a course of study in Arts or Science (not included in those taken for a degree), approved by the Board of the Faculty as at least equivalent to the subject of Education taken as part of the Final course for the degree.

The examination for the diploma in Education will in these cases consist of the tests of practical skill, and the paper in the Practice of Education, but the diploma will not be issued until the candidate has also passed the degree examination in the subject or subjects included under (ϵ) .

The list of successful candidates will be issued in alphabetical order.

No diploma will be issued until the candidate has passed in both the written and the practical parts of the examination; but a candidate who fails in the practical part only may, on the recommendation of the examiners, be allowed by the Senate to present that part at a subsequent date without further written examination. In such cases the candidate must produce a satisfactory report from the head teacher of the school in which he has been teaching, and must submit records of work done.

Diploma in Educational Administration*

The courses of study for the Diploma in Educational Administration are intended to meet the needs of those who are engaged in administrative work under Local Education Authorities, or of those who wish to gain a knowledge of such administrative work.

^{*}The course for this Diploma is at present in abeyance.

Diplomas in Arts

Admission

The lecture courses are open to all who have passed the Matriculation Examination of a University or its equivalent, or to those who can give evidence that their experience and education have been such as to enable them to profit by attendance at them.

Early application for admission is desirable and should be made to the Registrar in any case not later than 15th October. The University reserves the right to suspend the course if the entry of students is regarded as insufficient.

Duration of Courses

The full course of study for the Diploma comprises about 60 lectures on the subjects given below and extends over two Winter Sessions.

Examinations

Candidates who wish to obtain the Diploma must have attended the full course and have passed the appropriate examinations.

Lecture Courses

I. Development of educational administration in England and Wales—local and central authorities.

2. Organisation and duties of the administrative departments of Local Education Authorities—County, County Borough and Borough.

3. Organisation and duties of the Central Authority.

4. The university system.

5. The school system—types of schools and coordination.

6. Supervision of schools—inspection and examination.

7. Educational finance.

8. Educational statistics.

9. School buildings and equipment.

10. School medical service.

II. Social and welfare activities.

12. The training of teachers.

13. The legal aspect of education.

14. Educational systems of other countries.

Lecturers

The Lectures will be given by members of the Staff of the Education Department of the University, Directors of Education, and others with expert knowledge and experience.

Dates and Fees.

The Lectures will be given on Wednesdays and Fridays at 6.15 p.m., beginning in November.

The fee for the full Diploma Course of two Sessions is $\pounds 5$ 5s.; or for one Session $\pounds 3$ 3s.; or for a group of 8 lectures $\pounds I$ IS.

Diploma in Public Administration

The Course for the Diploma in Public Administration extends over two Winter sessions, comprising in each session about 80 lectures of one hour each.

An examination is held at the end of each session, and the Diploma will be awarded to those who are successful in the examinations after having made satisfactory attendance (*i.e.* not less than 75 per cent.) throughout the complete course.

The lectures are given in the University on Tuesdays and Fridays from 6.30 p.m. to 7.30 p.m. and 7.30 p.m. to 8.30 p.m. each evening.

The tuition fee is $\pounds 7$ a session, with an examination fee of $\pounds I$ each session.

The syllabus is as follows :---

First Year :

- **I.** General Economics with special reference to modern problems (two hours a week).
- 2. Reconstruction.
- 3. A course in *either* Local Government* or Economic Statistics.*

Second Year:

- I. Public Administration, Central and Local (one hour a week).
- 2. Public Finance, Central and Local (one hour a week).

* The choice between these will be dictated by the staff available.

Diplomas in Arts

- 3 and 4. Two of the following courses, of which not more than three will be held in any year (each one hour a week) :---
 - (a) Industrial and Social History of Great Britain since 1760.
 - (b) Constitutional History (with special reference to local government).
 - (c) Economic Statistics.
 - (*a*) The Economics of Public Utility and Public Undertakings.
 - (e) Recent Economic Changes.
 - (f) Accountancy.
 - (g) Auditing.

Students will be required to write at least one essay in connexion with the course.

The first year course will begin in October.

Diploma in Geography

Candidates for the Diploma in Geography must be graduates of a recognised University, or must furnish evidence satisfactory to the Senate of educational qualifications sufficient to enable them to profit by the course.

Candidates will ordinarily attend as full-time students in the Department for one session, but in special cases attendance equivalent in time to the foregoing but spread over a longer period may be permitted.

The content of the Diploma course, and the nature and standard of the examination, will be the same as obtain for a student presenting Geography as a Principal subject for the Ordinary Degree of B.A.

The fees payable will be as follows :---

1. In the case of candidates who are graduates of the University of Leeds, and who have previously paid to this University three composition fees of not less than f_{33} each—

No Registration Fee.

(a) If the course is completed in one year \dots £28

(b) If the course is spread over two years £16 10s. a year.

2. Other candidates:

Registration Fee

(a)	If the course is completed in one year		£34
<i>(b)</i>	If the course is spread over two years	£19 1	tos.
	a year.		

Diploma in Biblical Studies

In response to a widely-felt need for a more adequate training on the part of those who give, or may be called upon to give, religious instruction in schools, the University has instituted a Diploma in Biblical Studies.

The course for the Diploma extends over two years of part-time study. The lectures. of which there are two in each week, namely on Tuesday evenings, are designed to give the teacher an adequate literary, historical and comparative knowledge of the Old and New Testaments.

Admission

The lecture courses will be open to all whose education has been such as to enable them to profit by attendance at them. Applicants for admission should state their educational qualifications.

The University reserves the right to suspend the course if the entry of students is regarded as insufficient.

Duration of Courses

The full course of study for the Diploma comprises about a hundred lectures on the subjects given below and extends over two sessions.

Examination

An examination will be held at the end of the course. To qualify for the Diploma a candidate must pass the examination after making satisfactory attendance upon the full course.

Lecture Courses

The following subjects will be included in the course :— (i) Old Testament :

- (a) A general knowledge of the history of Israel and Judaism to A.D. 70, and the literature of the Old Testament.
- (b) The development of theological thought, ethics and worship during the same period.
- (c) Two prescribed books (in English).

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(ii) New Testament :

- (a) The life and teaching of Christ as contained in the Gospels.
- (b) The history and religious thought of the Apostolic Age.
- (c) A general knowledge of the Synoptic problem and the Textual Criticism of the New Testament with a more detailed study of one Gospel and one Epistle (in English).
- (iii) Historical and archæological background of the Old and New Testaments :

One or more of the following optional subjects may also be taken:

New Testament Greek. Old Testament Hebrew. Church History (with prescribed periods).

Dates and Fees

The compulsory lectures will be given on Tuesdays at 6 p.m.; the optional subjects on Saturdays at 11 a.m.

The fee for the course will be $\pounds 5$ 5s. a session, with an examination fee for the Diploma of $\pounds 3$.

Diploma in Hebrew

The Diploma in Hebrew is designed to meet the requirements of those who desire a thorough practical acquaintance with the Hebrew language and literature and the history of the Jewish people and their institutions.

Admission.

Candidates must furnish evidence, satisfactory to the Senate, of educational qualifications sufficient to enable them to profit by the course.

Duration of Courses.

The course of study will normally extend over six terms, and will consist of two lectures per week of one hour each to be given in the University; candidates who can show that they possess an adequate knowledge of Hebrew may, with the approval of the Senate, be allowed to take the Diploma after attendance at lectures for four terms.

Diplomas in Arts

Examination.

Part I of the examination will be held at the end of the first year, and Part II at the end of the second year of the course, and the Diploma will be awarded to those who are successful in the whole examination, after having attended satisfactorily throughout the course.

Lecture Courses.

First term : Elementary Biblical Hebrew ; grammar, composition, retranslation and pointing of prescribed portions. Outline of Jewish history to 130 A.D.

Second and Third terms: More advanced prose passages from the Old Testament; prescribed portions of Post-Biblical Hebrew; Hebrew syntax. Introduction to Jewish literature.

Fourth and Fifth terms: Prescribed poetic passages from the Old Testament; prescribed books of modern Hebrew; comparative Hebrew grammar and syntax. The development of Jewish Religious ideas and institutions.

Sixth term : Modern Hebrew. Outline of Jewish history, from 130 A.D.

Certificate in the Teaching of Hebrew

Candidates who obtain the Diploma in Hebrew may proceed to a third year for a Hebrew Teachers' Certificate. This certificate may also be taken, without the Diploma, by candidates who hold an academic qualification which is regarded by the Senate as equivalent to the Diploma.

The syllabus for this course, which will consist of two hours a week for three terms, will comprise (a) more advanced classical and modern Hebrew (b) 10 lectures on the general principles of education to be given by the Department of Education of the University (c) about 20 lectures on the methods and history of teaching the regular subjects of the Jewish school to be given by a lecturer approved by the University (d) six months' practical training, under supervision, at a local Jewish school.

Diplomas in Arts

Diploma in Spanish

The Diploma is designed to meet the needs of those who desire to increase their knowledge and to deepen their understanding of Spanish language and literature.

Admission.

The course will be open to all candidates who can furnish evidence, satisfactory to the Senate, of educational qualifications (including a knowledge of Spanish) sufficient to enable them to profit by the course. The University reserves the right to suspend the course in any year if the entry of students is regarded as insufficient.

Duration of Course.

The course will continue over two sessions and will consist of not less than two hours tuition each week at the University during the normal academic terms.

Examinations.

Part I of the Examination will be held at the end of the first year and Part II at the end of the second year of the course; each Part of the examination will include an oral test and a student must pass Part I *in toto* before proceeding to the second year course. The Diploma will be awarded to those candidates who are successful in the whole examination, after having attended satisfactorily throughout the course; the Diploma may be awarded with distinction.

Courses

First Year : Grammar, Translation and Composition, Spanish History and Civilization 1500-1700 or 1800-1945.

Three Literary Texts, to be studied with particular reference to their background.

Second Year : Grammar, Translation and Composition, Phonetics, Spanish Literature 1500-1700 or 1800-1945.

Six Literary Texts, to be studied with particular reference to their background.

COURSES IN ARTS

GREEK LANGUAGE AND LITERATURE

Greek I

The work in this course will comprise composition. translation at sight and the special study of Euripides, *Iphigenia in Tauris*; Xenophon, *Memorabilia* (selections).

Four hours at times to be arranged.

Books recommended

North and Hillard's Greek Prose Composition (Rivington). Euripides, Iphigenia in Tauris (England, Macmillan). Xenophon, Memorabilia Socratis (Cluer, Macmillan).

Greek II

The work in this course will comprise composition, translation at sight, and the special study of Homer, Odyssey III, IV; Thucydides VII (selection).

Four hours at times to be arranged.

Books recommended

Sidgwick's Greek Prose Composition (Rivington). Homer, Odyssey I-XII (Merry, Clarendon Press). Thucydides VII (Marchant, Macmillan).

Greek III

The work in this course will comprise composition, translation at sight, and the special study of Sophocles, *Philoctetes*; Plato, *Republic I*, II (to 369b).

Four hours at times to be arranged.

Books recommended

Sidgwick's Greek Prose Composition (Rivington). Sophocles, Philoctetes (Abbott, Clarendon Press). Proem to the Ideal Commonwealth of Plato (Tucker, Bell).

Honours and M.A. Course

The work in this course will comprise composition, translation at sight, and the study of books prescribed for the examinations for Honours in Classics, and for the M.A. degree in Greek.

Six hours at times to be arranged.

SPECIAL CLASSES

Elementary Class

This class is intended for beginners; it will not be held unless there is a reasonable number of promising applicants.

Two hours at times to be arranged.

LATIN LANGUAGE AND LITERATURE Latin I

The work in this course will comprise composition, translation at sight and the special study of prescribed authors.

Mondays, Wednesdays and Fridays at 10 a.m., with a composition class on *either* Tuesdays at 11 a.m., or Thursdays at 10 a.m.

Books prescribed for June 1947 Cicero and Sulpicius. ed. James. Clarendon Press. Virgil, Aeneid I. Caesar, Bellum Gallicum IV20-V23.

Latin II

The work in this course will comprise composition, translation at sight and the special study of prescribed authors.

Mondays, Tuesdays, Wednesdays, Fridays at 12 noon.

Books prescribed for June 1947

Livy V. ed. Whitley. Pitt Press.

Lucretius VII 783-end. ed. Lowe. Clarendon Press or Duff, Pitt Press.

Rieu, A Book of Latin Poetry. Methuen.

Latin III

The work in this course will comprise more advanced composition, translation at sight and the special study of prescribed authors.

Mondays and Fridays at 3 p.m., Wednesdays at 12 noon, and a composition class on Tuesdays at 12 noon.

Books prescribed for June 1947

Tacitus, Annals XIV. ed. Woodcock. Methuen. Horace; Oder III. Rieu. A Book of Latin Poetry. Methuen.

Hebrew

Honours and M.A. Course

The work in this course will comprise composition, translation at sight and the study of books prescribed for the examinations for Honours in Classics and for the M.A. degree in Latin.

Mondays at 12 noon, Tuesdays at 9 a.m., Thursdays at 9 a.m. and 10 a.m., and Fridays at 12 noon, with other hours to be arranged.

HEBREW LANGUAGE AND LITERATURE

Hebrew I

1. Hebrew Grammar.

2. Translation, exegesis, retranslation and pointing of set portion of the Old Testament.

3. Composition; introduction to the Pentateuch.

Tuesdays and Thursdays, 9 a.m. One additional hour to be arranged.

For session 1946-47 the prescribed portion is Genesis, 1-8.

Hebrew II

1. Hebrew Syntax, prose composition, and unprepared translation.

2. Translation, exegesis, grammar, retranslation, and pointing of prescribed texts from the Old Testament; introduction to the books from which the prescribed texts are taken.

3. Either (a) Prescribed texts from Mediaeval and Modern Hebrew; composition and essay.

> or (b) Critical introduction to the Old Testament literature.

Three hours weekly to be arranged.

For session 1946-47 the prescribed texts are I Kings, 14-22; Judges, 1-5; Isaiah, 1-6; The Ethics of the Fathers I-III; J. Steinberg: Ba-yamim Ha-hem I-III; J. L. Perez: Mi-pi Ha^cam; H. N. Bialik: ²Im yesh eth nafsheka lada^cath, Ha-berekah.

Hebrew III

1. Poetic composition; unprepared translation and pointing.

2. Prescribed texts from the Old Testament; introduction to the books from which the prescribed texts are taken.

- 3. Either (a) Prescribed texts from Mediaeval and Modern Hebrew; composition, essay and oral examination.
 - or (b) History and development of the moral and religious ideas in the Old Testament.

Three hours weekly to be arranged.

The prescribed texts for session 1946-47 are Isaiah, 40-55; Psalms, 1-30; Ecclesiastes; Maimonides: Mishneh Torah I, Hil. Talmud Torah 1-3; N. Krochmal: Moreh Nebuke Ha-zeman, ch. 7; Ahad Ha'am: 'Abduth betok heruth; Mendele Mocher Sefarim: Hayye Shelomo I-III; J. L. Gordon: Ben Shinne 'Arayoth; H. N. Bialik: Mete Midbar; S. Tshernichowski: Baruch Mi-magenza, Part I.

ENGLISH LANGUAGE AND LITERATURE English IA (Poetry and Drama)

A first year course for Special (qualifying) and General students. It consists of a study of (i) poetry and poetic forms, and (ii) the drama. The following works will be especially studied :--

(i) Poetry, Epithalamion and Prothalamion, Spenser; Paradise Lost, Books V and VI., Milton; Poems, Marvell; Absalom and Achitophel, Part I, Dryden; The Rape of the Lock and Eloisa to Abelard, Pope; The Prelude, Book VIII, Wordsworth; The Waste Land, T. S. Eliot.

(ii) Drama. Ralph Roister Doister, Udall; Faustus, Marlowe; Volpone, Jonson; The Way of the World, Congreve; Major Barbara, Shaw.

English

Poetry. The English Parnassus, ed. Grierson (Oxford); English Poetry, ed. Muir (Oxford); Paradise Lost, Books V and VI, ed. Verity (Cambridge); Dryden's Poems, Everyman; Marvell's Poems, Muses' Library; Poems, Epistles, and Satires of Pope, Everyman; The Prelude, Macmillan; Poems of T. S. Eliot, 1909-1925, Faber.

Drama. Either Minor Elizabethan Drama, 2 vols. (Everyman), or Five Pre-Shakespearean Comedies (World's Classics); Marlowe's Plays (Everyman or World's Classics); Jonson's Plays (Everyman or Mermaid); Restoration Plays (Everyman). Dryden and Congreve can be found in the Mermaid Series, All for Love in 'Five Restoration Tragedies' (World's Classics), and The Way of the World, in 'The Comedies of Congreve' (World's Classics); Major Barbara is published separately or with other of Shaw's plays by Constable; Tragedy, by F. L. Lucas (Hogarth).

Wednesdays (Drama) and Fridays (Poetry) at 11 a.m.

English Is (Composition and Criticism)

For both Special (qualifying) and General students. It consists of (i) the study of English composition; and (ii) a course in critical method. The following works will be especially studied :---

(i) Urn Burial, Sir T. Browne; My First Acquaintance with Poets, Hazlitt; Sea and Sardinia, D. H. Lawrence.

(ii) An Apology for Poetry, Sir P. Sidney; Preface to the Fables, Dryden; Dryden as Critic and Poet, Johnson; and Poetry and Poetic Diction (Preface to 2nd Edition of 'Lyrical Ballads'), Wordsworth; A Defence of Poetry, Shelley; Wordsworth, Tennyson and Browning, Bagehot; G. M. Hopkins, Read.

A wider general knowledge will be required, and the following books, which contain (ii), are recommended as far as available :

The London Book of English Prose, Read and Dobrée (Eyre and Spottiswoode); Milton's Prose, sel.: Wallace (Oxford), Critical Essays of the 16th to 18th Centuries (World's Classics); Critical Essays of the 19th Century (World's Classics); Critical Essays of the 20th Century (World's Classics); Modern Prose Style, Dobrée (Oxford).

Mondays at II a.m.

English Ic (Essays and Discussions)

The work will take the form of discussions, following upon essays by students read to the class, on the matter lectured upon in Ia and Ib; and of pratcical composition in any form, and practical criticism.

In tutorial groups at times to be arranged.

English ID (Language and Early Literature)

This course is intended only for Honours (qualifying) students in their first year. The work will comprise the outlines of English Language, Literature and History, to the close of the Old English period.

The following books are selected for study in 1946-47: Wright, Elementary Old English Grammar; Wyatt, Anglo-Saxon Reader (specified passages); The Dream of the Rood (ed. Dickins and Ross); The Parker Chronicle, 832-900 (ed. A. H. Smith); Jespersen, Growth and Structure of the English Language (Blackwell); etc.

Mondays and Fridays at 3 p.m.: Thursdays at 12 (noon).

Books recommended

Wyld, The Historical Study of the Mother Tongue. (Murray). Bradley, The Making of English. (Macmillan).

Brook, Notes on some English Sound Changes.

Ker, Énglish Literature : Medieval. (Home Univ. Library). Chambers, England before the Norman Conquest. (Longmans). Oman, England before the Norman Conquest. (Methuen). British Museum Guide to Anglo-Saxon Antiquities.

English IIA (Literature)

For Pass students in their second and third years. The work will each year consist of the study of English Literature in a selected period, which will vary from year

English

to year. The period to be studied in the year 1945 (2 terms) is that from 1660-1700. A general knowledge of the period will be expected; some books are recommended for special study.

English IIB (Composition and Literary Forms)

This consists of tutorial classes : practical composition on subjects lectured on in IIA, and typical forms.

At times to be arranged.

English IIc (Language and Early Literature)

The work in this course will comprise a study of Old English (Language and Literature). The following texts will be used :—

Sweet, Anglo-Saxon Reader, selections i, ii, viii, ix, xv, xxi, xxvi.

Wednesdays at II a.m. throughout the session.

English IIIA (Literature)

As for English IIA (Literature).

English IIIB (Language and Literature)

The work of this course will comprise a study of Middle English language and literature, with special attention to the works of Chaucer. A general knowledge of the history of the English language will also be required.

The following texts will be read :--

Sisam, Fourteenth Century Verse and Prose, selections ii, v, viii, ix, x, xv, xvii; Chaucer, Knight's Tale (ed. Pollard), Nun's Priest's Tale and Clerk's Tale (both ed. Sisam).

Fridays at 12 noon throughout the session.

Books recommended

French, A Chaucer Handbook (Crofts, New York). Ker, English Literature : Medieval.

Jespersen, Growth and Structure of the English Language (Blackwell).

Bradley, The Making of English (Macmillan).

FINAL HONOURS AND M.A. COURSES A. Literature.

Ha1. (Scheme A) Second and Third Years Forms of English Poetry from Skelton to Auden.

This course will be given in alternate years. It will next be given in 1946-7.

Ha2. (Scheme A) Second and Third Years

The development of the English novel from Lyly to E. M. Forster.

This course will be given in alternate years. It will next be given in 1947-8.

Ha5. (Scheme A and B) Second and Third Years Chaucer.

This course will be given in alternate years. It will next be given in 1946-7.

Wednesdays at II a.m.

Ha6. (Scheme A) Second and Third Years Period for the session 1946-7: 1700-1745.

Ha7. (Scheme A and B) Second and Third Years Shakespeare.

This course will be given in alternate years. It will next be given in 1947-8.

Wednesdays at II a.m.

Ha8. (Scheme A and B) Second and Third Years

Elizabethan Drama.

This course will be given in alternate years. It will next be given in 1947-8.

English

Hag. (Scheme A and B) Second and Third Years On a special period. That for 1946-47 will be 1700-1745. Thursdays at 2 p.m.

Ha10. (Scheme A and B) Second Year Tutorial classes on the special period (see Ha9). At times to be arranged.

HaII. (Scheme A) Third Year Seminar classes on one author. The one chosen for 1946 is Swift. At times to be arranged.

B. Language.

Hø1. (Scheme B) Second Year The History of English. Mondays and Wednesdays at 12 noon.

Hb2. (Scheme A and B) Second Year Introduction to Middle English. Mondays at 10 a.m.

Hb3. (Scheme A and B) Third Year

Middle English Texts and Literature with special study of The Owl and the Nightingale, Havelok the Dane and Sir Gawain and the Green Knight.

Wednesdays at 10 a.m., and Thursdays at 12 noon.

Hb4. (Scheme A and B) Second Year

Old English Texts and Literature, with special study of Beowulf and the Heroic Fragments.

Wednesdays at 12 noon and Thursdays at 10 a.m.

Hb5. (Scheme B) Second Year

Early Middle English Texts. Fridavs at 2 p.m.

Hb7. (Scheme B) Second and Third Years Old and Middle English Philology: Second Year, Thursdays at 10 a.m.; Third Year, Mondays at 10 a.m.

H/8. (Scheme B) Third Year Introduction to Germanic Philology. Thursdays at 10 a.m.

H^{69.} (Scheme B) Second and Third Years Elementary Old and Middle English Palaeography. At times to be arranged.

Horo. (Scheme A and B) Second and Third Years Old Icelandic.

(i) Second Year, at times to be arranged.

(ii) Third Year, at times to be arranged.

Hb11. (Scheme B) Second and Third Years Modern Icelandic.

At times to be arranged.

H b_{12} . (Scheme B) Second and Third Years Gothic.

(i) Second Year, at times to be arranged.

(ii) Third Year, at times to be arranged.

Ho13. (Scheme B) Second and Third Years Vedic Philology.

At times to be arranged.

H^b14. (Scheme B) Second and Third Years Medieval Welsh.

At times to be arranged.

H^{b15.} (Scheme B) Second and Third Years Old Saxon and Old High German. By arrangement with the German department.

Icelandic

H^{b16}. (Scheme B) Second and Third Years Old French.

By arrangement with the French department.

Hő17. (Scheme B) Second and Third Years (i) Second Year, Russian.

(ii) Third Year, Old Bulgarian.

By arrangement with the Russian department.

H δ 18. (Scheme B) Second Year Latin Philology. By arrangement with the Latin department

By arrangement with the Latin department.

H^{b19.} (Scheme B) Second Year Greek Philology.

By arrangement with the Greek department.

H^{\$20}. (Scheme B) Second and Third Years Essays and discussions.

(i) Second Year, at a time to be arranged.

(ii) Third Year, at a time to be arranged.

Honours Modern Language Students who offer the History of the English Language should attend this class, if possible.

Hø21. (Scheme B) Third Year Old Icelandic literature.

ICELANDIC LANGUAGE AND LITERATURE

Icelandic IA

This course is an introduction to Old Icelandic Language and Literature (from the beginnings to 1400). It comprises a study of the grammar of the language, including phonology, accidence and syntax, and detailed study of selected texts.

Fridays at 12 noon.

Book recommended Gordon. An Introduction to Old Norse. (Oxford).

Icelandic IB

This course is an introduction to modern Icelandic Language and Literature (from 1400 to the present day). It comprises (i) a study of the grammar of the language, (ii) prose composition in modern Icelandic, (iii.) practice in speaking present-day Icelandic, and (iv) detailed study of selected texts.

Mondays and Thursdays at 3 p.m.

Books recommended

Snæbjörn Jónsson, A Primer of Modern Icelandic. (Oxford) Sigurður Nordal, Íslenzk Lestrarbók. (Reykjavík) Geir Zoëga, Íslenzk-ensk Orðabók. (Reykjavík). Oxford Book of Scandinavian Verse (selections).

Icelandic IIA

The work of this course will comprise the study of Old Icelandic grammar and philology, and of prescribed texts.

Tuesdays at II a.m.

Books recommended

Gordon, An Introduction to Old Norse (Oxford). Gunnlaugssaga Ormstungu. (ed. L. M. Small). Zoëga, Old Icelandic Dictionary. (Oxford). Ker, Epic and Romance. (Macmillan). Phillpotts, Edda and Saga. (Home Univ. Library). Liestöl, The Origin of the Icelandic Family Sagas. (Oslo).

Icelandic IIB

The work of this course will comprise (i) the study of prescribed literary texts in modern Icelandic, (ii) Icelandic prose composition, (iii) conversations and discussions of work in Icelandic.

Two hours a week at times to be arranged.

Books recommended

Jón Thoroddsen, Maður og Kona. Jóhann Sigurjónsson, Fjalla-Eyvindur. Brynjúlfur Jónsson, Saga Natans Ketilssonar og Skálá-Rósu. Sigurður Nordal, Íslenzk Lestrarbók.

Italian

FRENCH LANGUAGE AND LITERATURE

French I

The work done in this course will comprise the study of Modern French literature and institutions, and translation exercises.

Lectures will be given on Mondays, Wednesdays and Fridays at 12 noon and on Tuesdays at 3 p.m.

Students will be supplied with a list of prescribed books at the beginning of the term.

French II

The work in this course will comprise advanced syntax and composition and the study of literature, language and institutions, with prescribed authors.

Mondays, Tuesdays and Fridays at 2 p.m.; Tuesdays at 3 p.m.

French III

The work in this course will comprise composition, literature and the study of language and institutions, with prescribed authors.

Mondays, Tuesdays and Fridays, at 2 p.m.; Tuesdays at 3 p.m.

H. Honours Course

Students taking Honours should consult the Head of the Department as to the lectures they must attend.

ITALIAN LANGUAGE AND LITERATURE

Italian I

Three hours a week at times to be arranged.

This course is intended for candidates entering for the first year examinations in Arts, Science and Commerce and for general students who wish to acquire a greater proficiency in Italian. In addition to prescribed books, grammar, composition and dictation will be studied and there will be practice in Italian conversation. The course will also include a certain number of lectures on Italian geography.

Italian II

Three hours a week at times to be arranged.

The work of this class comprises the study of prescribed texts (both prose and verse), a general outline or a period or periods of Italian History together with grammar, composition and conversation in Italian.

Italian III

The work of this class comprises the study of advanced texts, a general outline or a period or periods of Italian literature together with the revision of Italian syntax, the elements of historical grammar and phonetics. The class will be taught in Italian.

GERMAN LANGUAGE AND LITERATURE

German I

This course is intended for candidates entering for the first year examination in Arts, Science, and Commerce, and for general students who wish to acquire a greater proficiency in German. In addition to the prescribed work, syntax, dictation and composition will be studied, and the class will have practice in German conversation.

Books recommended

Students should consult their lecturers about the set books for this course.

German II and III

The work of this class will comprise the study of composition, phonetics, German life and thought, periods of literature, and prescribed authors.

Books recommended

Students should consult their lecturers about the set books for this course

H. Honours Course

The work of this class will comprise the study of composition, historical grammar, medieval and modern texts, periods of literature, and a course on German life and thought.

Russian

Books and periods will be found under the Honours School of German Language and Literature for the B.A. degree with Honours.

SPECIAL CLASSES

Sa. Lower Elementary Class for Science Students

Mondays and Fridays at 2 p.m.

This class is intended for beginners. Special attention will be given to students of science and technology.

Book recommended

Fiedler and Sandbach. A First German Course for Science Students.

Sb. Lower Elementary Class for Arts Students

Two hours a week.

This class is intended for beginners who desire later to take German as an Ordinary Degree subject, and for Arts students wishing to acquire a reading knowledge of German.

Book recommended

Sack and Thompson, A Practical German Course (Longmans).

RUSSIAN LANGUAGE AND LITERATURE

The School of Russian Studies was founded in 1917. Its object is to study the language, literature, history, institutions and the economic conditions of Russia and the achievements of Russian scholars in art and science.

The subject is recognised for a University degree both for the ordinary degree and for the degree with Honours. Russian can also be taken under the regulations for the Degree or Diploma in Commerce.

The donor, in endowing the "School of Russian Studies," wrote that he "was of opinion that it would be an illusion to expect that adequate advantage could be taken of Russia as an outlet for our manufactures unless we can be represented out there by our own countrymen equipped with the knowledge of the Russian language."

A certificate (without matriculation or degree) is conferred by the University on students who, after due preparation, can show in examination a thorough practical acquaintance with the Russian language. The course for this certificate extends over not less than two sessions.

Candidates for a degree in Russian will be required to possess an adequate reading knowledge of German, and if necessary to attend elementary classes in this language during their first year.

Russian IA

Two hours a week at times to be arranged.

Grammar, composition, and reading of prescribed texts and practice in Russian conversation.

This course is intended for candidates entering for the first year examinations in Arts, Science and Commerce, and for general students who wish to acquire a greater proficiency in Russian.

Books recommended

Kolni-Balozky, A Progressive Russian Grammar, (Pitman). The Oxford Book of Russian Verse. (Selections). Gogol, Revizór. Allison Peers. Passages for Translation. (Harrap).

Russian IB

One hour a week at a time to be arranged. Ocherk russkov istórii

(An outline course of Russian history, delivered in simple Russian).

Book recommended

Pares, A History of Russia.

Russian Ic

One hour a week at a time to be arranged.

Russian Institutions

Book recommended

S. &. B. Webb, Soviet Communism.

Russian

Russian IIA and IIIA

Three hours a week at times to be arranged.

The work of these classes will comprise revision of Russian syntax, the elements of historical grammar and phonetics, and the study of advanced texts and composition. Tuition will be given partly in Russian.

Books recommended

Forbes, The Russian Verb. (2nd Russian Book). (Oxford University Press). Leskien, Handbuch der altbulgarischen Sprache.

Pushkin, Eugéni Onégin. Turgenev, Dym ('Smoke'). Oxford Book of Russian Verse. (Selections).

SPECIAL CLASSES.

SI Lower Elementary Class

Two hours a week at times to be arranged.

A rapid course for beginners, comprising the study of grammar, reading and writing, with practice in conversation.

Books recommended

M. O'C. Walshe, Russian for the Services. (Harrap). R. T. Currall, A Russian Vocabulary. (Harrap).

S2 Slavonic Pro-Seminar

One hour a week at a time to be arranged.

An informal discussion-class designed to introduce students to the wider field of Slavonic studies, with reading-practice in the main Slavonic languages. Students attending this class will be expected to have an elementary knowledge of Russian or some other Slavonic language.

Book recommended Berneker, Slavische Chrestomathie.

SPANISH LANGUAGE AND LITERATURE

Spanish I

Three hours a week at times to be arranged.

This course is intended for candidates entering for the first year examinations in Arts, Science, and Commerce, and for general students who wish to acquire a

greater proficiency in Spanish. In addition to prescribed books, grammar, composition, and dictation will be studied and there will be practice in Spanish Conversation.

Book recommended

Hills & Ford, Spanish Grammar for Colleges. J. Camba, La ciudad automática.

Spanish II

Three hours a week at times to be arranged.

The work of this class comprises the study of prescribed texts (both prose and verse), a period or periods of Spanish literature, together with grammar, composition and conversation in Spanish.

Books recommended

Lope de Vega, El Castigo sin Venganza. Espronceda, El Estudiante de Salamanca. La Vida de Lazarillo de Tormes (Manchester University Press).

F. Garcia Lorea, La Zapatera Prodigiosa.

Spanish III

The work of this class comprises revision of Spanish syntax, the elements of historical grammar and phonetics, study of advanced texts, and composition. The class will be taught in Spanish.

Books recommended

Tirso de Molina, El Burlador de Sevilla. Calderón, La Vida es Sueño. Cervantes, Don Quijote. R. Pérez de Ayala, Belarmino y Apolonio.

Spanish Honours

The work of this class comprises historical grammar, interpretation of old, seventeenth century and modern texts, and three courses of literature as follows: up to 1500 A.D. in the first year, the classical period in the second year, and the novel of the nineteenth century in the third year.

History

HISTORY

History IA

(Outlines of Greek and Roman History)

Tuesdays and Thursdays at 12 noon. Greek History to the death of Alexander. Roman History from 390 B.C. to 14 A.D.

Text Books recommended

Oman, A History of Greece; or
Bury, History of Greece for Beginners.
J. L. Myres, A History of Rome; or
J. Wells, A Short History of Rome to 14 A.D.
Plutarch, Lives of Cimon, Lysander, Cato the Elder, Sulla, in Vol. II. of the translation of Stewart and Long in Bohn's Library.

History II

(European History from 1815 to 1919)

Tuesdays and Thursdays at 12 noon.

Text Books recommended :

Grant and Temperley, Europe in the 19th and 20th Centuries.

Grant, Economic Development of France and Germany, 1815-1914.

History III

(An Outline Course on English History) Tuesdays and Thursdays at 2 p.m.

History IV

(European History)

Mondays and Wednesdays at II a.m.

History V

(An Introduction to Medieval Society)

Tuesdays at II a.m.

Tutorial classes at another hour will be arranged.

History VI (Ecclesiastical History)

History VII (Greek History from 478 to 362 B.C.) Wednesdays at 11 a.m. and Fridays at 10 a.m.

History VIII (Roman History from 133 to 30 B.C.) Tuesdays and Thursdays at 10 a.m.

History IX

(English History from 1815 to 1919) Tuesdays and Thursdays at 10 a.m.

History X

(The History of the British Empire)

Wednesdays and Fridays at 9 a.m.

History XI

(Special Lectures)

Thursdays at 11 a.m.

First Term : Prof. Le Patourel, "The Origins of the French Nation."

Second Term: Mr. J. C. Dickinson, "Medieval Architecture in Yorkshire."

HONOURS AND M.A. COURSES

H1. Roman History 44 B.C. to 14 A.D. Mondays and Wednesdays at 10 a.m.

H2. Roman History 44 B.C. to 14 A.D. For Students in their Third Year. Wednesdays and Fridays at 11 a.m.

H₃. The Norman Conquest Tuesdays and Thursdays at 12 noon.

H4. The Norman Conquest For Students in their Third Year. Fridays at II a.m.

History

H₅. The Commonwealth and Restoration Wednesdays and Fridays at 12 noon.

H6. The Reign of James I For Students in their Third Year. Wednesdays and Fridays at II a.m.

H7. English History 1880 to 1914 Wednesdays and Fridays at 12 noon.

H8. English History 1870-1900 For Students in their Third Year. Wednesdays and Thursdays at 10 a.m.

H9. English Constitutional History from 1485 Tuesdays and Thursdays at 12 noon.

H10. European History Mondays and Wednesdays at 11 a.m.

H11. Sources of English History For Students in their Second Year, Fridays at 10 a.m.

H12. European History 1815-1919 For Students in their First Year, Tuesdays and Thursdays at 12 noon.

H13. Political Theory At times to be arranged.

H14. The History of the British Empire Wednesdays and Fridays at 9 a.m.

H15. An Outline Course on English History Tuesdays and Thursdays at 2 p.m.

H16. Roman History

Tuesdays at 4 p.m. and Fridays at 11 a.m. (for Classics Honours students).

PHILOSOPHY

Philosophy I

Three lectures each week throughout the session at hours to be arranged.

This course is intended to give a general introduction to the study of philosophical questions, based upon certain classes in the subject, and will deal with the elements of Moral Philosophy and of the theory of knowledge. It will involve the special study of certain books *selected from* :—

Plato : Apology, Crito, Republic, Theatetes.

Descartes: Meditations, Discourse on Method.

Berkeley: Principles of Human Knowledge; Three Dialogues between Hylas and Philonous.

I. S. Mill: Utilitarianism.

Bertrand Russell: The Problems of Philosophy.

Philosophy II

Three lectures each week throughout the session at hours to be arranged.

IIA. History of Modern Philosophy from Bacon to Kant: two hours.

IIB. Psychology: one hour.

IIC. Logic: one hour.

Note.—IIC is primarily for Honours students, but may be taken by others as an extra course if they intend to take IIIA in their third year.

Philosophy III

Three lectures each week throughout the session at hours to be arranged.

IIIA. Contemporary Philosophy: two hours.

IIIB. Ethics : two hours.

This course includes the special study of the following: Aristotle's *Ethics*; Butler, *Sermons* I-III and V, VI, XI and XII, and Kant, *Fundamental Principles of the Metaphysics of Ethics*.

IIIc. Study of a special set book: one hour.

Course III will normally consist of *either* IIIA or IIIB together with IIIc: but IIIA and IIIB may be taken together as an alternative if desired.

Greek Philosophy

This course is mainly for students in the Honours Schools of Philosophy and Classics.

Political Theory

This course is mainly for students in the Honours Schools of Philosophy and History, and gives a primarily historical survey of the subject.

H. Honours Courses

Lectures will be delivered on subjects for the Honours degree, as required, at hours to be arranged.

ANTHROPOLOGY

Anthropology I (General Ethnology)

Two or three lectures and three hours' practical work a week throughout the session at times to be arranged.

The concept of human "races" and the limitations of classifications of mankind on the basis of race. Human origins. A comparative study of the physical criteria employed to distinguish racial types. The distribution and regional grouping of racial types. Problems of the relationships of racial types to geographical environment. The geographical setting of early "modern man." The idea of racial drifts. The meaning and content of culture. Culture (including language) versus race. Elementary comparative study of language. The classification of peoples in relation to language. Regional studies of primitive economies and their relation to environment. The geographical background of the ancient civilizations of the Near East, India, China and the Aegean. The dawn of civilization in Europe. The material cultures of pre-Columbian America. Diffusion and independent origins.

Anthropology II (Physical Anthropology)

Two or three lectures and three hours' practical work a week throughout the session at times to be arranged.

The comparative anatomy of the man-like apes and man (Primates) with special reference to the skeleton and brain. The evolution of man. Palæontology and the antiquity of man. The classification and distribution of living races of mankind. The physical characters of races of living man and the methods of anthropometry.

Anthropology III (Social Anthropology)

Two or three lectures a week throughout the session at times to be arranged.

The scope of social anthropology. Historical, comparative and functional method of approach. The investigation of the nature and structure of human society by the comparative study of communities of divers kinds. Forms of social structure. The family and kinship. Patrilineal and matrilineal organization. The extension of kinship, clans, tribes and nations. Regulation of sexual life. Rules of marriage and sex division in relation to economic, religious and social activities. Primitive law, land tenure, property and Political organization. Chieftainship, inheritance. kingship, secret societies. The sanctions of authority. Genesis and growth of moral ideas, and of magicoreligious customs and beliefs.

HISTORY OF RELIGION

Lectures throughout two sessions at times to be arranged.

I. The great living religions of the world, together with the chief ancient polytheisms, in their relations with one another and with Christianity.

II. One of the great living religions of the world to be studied in greater detail. The selected subject for 1947 will be Islam, and for 1948 Hinduism.

THEOLOGICAL STUDIES

Courses towards this degree are provided by the staff of the University in co-operation with teachers recognised for this purpose by the Senate, from the staffs of the Wesley College, Headingley, the Rawdon Baptist College, the Yorkshire United Independent College, Bradford, and the College of the Resurrection, Mirfield.

Syllabuses

I. Old Testament History, Literature and Religion

The first year course comprises the History and Religion of Israel to the beginning of the Exile; critical introduction to the Pre-Exilic literature of the Old Testament; and a detailed study of prescribed books in the Revised Version.

The second year course comprises the History of Israel from the Exile to 70 A.D., the development of Religion from the Exile to the end of the Old Testament period; critical introduction to the Post Exilic literature of the Old Testament and the Apocrypha and a detailed study of prescribed books.

Set Books

First year course : 1946-47 Joshua and Judges. Second year course : 1947-48 Haggai & Zechariah.

Books recommended

W. O. E. Oesterley and T. H. Robinson : History of Israel.

J. N. Schofield: The Historical Background of the Bible; The Religious Background of the Bible.

Courses in Arts

- W. O. E. Oesterley and T. H. Robinson: Hebrew Religion (2nd ed.).
- S. R. Driver: Introduction to the Literature of the Old Testament.
- Mitchell: Haggai and Zechariah (I.C.C.).

Burney: Judges.

II. New Testament Language and Literature

Three lectures are given each week at times to be arranged. The course may be taken for one or two years.

The first year course includes :

- 1. The grammar and syntax of the Greek New Testament.
- . 2. Translation, criticism and exegesis of a prescribed Gospel.
 - 3. Introduction to the Gospels and the Acts of the Apostles; the textual criticism of the New Testament.

The second year course will include :

- 1. Unprepared translation from the Greek New Testament.
- 2. Translation, criticism and exegesis of a prescribed Epistle.
- 3. Introduction to the New Testament Epistles and the Apocalypse; the History of the Formation of the New Testament Canon.

Set Books

First year course : 1946-47 St. John.

Second year course : 1946-47 Acts (Chap. 1-12).

Books recommended

Vincent Taylor : The Gospels.

F. B. Clogg: Introduction to the New Testament.

F. G. Kenyon: The Text of the Greek Bible.

A. Souter: Text and Canon.

C. A. Anderson Scott: Christianity according to St. Paul. Commentaries of McNeil on St. Matthew's Gospel.

Commentary of Lightfoot on Colossians.

Commentary of Armitage Robinson on Ephesians.

J. A. Findlay on Acts

International Critical Commentary on St. John.

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Theological Studies

III. Ecclesiastical History

Two lectures are given each week at times to be arranged. This subject may be taken for one or two years. Candidates take one or two of the following periods :---

- I. 70 A.D. to 313 A.D. Vol. I of Kidd's Documents Illustrative of the History of the Church will be studied in connexion with this course.
- 2. 313 A.D. to 451 A.D. Vol. II of Kidd's Documents will be studied in connexion with this course.
- 3. General outlines of Ecclesiastical History from 1453 A.D. to 1845 A.D.
- 4. General outlines of Ecclesiastical History from 1054 A.D. to 1845 A.D.

Books recommended

Periods I and II.

Foakes Jackson : History of the Church.

J. W. C. Wand : History of the Early Church to 500 A.D.

J. Moffat: First Five Centuries of the Church.

B. J. Kidd: History of the Church to A.D. 461.

Period III.

Williston Walker: History of the Christian Church (T. T. Clark).

J. W. C. Wand: A History of the Modern Church (Methuen).

IV. History of Religion.

As in Arts Course—See page 8.

V. Philosophy of Religion.

The philosophical approach to the study of religion in relation to general principles and fundamental ideas, with special reference to the development of theology in Greek thought.

Modern Theism based on the study of selected works.

1946-47 J. W. Oman: The Natural and the Supernatural. Books recommended

G. Galloway: The Philosophy of Religion.

J. Baillie: The Interpretation of Religion.

W. Pringle Pattison: The Idea of God.

F. R. Tennant: Philosophical Theology.

VI. Biblical and Historical Theology

Two lectures are given each week at times to be arranged.

This subject may be taken for one or two years.

The course is divided into two sections which are taken in alternate years.

Section A. The Incarnation and the Trinity with special reference to the following :---The Old Testament antecedents : New Testament data and their interpretation; the controversies of the Conciliar Period; the Middle Ages and the Reformation Period : modern presentations.

Section B. The Atonement with special reference to the following :- The Old Testament antecedents; New Testament data and their interpretation ; early Christian conceptions, Greek and Latin, of salvation through Christ; the teaching of Anselm and Abelard ; Reformation and Post Reformation conceptions of the Atonement; modern presentations.

Section A will be taken during the session 1945-46 and Section B during the session 1946-47.

Books recommended

- H. R. Mackintosh: The Person of Christ.
- A. E. J. Rawlinson: Essays on the Trinity and the Incarnation.

A. E. J. Rawlinson : The New Testament Doctrine of the Christ. Vincent Taylor: The Atonement in New Testament Teaching. J. K. Mozlev: The Doctrine of the Atonement

A. B. Davidson: Theology of the Old Testament.

Qualifying Examination for B.D. Degree

1. The qualifying examination referred to in Articles 51 and 52 of Ordinance II consists of the following subjects :---

Old Testament History, Literature and Religion with or without Hebrew Language and Literature (2 papers in Old Testament or 1 in Old Testament and I in Hebrew).

Economics

New Testament Language and Literature (2 papers). Ecclesiastical History (2 papers). Biblical and Historical Theology (2 papers), The Philosophy of Religion (2 papers) or The History of Religion (2 papers) or The Philosophy of Religion (1 paper) and The History of Religion (1 paper).

2. The syllabus for the qualifying examination is that prescribed for the second and third year courses in the relevant subjects for the B.A. degree in Theological Studies, except in History of Religion, where the syllabus for the Qualifying Examination is that of the first and second year courses for the B.A. in Theological Studies. In the case of Ecclesiastical History candidates must offer *either* Period I and Period 2 or one of these two Periods together with Period 3 or Period 4.

3. If desired the first part of the Qualifying Examination in each subject may be taken in one year and the second part in the subsequent year. Candidates who wish to divide the Qualifying Examination in this way will be required to take the appropriate papers for the B.A. degree in Theological Studies.

Entries for the Qualifying Examination must be made on the appropriate form not later than 1st March in each year.

BIBLICAL STUDIES Biblical Studies I The historical background of the Bible.

Biblical Studies II

Introduction to the literature and religion of the Bible.

ECONOMICS

I. General Economics

The evolution of modern economic conditions. Modern industrial, commercial and social organisation. The national income. Value and distribution.

Tuesday and Thursday at 10 a.m.

Courses in Arts

FINAL COURSES

II. Principles of Economics

The general relations of demand, supply and value, including distribution and international trade.

Tuesday and Thursday at 11 a.m.

IIA. Industrial Fluctuations

A study of fluctuations in various forms of economic activity, including seasonal, cyclical and secular changes in industry and trade. Theories of the trade cycle.

One hour a week at a time to be arranged.

IIB. Industrial Administration

Business organisation and management; large and small businesses; joint stock enterprise; selling syndicates; trusts; public utility undertakings. The movement towards monopoly.

Thursday at 12 noon.

IIc. Public Finance and Administration

Public expenditure and revenue; rates, taxes, and public debts; the budget; relations of central and local administration; local rates; grants in aid; municipal finance and administration; national and municipal industries.

One hour a week at a time to be arranged.

IID. Financial Organisation

Currency and banking; the money market; foreign exchanges. The organisation of foreign trade.

Tuesday at 12 noon.

IIE. Industrial Relations

Methods of remuneration; structure and policy of trade unions and employers' organisations; causes and settlement of industrial disputes; conciliation and arbitration; joint industrial councils, works committees, etc. Personnel management. Industrial psychology. State regulation of working conditions, including factory legislation and trade boards. International Labour Organisation.

Tuesday and Thursday at 10 a.m.

Economics

IIF. Social Science and Administration

The influence of industrial conditions on social life; the problems of poverty, housing and unemployment. Some social aspects of industry. Employment of women and children. Schemes of industrial betterment. Industrial and social legislation.

Tuesday and Thursday at 2 p.m.

IIG. Economic Problems of War and Reconstruction Two hours per week at times to be arranged.

IIH. and IIJ. Economic History

A general course beginning with the Manor and ending with the Nineteenth Century, with special attention to a particular period.

The course will be divided into two parts (IIH and IIJ), each part being given in alternate years.

IIH. Economic History (up to 1750).

r. The Middle Ages. The manor—the growth of towns —the guilds—agricultural changes—industry—foreign trade—public finance.

2. The Age of Mercantilism. Agriculture—industry and industrial organisation—foreign trade—social legislation —public finance.

IIJ. Economic History (1750-1900).

I. The Rise of Modern Industry. Transport—markets —agriculture—industrial technique—capital—labour the factory system—social changes—social legislation —public finance.

2. Industrial and commercial trends of the Nineteenth Century. The economic consequences of mechanical transport—changes in industrial technique—the new international division of labour—free trade and protection—agriculture—social reform—the spirit of association—foreign trade and the export of capital banking and finance—the new colonial era—social and political trends—public finance.

Monday and Friday at 12 noon.

Courses in Arts

HONOURS AND M.A. COURSES

HI. Advanced Economic Theory

- H2. History of Economic Thought
- H3. Economic History: Special Period
- H4. Industrial and Financial Organisation

H5. Industrial RelationsH6. Economic PolicyH7. Political Theory

Special Courses

Students in the Economics department may attend other courses provided for students in the department of commerce and social organisation. Courses will normally be offered on The Interpretation of Social Statistics, Local Government, and The Social History of the XIXth century. A course of one hour a week in Economic Statistics will be provided. When required special courses will be given on The Organisation of Foreign Trade; Business Finance; the banking systems of the chief modern states; and on the economics of the following industries: mining, engineering, iron and steel manufacture, textile manufacture, and transport by land and sea.

GEOGRAPHY

Geography I

General Geography.

Lectures 2 hours per week throughout the session (Tuesdays and Fridays at 9 a.m.).

Tutorials and practical work of not less than 3 hours per week at times to be arranged.

Geography II

A.—Principles of Human Geography. Lectures two hours per week throughout the session. (Tuesdays 10 a.m. and Wednesdays at 9 a.m.).

B.—The geography of a selected area (one hour per week throughout the session).

C.—Tutorials and practical work of three hours per week at times to be arranged.

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Geography III

Three of the following courses, normally including two under (A).

(A) Selected studies on a regional basis.

(i) India.

(ii) English Speaking North America.

(iii) An area to be arranged from year to year.

(A course of one lecture per week throughout the session for each area).

(B) Selected studies in Economic Geography.

(Two lectures per week throughout the session).

(C) Selected studies in Historical and Political Geography.

(Two lectures per week throughout the session).

Tutorials and practical work at times to be arranged. All students are required to undertake a Regional Survey under the supervision of a member of the staff.

All students in Geography are required to attend class excursions. At intervals, vacation courses are arranged, in conjunction with other British Universities for the intensive study of type regions at home and abroad.

Courses adapted to requirements of Modern Language students to be arranged as required.

HONOURS COURSES

Probationary Honours

General Principles of Geography and a regional course together with at least one tutorial class per week.

Second Year

A.—Principles of Human Geography—two hours per week.

B.—Geomorphology—one lecture and three hours laboratory per week.

C.-A regional course-one lecture per week.

D.—Studies in Economic Geography—two hours per week.

Tutorials and discussions at times to be arranged. All students are required to undertake a Regional Survey under the supervision of a member of the staff.

Courses in Arts

Third Year

Lectures and discussion classes, about 8 hours, at times to be arranged.

All students are required to attend class excursions. At intervals, vacation courses are arranged in conjunction with other British Universities for the intensive study of type regions at home and abroad.

MUSIC

Music I

The harmonization of given melodies and unfigured basses in not more than four parts.

Strict counterpoint in not more than three parts. History of Music.

Musical form.

Music II

More advanced harmony in not more than four parts. Strict counterpoint in not more than four parts. Free counterpoint in not more than three parts. Free composition in the simplest forms.

History of Music, with a special period for detailed study.

Music III

Harmony in not more than five parts. Double counterpoint, canon and fugue. Free composition.

History of Music, with a special subject for detailed study.

Courses for the Degree of B. Mus.

First Year

Harmony for not more than four voices, strict counterpoint for not more than three voices. History of Music. Form, Study of Prescribed Scores, Score Reading.

Second Year

Harmony for not more than four voices including writing for strings, Counterpoint (strict and free) for not more than four voices, a selected subject for special study, study of prescribed scores, Conducting and playing from Thorough-Bass.

Education

Third Year

Harmony for not more than five voices, Counterpoint (strict and free) for not more than five voices, Canon, Fugue, Orchestration, History of Music since 1880.

At the beginning of the third year each candidate must submit to the Head of the Department proposals for the original musical exercise which he is required to offer. This exercise which must consist of *either* (i) a work for chamber combination of not fewer than four instruments or (ii) a work for small orchestra or (iii) a work for small orchestra and voices which should take at least 20 minutes to perform. The manuscript must be submitted not later than 1st May in the year in which the candidate is taking the Final Examination; if the candidate is successful the exercise will be retained by the University.

EDUCATION

The courses of study organised in connexion with the Department of Education are (1) a Four Year Course, (2) a Post-graduate Course for the Diploma in Education, (3) Post-graduate Courses for the higher degrees of M.A. (Education) or M.Ed. Students may enter upon one or other of the first two courses either as Recognised Students in Training under the Regulations of the Board of Education or without such recognition. In the former case, subject to certain conditions, grants may be paid by the Ministry of Education towards tuition and maintenance. Recognised Women Students must reside either at home or in a University Hall of Residence; Men Students who cannot live at home reside in a University Hall of Residence or in registered lodgings.

I. Four Year Course

This course leads to the degree of B.A., B.Sc., or B.Com., together with the Diploma in Education, or the Certificate of the Ministry of Education. It is open to students who have passed the matriculation examination or its equivalent. The first three years are mainly occupied with academic work for the degree, one half-day a week being set apart for professional work. The fourth year is post-graduate and wholly devoted to professional training. This is the normal course for Recognised Students.

The work in this course is divided into (a) Academic (leading to a degree), and (b) Professional (leading to the Diploma).

(A) ACADEMIC

The academic Courses are those for the Degrees of B.A., B.Sc., and B.Com. of the University of Leeds. Honours Courses may be taken by those qualified to enter upon them. The standard of attainment for admission to an Honours Course is that of a satisfactory pass at one of the Higher School Certificate Examinations.

(B) PROFESSIONAL

The scope of the work is practically the same as given in Section II. following.

This course of professional training is taken by all Recognised Students in the fourth year, but in the case of those who have failed to pass the final examination for a degree, leads only to the Teacher's Certificate of the Ministry of Education.

A Recognised Student who fails during the undergraduate course to pass the examination or examinations which it is necessary for him to pass in order to complete the degree course in three years will cease to be recognised as a Four Year Student. The student will then terminate the course, or, if the authorities of the Department approve, be allowed to intercalate a year at his own expense, and to resume his Recognised Studentship if he retrieves his failure.

Where a Recognised Student fails in his final degree examination the Ministry of Education will be prepared to recognise him for the year of professional training on the special recommendation of the University authorities. Such a candidate is not eligible for the Diploma in Educati n, but if he completes the course of professional

Education

training and passes the necessary examinations he may be recommended to the Ministry of Education for recognition as a certificated teacher.

II. Post-graduate Course for Diploma in Education

This course is open to graduates of the University of Leeds or other approved Universities, and normally extends over one year.

I. Lectures and Laboratory Work

- (a) The principles and methods of education and teaching.
- (b) The psychological bases of education.
- (c) Physical, intellectual, and moral development of the child.
- (d) The History of Education (with selected work or works).
- (e) Educational Systems.
- (f) Experimental Education (with laboratory practice).
- (g) Modern Problems in Education.
- (k) Physical Development, Hygiene and Physical Training.
 In addition there are various optional courses.

II. Practical Training

The training includes (a) demonstrations in teaching by members of the staff of the Department, by other members of the University, and by teachers in the University Demonstration Schools; (b) criticism lessons and other teaching exercises by the students themselves; (c) attendance at various schools, elementary, continuation, central and secondary, for observation and practice; (d) visits to special schools and institutions.

Attendance is required at courses on Teaching Illustration by Drawing, Handicrafts, Needlework, Music or Gardening.

Candidates for the Diploma in Education may, if they so desire, apply for admission as Recognised Students. If admitted they will be eligible for tuition and maintenance grants subject to certain conditions.

III. Higher Degree Courses

(i) M.A. (EDUCATION).

Education is one of the subjects which may be taken for the degree of M.A. For detailed regulations see under Degree of Master of Arts.

(ii) M.ED.

The degree of Master of Education has been established to promote advanced study, independent criticism, and original research in education.

For detailed regulations see under Degree of Master of Education.

RESIDENCE

(Recognised Students)

Men students who do not live with parents or guardians are required to live in lodgings registered and inspected by the University Authorities, or may apply to reside in the University Hall of Residence for Men.

Women students who do not live with parents or guardians are required to reside in one of the University Halls of Residence for Women.

ADMISSION AS RECOGNISED STUDENTS

A. Application for a Four Year Course

I. Candidates must be over 18 years of age on the first day of the academic year in which they wish to be admitted, except that under special circumstances candidates who are over 17 and under 18 years of age on that date may be admitted.

2. A candidate is required to have qualified for admission to the University as an undergraduate. (See Regulations as to Entrance Examinations for Degree Students).

3. The qualification for admission as a Recognised Student in Training is covered by the qualification for admission as an undergraduate.

4. In the selection of candidates preference is given to those who have obtained good "credits" or "distinctions" at one of the recognised School Certificate Examinations, or have obtained satisfactory results at one of the recognised Higher School Certificate Examinations. As a rule accepted candidates who have not passed the Higher School Certificate Examination before applying for admission are required to enter for that examination and their admission will be conditional on their obtaining satisfactory results.

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Admission of Recognised Students

B. General Conditions for all Recognised Students

r. Candidates, before being accepted, are required by the Regulations of the Ministry of Education to be examined by the Medical Officer of the Department, and can only be admitted if reported as without physical defect or organic disease, strong and in good health and capable of entering on their course without undue strain.

2. Candidates must be British subjects ordinarily resident in the United Kingdom unless this condition is specially waived by the Ministry of Education.

3. Candidates will be required to furnish certificates of good character.

4. Candidates on admission will be required to sign a Declaration to the effect that they intend to adopt and follow the profession of teacher in an approved school and acknowledge that mentering a Training Department they take advantage of the Parliamentary Grants by which it is aided in order to qualify themselves for the profession of teacher and for no other purpose.

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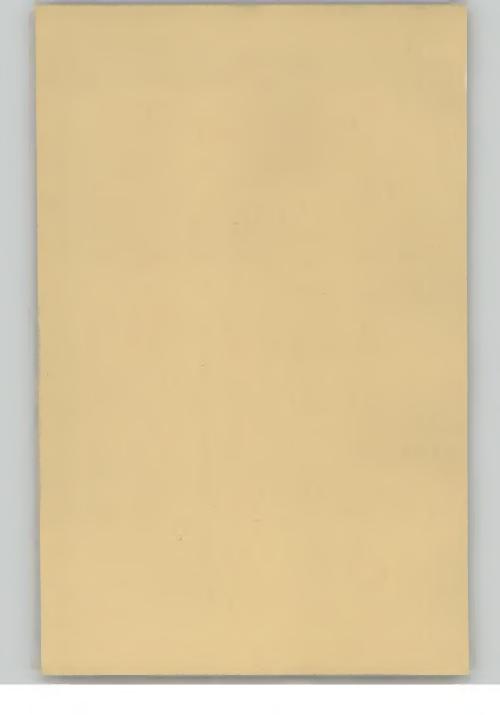
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*Scales of fees are published in a separate Fees Pamphlet.





FACULTY OF ECONOMICS AND COMMERCE

The Faculty of Economics and Commerce offers opportunities for the study of economic theory, industrial organisation, and commercial and social questions. Students may qualify for the Ordinary or Honours Degree of Bachelor of Commerce after three years' training. In addition, courses are given within the Faculty of Arts, and students may proceed to an Ordinary Degree in Arts by specialising in economic, social and industrial subjects. The Honours course in Economics and Political Science offers a broad training to those who desire to take an Honours Degree in Arts, while giving special attention to the study of economic and allied questions.

The Faculty has thus been created to meet more than one need. In the first place, training for business is still less organised in England than in some other countries. Academic instruction cannot take the place of the numerous details on which success in business depends, but, on wider matters of policy, knowledge of detail cannot take the place of training in economic and industrial principles and trends.

Then there is an increasing demand for knowledge on industrial relations and social affairs. Public and private enquiries have made available a great mass of ascertained facts regarding many aspects of the problem of work and wages in relation to social welfare. The Universities are the natural channel for the communication of this knowledge, and for the interpretation of its significance.

Finally, there is the need in every industrial centre for research and investigation, including a study of local industries and affairs. This requires trained faculties, a knowledge of the right questions to ask, and of how to compile and use statistics.

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The Degree in Commerce

Appended are the Ordinance and Regulations for the degree in Commerce and the syllabus of the subjects comprising the commercial group in that degree. The following explanatory remarks may prove useful to the intending student.

There are obvious differences between a Commerce degree and a degree in Law, Medicine or Applied Science. In each of the latter the chief subjects are intimately connected with or essential preliminaries to professional practice. There are no subjects which have a similar bearing upon the whole field of commerce; nor is there any comparable clinical material upon which the student can work. Again, Commerce, in the sense in which it is employed for the purpose of this degree, does not merely mean buying and selling, but covers a wide range of organising and administrative functions, both in public departments and in private industry The appropriate training for the and commerce. many forms of economic activity for which a commerce degree has been established can only be provided. therefore, by offering a wide choice of subjects. Nevertheless, there is a group of subjects which should be studied by all who seek a career in the world of business and in some branches of public administration; and this group provides the nearest approach which seems possible towards the technical subjects in the other degrees to which reference has been made.

The degree course is thus made up of two parts.

The first part, which must be taken by all students, comprises Economics, Commercial Law, Accountancy and *either* Mathematics and Statistics or Geography.

The course in Economics extends over three years. In the first year it will consist of general economic principles; in the second it will include the organisation of industry, industrial relations, commerce and finance. In the third year the student will be required, among other things, to make a detailed study of a special problem to which further reference is made below. The prescribed course in Commercial Law is taken during the first two years, and a course in Accountancy (including systems of costing and business administration) in the third year.

During the first two years, the student must have taken a prescribed course *either* (a) in Mathematics (first year) and Statistics (second year), or (b) in Geography.

The second part contains a large number of options which may be illustrated by a few typical cases. Students who aim at becoming textile manufacturers or woollen merchants for the wholesale trade will probably wish to devote part of their time to the study of textile manufacture, though not so much as is given to it by bleachers or dyers, whose training is mainly highly technical. In that event they will attend the Introductory course in Physics, and, in the first part, will choose Mathematics and Statistics, the study of the latter being important for the textile industry, the former being an essential introduction to statistics and allied to physics. The special economic subject to be studied in the third year would be the Economics of the Textile Industries. The full course would thus be constituted as follows :---

- First year: Economics; Commercial Law; Mathematics, Course J; Physics.
- Second year: Economics; Commercial Law; Statistics; Textile Manufacture.
- Third year: Economics; Accountancy; Textile Manufacture.

The substitution of Engineering for Textile Manufacture, and the Economics of the Steel and Engineering Industries for the Economics of the Textile Industries would provide the appropriate degree course for the commercial and administrative branches of engineering.

As a further illustration may be considered the case of a student who intends to go abroad as a business agent. He would naturally take Geography in the first part of the scheme and, in the second part, two languages, one studied for three years, the other for the first two years. The special economic subject to be studied in

the third year would be the organisation of foreign trade and the banking systems of selected countries. The full course might be constituted as follows :---

First year: Economics; Commercial Law; Geography; French; Spanish; Italian.

Second year : Economics ; Commercial Law ; Economic Geography; French; Spanish; Italian.

Third year: Economics; Accountancy; French (or Spanish or Italian).

It will thus be seen that the degree in Commerce approaches closely to a degree in Arts on one flank, and, on the other, to a degree in Applied Science. Many combinations are possible, all of which, however, include Economics, Commercial Law and Accountancy.

Bachelor of Degree of Commerce Ordinance III

Ordinance I. The degree in Commerce shall be that of-Bachelor of Commerce (B.Com.)

> 2. The degree of Bachelor of Commerce shall be conferred as an Ordinary degree or as a degree with Honours.

> 3. All candidates for the degree of Bachelor of Commerce shall be required to have passed the examination for Matriculation or to have obtained exemption therefrom, and thereafter to have pursued approved courses of study for not less than three academic years.

Ordinary Degree of Bachelor of Commerce

4. The complete course of study for the Ordinary degree of Bachelor of Commerce shall be divided into two parts, called respectively the Intermediate course and the Final course.

5. Every candidate shall be required to pass two examinations, the Intermediate and the Final.

6. The Intermediate and Final examinations shall ordinarily be held in June. There shall also be a supplementary Intermediate examination in September, at which those candidates only may present themselves who have obtained the permission of the Senate.

7. Candidates who have failed at an Intermediate examination in June, and have obtained permission to present themselves at the following supplementary examination may be excused such part of the supplementary examination as the combined examination Committee, on report from the Examination Committee for the degree of Bachelor of Commerce, may determine.

8. All students shall be required, before presenting themselves for the Intermediate or Final examination, to furnish certificates testifying that they have regularly attended the prescribed courses of study, and performed the class exercises to the satisfaction of the Professor or Lecturers, in each of the subjects which they offer at the examination.

Intermediate Course and Examination

Every candidate shall be required, after passing the Regulations Matriculation examination, to attend, during not less than one academic year, approved courses of instruction and to pass an examination in each of the following subjects:—

- i. Economics.
- ii. Commercial Law.
- (a) (i.) Mathematics J, and (ii) Physics or Geology or Chemistry.
 - (b) (i) Mathematics J, or Geography, and (ii) Two of the following:—French, German, Spanish, Russian, Italian, English Literature, Modern History, Philosophy, Geography (if not selected under (i)), Mathematics J. (if not selected under (i)).

The examination in each modern foreign language shall include an oral examination.

Candidates who intend to select v. (f) in the Final course may substitute Mathematics R for Mathematics I in the Intermediate course.

Final Course and Examination

Every candidate shall be required to attend approved courses of instruction, and to pass an examination in each of the following subjects, studied either for two years as principal subjects or for one year as subsidiary subjects as hereinafter prescribed, viz. :---

i. Economics: principal subject.

- ii. Commercial Law: subsidiary subject.
- iii. Accountancy: subsidiary subject.
- iv. Either Statistics or Economic Geography: subsidiary subject.
- v. One of the following :-
 - (a) Engineering (principal subject).
 - (b) 'Textiles (principal subject).
 - (c) Mining (principal subject).
 - (d) Agriculture (principal subject).
 - (e) Printing* (principal subject).
 - (f) Chemistry of Leather Manufacture.

(g) One principal and one subsidiary subject from the following lists:---

Principal subjects: French, German, Spanish, Russian, Italian, English, History, Philosophy, Law (including Constitutional and International).

Subsidiary subjects: French, German, Spanish, Russian, Italian, English, History, Philosophy, International Law, Constitutional Law, Mathematics, Geography.

Provided that no candidate shall be admitted to the Final courses (a) in Statistics unless he has taken Mathematics J or R in the Intermediate course; (b) in Engineering or Textile manufacture unless he has taken Mathematics for Applied Science Students and Physics in the Intermediate course; (c) in Mining, unless he has taken Mathematics for Applied Science students and Geology in the Intermediate course; (d) in Agriculture, unless he has taken Chemistry in the Intermediate course.

¹ For details of First Year course see Textiles Prospectus.

^{*} A special prospectus relating to the degree in Commerce for Printing students may be obtained on application to the Registrar.

Provided further that no candidate shall be admitted to the final course in Printing in the third year unless he has (a) taken Mathematics for Applied Science students and Physics in the Intermediate course and Statistics as a subsidiary subject; (b) attended a prescribed course in Engineering during the second year and prescribed courses in Printing during the first two years.

The examination in each modern foreign language shall include an oral examination.

An English essay shall also form part of the examination.

Candidates who have taken the course of study in a subsidiary subject in the first year of the Final course may present themselves at the end of that year for examination in such subject. The same subject may not be taken as a prin cipal and subsidiary subject. The course in Accountancy may not be taken before the third year.

N.B.-These regulations do not entitle a candidate to the right of presenting himself for examination in a subject in which the University may, for the time being, be unable to provide instruction.

Degree of Bachelor of Commerce for Students Training as Accountants

For students intending to enter the Accountancy profession the following course is recommended:-

> Economics (3 years course) Accountancy (3 years course) Law (3 years course) Study of Government (I year course) One other subject (I year course)

Degree of Bachelor of Commerce with Honours

9. Candidates for the degree of Bachelor of Commerce Ordinance with Honours shall, except as hereinafter stated, be required to furnish certificates of having attended courses of instruction approved by the University and extending over not less than three academic years in the Honours School hereinafter specified.

10. The Honours School referred to in this Ordinance shall be, unless otherwise stated, the Honours School of Economics as defined by the Regulations for the Degree of Bachelor of Commerce with Honours.

II. Every candidate for the degree of Bachelor of Commerce with Honours shall be required to present himself for examination at the end of the third or fourth academic year from the time when he has entered upon one of the courses of instruction approved by the University for such degree unless he shall present a medical certificate of illness satisfactory to the Senate. This examination shall ordinarily be held in June of each year.

12. Candidates for the degree of Bachelor of Commerce with Honours may present themselves for examination in the Honours School on furnishing certificates of having pursued, to the satisfaction of the Senate, the courses required for such Honours School.

13. Candidates who have passed the Final examination for an ordinary degree of Bachelor of Commerce may, with the sanction of the Senate, and on furnishing certificates of having attended, during the academic year following such Final examination for the ordinary degree, the third year's, or during the two academic years following such Final examination, the second and third years' course approved by the University for the Honours School, present themselves for the degree of Bachelor of Commerce with Honours.

14. No candidate for a degree of Bachelor of Commerce with Honours shall be admitted more than once to examination in the Honours School.

15. Students who have passed the Final examination for the degree of Bachelor of Science with Honours, or the degree of Bachelor of Arts with Honours in any other School than that of Economic and Political Science, or the degree of Bachelor of Laws with Honours may be admitted to the Final examination for the degree of Bachelor of Commerce with Honours after the expiration of one or two years, on presenting certificates of having attended, during the period in question, courses approved by the University.

Provided that candidates shall not present themselves for the Final examination in the Honours School more than two academic years after the Final examination in Honours already passed by them, and also that no candidate shall be admitted to examination in the Honours School after a longer period than five years has elapsed since the date of his first entrance upon a prescribed course of study for an Honours School.

16. Names of candidates who have passed the examination for the degree of Bachelor of Commerce with Honours shall be published in three classes, each class being arranged in alphabetical order.

17. Candidates who have not acquitted themselves so as to deserve Honours may be excused the whole or such part of the examination for the Ordinary degree as the Combined Examination Committee may determine.

Honours Course and Examination

Candidates for the degree of Bachelor of Commerce Regulation with Honours in Economics shall be required to pursue courses of study, and to submit themselves to examination, as follows:

The course of study for the first academic year shall include the following subjects: (1) Economics, (2) Mathematics, J or R, (3) Modern History, (4) French or German or Spanish or Russian, and (5) one of the following:—English, Geography, Constitutional Law, International Law, Philosophy, Modern Language (if not already taken), Physics, Chemistry, Geology or Anthropology. An examination will be held in these subjects at the end of the first year, and must be passed before proceeding to further study.

(Candidates who have passed the above Intermediate examination, but are unable to continue their Honours course, may apply to the Senate for permission to proceed to the Final course and examination for the Ordinary degree of B.Com.)

Some modification of the First Year course and examination may be made, subject to the approval of the Board of the Faculty of Arts, in the case of students who have obtained a Higher School Certificate.

Attendance on the full course for the Intermediate Examination for the Ordinary degree of B.Com., may also be accepted by the Senate as the required attendance for the first year of the Honours Course. During the second and third years candidates shall be required to attend approved courses in the subjects of the School of not less than five hours per week in each year.

They shall also be required to attend, during the second and third years, approved courses of lectures on other subjects amounting to not less than two hours a week in each year.

Examination

Essay, one paper.

Economics (including Industrial and Commercial Organisation and Industrial Relations), three papers.

Economic History, one paper.

Geography or Statistics, one paper.

Commercial Law, one paper.

A special Economic subject, one paper.

In addition candidates shall be required to present a dissertation on some subject approved by the Board of the Faculty of Arts.

Candidates shall also be required to show in the examination some knowledge of at least one foreign language.

Diploma in Commerce

Candidates for the Diploma in Commerce must either be graduates of some University of the United Kingdom or have obtained one of the following diplomas granted by the University of Leeds :---Civil Engineering, Electrical Engineering, Gas Engineering, Mechanical Engineering, Mining Engineering, Colour Chemistry, Dyeing, Fuel and Metallurgy, Leather Manufacture, Textile Industries, Social Organisation and Public Service. Applicants who have obtained such diplomas of other Universities in the United Kingdom as shall be approved for this purpose by the Senate of the University of Leeds may also be admitted as candidates for the Diploma.

The course extends over one session, and consists of the following subjects :---The organisation of industry and commerce; industrial relations; business finance and administration; accountancy; commercial law, and either statistics or economic geography or some other subject approved by the Senate. The course may be

modified, with the approval of the Senate, to meet the special requirements of individual students. Candidates will be expected, before entering upon the course, to have studied the elementary principles of Economics. An examination in each subject will be held at the end of the course.

Ordinary Degree of B.A.

18. The Ordinary degree of B.A. can be taken with Ordinance Economics as a Principal Subject at the Final Standard.

Honours Degree of B.A.

Candidates for the degree of Bachelor of Arts with Honours in Economics and Political Science shall be required to pursue courses of study, and to submit themselves for examination, as follows :—

The course of study and the examinations for the first academic year shall normally be the same as for the Ordinary degree of Bachelor of Arts, provided that at least one of the following subjects must be included: (\mathbf{I}) Economics; (2) Logic.

Some modification of the courses and examinations required for the first year may be made, subject to the approval of the Board of the Faculty of Arts, for candidates who have obtained a Higher School Certificate.

During the second and third years candidates shall be required to attend approved courses in the subjects of the school of not less than five hours a week in each year.

They shall also be required to attend, during the second and third years, approved courses of lectures on subsidiary subjects, the number of lectures amounting to not less than two hours a week in each year.

Examination

Essay, one paper.

Economics (including Industrial and Commercial Organisation and Industrial Relations), two papers.

History of Economic Theory, one paper.

Economic History, one paper.

Political Theory, one paper.

Constitutional Law, one paper.

A special Economic subject, one paper.

In addition, candidates shall be required to present a dissertation on a subject approved by the Board of the Faculty of Arts

Degree of Master of Commerce (M.Com.)

Ordinance

19. The degree of Master of Commerce may be conferred, on payment of the proper fee, and subject to the conditions laid down in *Articles* 20, 21, and 22 on:

- (a) Registered Bachelors of Commerce of the University who have graduated with Honours, after not less than one year from the date of their graduation;
- (b) Other registered graduates of the University and graduates of other approved Universities, after not less than *two* years from the date of their graduation.

20. Candidates who are not registered Bachelors of Commerce of the University shall be required :

- (a) to satisfy the Senate that they are qualified to pursue advanced study or research within the field of Economics and Commerce;
- (b) to attend approved courses of study within the University for not less than two years; but it shall be in the power of the Senate, on the recommendation of the Board of the Faculty of Arts, to excuse specially qualified graduates of the University from this attendance.

21. Every candidate, with the exception provided for under Article 22, shall present a thesis, satisfactory to the Senate, on a subject approved by the Board of the Faculty of Arts, embodying the results of his independent study or original research within the field of Economics and Commerce.

22. Registered Bachelors of Commerce of the University who have not graduated with Honours may be permitted or required, in place of the thesis prescribed under *Article* 21, to submit themselves for examination in a course or courses upon which instruction is given within the department of Economics and Commerce, and to present a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculty of Arts. I. Candidates who are not registered graduates of Regulations the University must become registered as students of the University.

2. Candidates who are not registered Bachelors of Commerce of the University shall be required :

- (a) to pursue a course of advanced study or research under the supervision of the Head of the Department of Economics and Commerce;
- (b) to give evidence to the Senate at the end of the first year of their period of study that their work has been satisfactory.

3. Candidates may be required to submit themselves for examination (written, or oral, or both) in the subject of their thesis (or dissertation).

4. A candidate shall not be permitted to submit as his thesis one for which a degree has been awarded in this or any other University, or which is under consideration for the award of a degree in another University; but he shall not be precluded from incorporating in his thesis any part of such work provided that he states his desire to do so at the time of his application for acceptance as a candidate, and in the thesis itself indicates the part of the work so incorporated.

Courses of Study

The following syllabus explains more in detail the nature of the various courses.

Economics

I. General Economics

The evolution of modern economic conditions. Modern industrial, commercial and social organisation. The national income. Value and distribution.

Tuesday and Thursday at 10 a.m.

FINAL COURSES

II. Principles of Economics

The general relations of demand, supply and value, including distribution and international trade.

Tuesday and Thursday at II a.m.

II (a). Industrial Fluctuations

A study of fluctuations in various forms of economic activity, including seasonal, cyclical and secular changes in industry and trade. Theories of the trade cycle.

One hour a week at a time to be arranged.

II (b). Industrial Administration

Business organisation and management; large and small businesses; joint stock enterprise; selling syndicates; trusts; public utility undertakings. The movement towards monopoly.

One hour a week at a time to be arranged.

II (c). Public Finance and Administration

Public expenditure and revenue. Rates, taxes, and public debts; the budget; relations of central and local administration; local rates; grants in aid; municipal finance and administration; national and municipal industries.

One hour a week at a time to be arranged.

II (d). Financial Organisation

Currency and banking; the money market; foreign exchanges. The organisation of foreign trade.

One hour a week at a time to be arranged.

II (e). Industrial Relations

Methods of remuneration; structure and policy of trade unions and employers' organisations; causes and settlement of industrial disputes; conciliation and arbitration; joint industrial councils, works, committees, etc. Personnel management. Industrial psychology. State regulation of working conditions, including factory legislation and trade boards. International Labour Organisation.

Tuesday and Thursday at 10 a.m.

II (f). Social Science and Administration

The influence of industrial conditions on social life; the problems of poverty, housing and unemployment. Some social aspects of industry. Employment of women and children. Schemes of industrial betterment. Industrial and social legislation.

Tuesday and Thursday at 2 p.m.

II (g). Economic Problems of War and Reconstruction Two hours per week at times to be arranged.

II (h) and II (j). Economic History

A general course beginning with the manor and ending with the nineteenth century, with special attention to a particular period.

The course will be divided into two parts II (h) and II (j) each part being given in alternate years.

II (h). Economic History (up to 1750).

I. The Middle Ages. The manor; the growth of towns; the guilds; agricultural changes; industry; foreign trade; public finance.

2. The Age of Mercantilism. Agriculture; industry and industrial organisation; foreign trade; social legislation; public finance.

II (j). Economic History (1750-1900).

1. The Rise of Modern Industry. Transport; markets; agriculture; industrial technique; capital; labour; the factory system; social changes; social legislation; public finance.

2. Industrial and Commercial Trends of the Nineteenth Century. The economic consequences of mechanical transport; changes in industrial technique; the new international division of labour; free trade and protection; agriculture; social reform; the spirit of association; foreign trade and the export of capital; banking and finance; the new colonial era; social and political trends; public finance.

Monday and Friday at 12 noon.

HONOURS AND M.A. COURSES

- Hr. Advanced Economic Theory
- H2. History of Economic Thought
- H₃. Economic History: Special Period
- H₄. Industrial and Financial Organisation
- H₅. Industrial Relations
- H6. Economic Policy
- H7. Political Theory

Special Courses

Students in the Economics department may attend other courses provided for students in the Faculty of Economics and Commerce.

A course of one hour a week in Economic Statistics will be provided.

Courses will normally be offered on the interpretation of social statistics, local government, and the social history of the nineteenth century. When required special courses will be given on the organisation of foreign trade; business finance; the banking systems of the chief modern states; and on the economics of the following industries: mining, engineering, iron and steel manufacture, textile manufacture, and transport by land and sea.

DIPLOMA IN SOCIAL ORGANISATION AND PUBLIC SERVICE

The courses of study for the Diploma in Social Organisation are designed to provide specialised training for students who are preparing to engage in social work, either voluntarily or in salaried positions.

As administrative social work becomes more standardised there is a marked tendency to demand of candidates for salaried posts a sound knowledge of economic and social conditions. Government Departments, Municipal Authorities, progressive employers and others now realise that the well-trained administrator should see the interests and problems of life as a whole, and not in isolated sections. This may be observed, for example, in the Public Health Services and in the selection of Welfare Workers, Probation Officers, Relieving Officers, Juvenile Advisory Committee Officers, and the paid officials of social agencies.

The growth of the teaching of Civics or Citizenship also demands of the teachers some knowledge of social history, industrial conditions and the machinery of central and local government.

Diploma in Social Organisation

Efficient voluntary social work depends increasingly upon the accuracy with which members of voluntary bodies can conduct investigations, interpret evidence and statistics, and devise remedies appropriate to the problems presented. Councils of Social Service, Guilds of Help, Friendly Societies, Trade Unions, Co-operative Societies and the numerous clubs and religious and educational agencies, offer a very wide field to the trained social student.

Admission to the Course

Candidates for the Diploma should have passed the examination for matriculation conducted by the Joint Matriculation Board, or some equivalent examination. Non-matriculated candidates will be required to present evidence that their experience and education have been such as to enable them to profit by the course.

The course will begin in October in each year.

Courses of Study

The normal course for the Diploma extends over two years, and consists of lectures in the University together with practical work under the direction of the Tutor in Practical Work.

Graduates of an approved University may present themselves for examination after attending a modified course of lectures and practical work extending over one year only, the course in each case, modified to suit the requirements of the student in question, to be approved by the Board of the Faculty of Arts.

First Year Lectures :

Economics	Two hours a week.
INDUSTRIAL AND SOCIAL	
HISTORY	One hour a week.
Social Psychology	One hour a week.
Local Government	One hour a week.
PUBLIC HEALTH AND	
HYGIENE	One hour a week.

Diploma in Social Organisation

Second Year Lectures :

SOCIAL SCIENCE AND AD-

MINISTRATION (including

Industrial Legislation)	Two hours a week.
Social Ethics	One hour a week.
Social Statistics	One hour a week.
INDUSTRIAL RELATIONS*	Two hours a week.

Practical Work

During the course the equivalent of two days a week will be devoted to practical social work under the direction of the Tutor in Practical Work. Part of this will consist of continuous work during the long vacation.

Examinations

An examination will be held at the end of each year of the course. The Diploma will be awarded to students who have passed both first and second year examinations and have obtained satisfactory reports on their practical work.

Separate Classes

Students who are unable to devote two years to the full Diploma course will be admitted by special arrangement to such of the classes as may suit their requirements on payment of the fees for the separate classes in addition to the Library fee.

Training of Hospital Almoners

Each candidate for the position of Hospital Almoner is required to take the Diploma in Social Organisation and Public Service before proceeding to the rest of her training.

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^{*} Other subjects may be taken if they are more suitable for the particular career the candidate has in view.

THE FACULTY OF LAW

The primary objects of the Faculty of Law are to provide the training and courses necessary for obtaining a degree in law, and to enable articled clerks to fulfil the requirements of the Solicitors' Acts, 1932 and 1936, in the matter of compulsory attendance at an approved law school. The training designed for these purposes may be usefully undertaken by those who are studying for the examinations of the Council of Legal Education, before admission to the Bar, and by those who, having completed their statutory year, require further tuition for the examinations of the Law Society.

The conditions under which a degree in Law is to be obtained are set out in the following Ordinance and Regulations. Normally, three years is the period of study for the degree of LL.B.

ORDINANCE IV

Part I

Degrees in Law

Part II

Degree of Bachelor of Laws

I. The degree of Bachelor of Laws shall be conferred either as an ordinary degree or as a degree with Honours.

2. All candidates for the degree of Bachelor of Laws shall be required to have passed the examination for Matriculation except such as may have been exempted therefrom, and thereafter to have pursued approved courses of study for not less than three academic years; provided that graduates of this University other than graduates in Law, or, subject to the approval of the Senate, graduates of other approved Universities, may proceed to the final examination for the degree of Bachelor of Laws after pursuing approved courses of study in Law for not less than two years.

Degrees in Law

3. Every candidate for the degree of Bachelor of Laws, whether Ordinary or with Honours, shall be required to attend approved courses of study, and to pass the prescribed examinations.

4. The prescribed examinations shall ordinarily be held in June of each year.

5. All candidates shall be required, before presenting themselves for a prescribed examination, to furnish certificates testifying that they have regularly attended the courses of study approved for such examination. Some modification of the amount of attendance required may, in exceptional cases, be made by the Senate.

6. The following provisions shall apply to the degree of Bachelor of Laws with Honours :—

(a) Every candidate for the degree of Bachelor of Laws with Honours shall be required to present himself for examination not later than the end of the third or fourth academic year from the time when he has entered upon one of the courses of instruction approved by the University for such degree unless he shall present a medical certificate of illness satisfactory to the Senate.

(b) Candidates who have passed the final examination for an ordinary degree of Bachelor of Laws may, on furnishing certificates of having attended the approved course or courses for the degree with Honours which are not approved courses for the Ordinary degree, present themselves for examination for the degree of Bachelor of Laws with Honours.

(c) No candidate for a degree of Bachelor of Laws with Honours shall be admitted more than once to examination in the Honours School of Law, but students who have passed the final examination in any of the other Honours Schools of the University may be admitted to the final examination in the Honours School of Law after the expiration of two years, on presenting certificates of having attended, during the period in question, courses approved by the University. 7. Names of candidates who have passed the examination for the degree of Bachelor of Laws with Honours shall be published in three classes, each class being arranged in alphabetical order.

8. Candidates who do not merit the award of an Honours degree may be excused the whole or such part of the examination for the ordinary degree as the Senate may determine.

Part III

Degree of Master of Laws

I. The degree of Master of Laws may be conferred, on payment of the proper fee, upon registered Bachelors of Laws, when of not less than one year's standing from the date of their graduation as Bachelors, subject to the conditions contained in the following paragraphs.

2. Bachelors of Laws may proceed to the degree of Master of Laws on presenting a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculty of Arts.

3. All candidates may be called upon to present themselves for an examination—written, oral, or both in the theme of their dissertation.

4. The names of candidates who have passed the examination for the degree of Master of Laws shall be arranged in alphabetical order without distinction of classes.

5. Graduates in Law or persons who have passed the Final examination for a degree in Law of other approved Universities shall, if they present evidence satisfactory to the Senate that they are qualified to pursue a course of advanced study or research, be permitted to enter the University and become candidates for the degree of LL.M. without taking the LL.B. degree, after not less than two years of such advanced study or research.

6. Such candidates shall be required to fulfil the following conditions :---

(a) To be registered as students of the University.

(b) To pursue a course of advanced study or research extending over not less than two years under the supervision of the Head of the Department.

Degrees in Law

- (c) To attend a course or courses of lectures at the University for at least one year, if required by the Professor of Law.
- (d) To pay the fee (including Registration and Library fee) prescribed for such candidates.

7. They shall be further required to give evidence to the Senate at the end of the first year of their period of study that their work has been satisfactory, and at the end of their second, or subsequent years, they shall be required to present a dissertation, and to satisfy such further test if any as the Senate shall deem expedient. They may be called upon to present themselves for an examination, written, oral, or both, in the theme of their dissertation.

Regulations

A candidate shall not be permitted to submit as his thesis one for which a degree has been awarded in this or any other University, or which is under consideration for the award of a degree in another University; but he shall not be precluded from incorporating in his thesis any part of such work provided that he states his desire to do so at the time of his application for acceptance as a candidate and in the thesis itself indicates the part of the work so incorporated.

Part IV

Degree of Doctor of Philosophy

I. The Degree of Doctor of Philosophy (Ph.D.) is conferred, on payment of the proper fee, on persons who are registered graduates of the University of Leeds, or who have obtained at an approved University or Institution of University rank a degree or appropriate diploma awarded upon an approved course of study extending over not less than three years, or have passed the Final Examination for such a degree at an approved University, provided that in all cases the conditions laid down in the following paragraphs have been satisfied.

2. All Candidates for the Degree of Doctor of Philosophy are required to pursue in the University for at least two calendar years an approved full-time course of advanced study and research, under the direction of the Head of the Department concerned or of a member of the University staff appointed by the Senate on his recommendation.

Provided that candidates may be permitted to devote such periods as may be deemed advisable by the Senate to full-time study and research in other approved Universities or Institutions, while remaining under the direction of the University or of persons nominated by the University, subject to candidates in all cases spending in the University not less than one calendar year or its equivalent as determined by the Senate.

Part V

Degree of Doctor of Laws

I. The degree of Doctor of Laws shall be conferred by the University upon Graduates of the University who shall be deemed by the Senate, after considering a report from one or more of the Boards of Faculties, to have distinguished themselves by special research or learning.

Provided that the Senate may, in such cases as it shall think fit, after considering a report from one or more of the Boards of Faculties, also require candidates to pass such an examination as it may from time to time determine.

2. A Graduate of the University may make application for the degree of Doctor of Laws in the sixth or any subsequent year from the date of graduation.

3. Such application shall be made in writing to the Registrar, and shall contain a full statement of the grounds on which the claim for the degree is based. together with one or more copies of any thesis, whether in print or in manuscript, which the applicant may desire to submit in support of the application.

I. A candidate shall not be permitted to submit in Regulations chief or sole support of his application for the degree a thesis for which a degree has been awarded in this or any other University, or which is under consideration for the award of a degree in another University ; but he shall not be precluded from submitting in additional support of his application a thesis for which a degree has already been awarded or from incorporating (in whole or in part) such work in the thesis submitted,

provided he clearly indicates the work thus submitted or incorporated.

2. If the application be approved by the Senate, the degree may be conferred at the first convenient date thereafter. A copy of the thesis approved for the degree shall be retained in the University Library.

The latest date for application and payment of fee is 1st February in any year.

REGULATIONS

Ordinary Degree of Bachelor of Laws

I. Approved Courses.

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Every candidate, subject to concessions to graduates under Part II, Article 2 of Ordinance IV. shall be required after passing the examination for matriculation, or obtaining exemption therefrom, to attend courses as follows :—

(a) In his first year of study courses on :--

(i) Constitutional Law.

(ii) The History and Organisation of the Courts.

(iii) Roman Law.

(iv) The Law of Property.

(v) The Law of Contract.

(vi) The Law of Tort.

(b) In his second year of study courses on :---

(i) The Common Law.

(ii) The Law of Property and Equity.

(iii) The History of the Common Law.

(c) In his third year of study courses on :--

(i) The Common Law.

(ii) The Law of Property and Equity.

(d) In either his second or third year of study the candidate is required to attend a course on Jurisprudence.

2. Prescribed Examinations.

Every candidate shall, subject to the concessions to graduates above mentioned, satisfy the examiners in the following prescribed examinations :—

(a) After the completion of his first year of study he shall be examined as follows :—

Degrees in Law

(i) Constitutional Law	one paper.
(ii) Roman Law	one paper.
(iii) The Law of Property	one paper.
(iv) The Law of Contract	one paper.
(v) The Law of Tort	one paper.
(b) After the completion of his second ye	ear of study
he shall be examined as follows :	and the
(i) The Common Law	one paper.
(ii) The Law of Property and Equity	
(c) After the completion of his third year	
shall be examined as follows :	
(i) The Common Law	one paper.
(ii) The Law of Property and Equity	one paper.
(iii) Legal History	one paper.
(iv) Jurisprudence	one paper.
(v) Essay	one paper.
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No candidate shall be permitted to enter upon the second year of his course until he has satisfied the examiners in the examination prescribed at the end of his first year of study.

Degree of Bachelor of Laws with Honours

I. Approved Courses.

(a) The approved courses for the degree with Honours are identical with those above for the ordinary degree in paragraph I(a), (b) and (c),

(b) In his second and third year of study respectively the candidate is required to attend courses on Jurisprudence and Conflict of Laws or on Conflict of Laws and Jurisprudence according as the order is determined by the time-table.

2. Prescribed Examinations.

The subjects of the prescribed examination for the degree with Honours are as to the first and second years of study identical with those set out above for the ordinary degree; after the completion of the third year of study the examination shall consist of 2 (c) (i) to (iv) as for the ordinary degree and in addition of (v) Conflict of Laws—one paper and (vi) a paper on one or more special subjects.

Degree of Doctor of Philosophy

Before entering on the course of advanced study and research, candidates are required

(a) To have attained the age of 21 years.

- (b) To submit to the Senate for its approval the course of advanced study and research proposed by them and to present evidence satisfactory to the Senate that they are qualified to undertake the proposed course.
- (c) To register as students of the University and to pay the prescribed fees for tuition.

On completing the course of advanced study and research candidates are required

- (a) To present a thesis on the subject of their advanced study and research, and to satisfy the examiners that it contains original work worthy of publication, and that it is of a sufficient standard of merit to qualify for the degree of Doctor of Philosophy.
- (b) To submit themselves for an oral examination on matters relevant to their thesis, and, if required, for a written examination and to satisfy the examiners in the examination as well as in the thesis presented.

The application of a candidate for admission to the course for the degree must give particulars of his educational career and qualifications as well as the subject of his proposed course of advanced study and research. The application should be addressed to the Registrar.

NOTE.—A candidate is advised, before making application to the Registrar, to consult the Head of the Department of Law.

Towards the completion of his course the candidate, giving if possible three months' notice to the Registrar must make application to be examined and must submit, as soon as possible afterwards, at least one copy of his thesis, which should be accompanied by a short abstract. The copy of the thesis will be retained by the University.

N.B.—The latest date of entry and of payment of fees will be 1st MARCH. The LL.M. examination and the LL.D. examination if required, will be held in June.

The relation of the degree to the Professional Examinations and the Period of Articles

(a) Curriculum.

The relation of the degree subjects to the examinations of the Law Society is as follows: the subjects taken for the Intermediate LL.B. are all necessary for the intermediate examination of the Law Society with the exception of Roman Law, and provide all that is necessary with the exception of Trust Accounts and Book-keeping. The subjects taken for the final examination for the degree provide what is necessary for the Compulsory Subjects of the Law Society Final Examination, with the exception of the procedure and practice of the various courts, and the law as to income tax and death Those who take the degree with Honours will duties. also have studied Conflict of Laws, which is one of the Optional Subjects for the Law Society Final Examination. The above comparison is necessarily general in its nature, but serves to indicate that under the new regulations for the Law Society Examinations it is possible to a very large extent for the curricula for the degree and the professional examinations to cover common ground. In this way unity of effort is brought into legal studies.

The relation of the degree courses to the examinations of the Council of Legal Education is as follows: The courses in the first year of study on Roman Law, Constitutional Law, History of the Courts, Contract, Tort, and the Law of Property will serve as an introduction to the subjects required for Part I of the Examination for Call to the Bar. Generally speaking, the courses for the second and third years of study cover what is required for Part II of the Examination, but those who wish to attend for a limited period may ascertain on enquiry what lectures are available during the period which they wish to attend.

(b) Exemptions and Remissions.

Consequent upon the common element in the curricula for the degree and professional examinations, a system of exemptions is in force, by which students may

be relieved of part of their professional examinations as the result of having taken a degree in the Faculty of Law of the University. Certain remissions in the period of articles for those about to become solicitors are also conceded. The remissions conceded in the period of articles are as follows :---

i. Any person who, before entering into articles of clerkship, has obtained the Higher School Examination Certificate of the Joint Matriculation Board of the Northern Universities, Certificate A, may be admitted and enrolled as a solicitor after having served for four and a half years only : provided that

(a) Latin shall be one of the subjects taken, and if Latin is not a compulsory subject, the Examination Certificate shall state that the candidate has passed in Latin.

(b) All the subjects to be taken by a candidate shall be taken at one examination, and the Examination Certificate shall state that they have been so taken.

The above remission in the period of articles is also granted upon the basis of examinations of equal standard conducted by other Universities. Particulars can be obtained on application to the University.

- ii. Any person who, before entering into articles of clerkship, has passed the intermediate examination for the degree of LL.B. at any University in England and Wales may be admitted and enrolled as a solicitor after having served four and a half years only.
- iii. Any person who, before entering into articles of clerkship, has passed both the examinations indicated in the two preceding paragraphs may be admitted and enrolled as a solicitor after having served for four years only.

iv. Any person who, before entering into articles of clerkship, has passed examinations conducted by the Joint Matriculation Board which qualify him to enter upon a degree course at a Northern University (Latin being one of the subjects in which he has passed), or has passed any examination approved by the Law Society and accepted by the said Board as qualifying him to enter upon such a degree course (Latin being one of the subjects in which he has passed), and has passed the Intermediate LL.B. examination of such University, having attended the full curriculum prescribed, may be admitted and enrolled as a solicitor after having served for four years only.

NOTE. -- The above regulations apply as from 1st January, 1937.

The exemptions for those about to become solicitors concern the Law Society's intermediate examination other than the part relating to Trust Accounts and Book-keeping, and are as follows :—

- i. Persons who, before or after entering into articles of clerkship, have passed the examination required for the degree of LL.B. are exempt from the legal portion of the Law Society's intermediate examination.
- ii. Persons who, before or after entering into articles of clerkship, have obtained the degree of LL.B. after passing the examination required for the degree, or obtaining an aegrotat certificate in respect of that examination, are exempt as aforesaid.
- Note.—The above regulations apply to persons becoming bound by articles of clerkship on and after 1st January, 1937.

The exemptions for those about to become barristers are as follows: a student may apply to the Council of Legal Education for exemption from the whole or any section of Part I of the examination for Call to the Bar when he will receive a form indicating the standard required in the several sections before exemption will be granted.

Lectures given for Degree Courses

Time Table

The courses appropriate to each year of study are indicated in the regulations for the degree which have already been set out above. The relation of these courses to the lectures given is as follows, the lectures being so arranged that students are brought into the University on two days in the week during the University terms.

In the first year of study for the Intermediate LL.B. each of the six prescribed courses consists of one lecture per week during term time, with the exception of the course in the Law of Property which consists of two lectures per week. A normal timetable would therefore be Tuesday, II-I2 and I2-I, the Law of Property; 2-3 Contract: 3-4 Tort: Friday: I2-I History of the Courts, 2-3 Roman Law, 3-4 Constitutional Law. This may be subject to variation from year to year as to the days and hours, but can be taken as representative of what is required.

In the two final years, the work consists of (i) two hours per week on each of two days, one day for the Common Law, and one for the Law of Property and Equity: (ii) students in their second year will take a further hour on Legal History, and in their second or third year, a further hour on Jurisprudence; (iii) honours students will also take a further hour on Conflict of Laws, alternating in successive years with the course on Jurisprudence; (iv) a further hour will be required upon a special subject in English Law, from both pass and honours students.

Assuming that the special subject is chosen from the Common Law a normal time table for the two final years will therefore be: Monday, 11-12, Legal History (for second year students only); 12-1, 2-3, 3-4, Common Law: Thursday, 12-1, Jurisprudence, and (for Honours students only) Conflict of Laws (in alternating years); 2-3, 3-4, The Law of Property and Equity.

For the guidance of the student's reading, a more detailed account of the courses is as follows:

In the first year of study the lectures will guide the students towards a general survey of the subjects indicated, and should be supplemented by the following reading :—

Constitutional Law. Wade and Phillips.

The History and Organization of the Courts. Radcliffe and Cros.

Roman Law as advised in lectures. The Law of Property. Radcliffe. The Law of Contract. Sutton and Shannon. The Law of Tort. Underhill.

In the second year of study the lectures on Legal History will be concerned with the History of the Common Law, and students will be referred to portions of standard works on legal history in the course of their lectures. The lectures on Jurisprudence will be chiefly concerned with the processes of law-making, and may be supplemented by reading :

Law in the Making. Allen.

The Mechanics of Law Making. Ilbert.

For Honours students, since in alternate years Conflict of Laws will fall into the second year, it may be stated here that the students will be expected to read:

Private International Law. Cheshire.

The three hours per week on the Common Law constitutes a two-year cycle of lectures, following upon the preparation given in the first year, so that the subjects taken by students will vary in their order according to the year in which the student enters upon his final course. For those who enter upon their second year in session 1940-41, the subjects taken will be as follows : The Law of Contract, Evidence, Sale of Goods, Bankruptcy, Insurance.

This will be followed in the third year by the following subjects : The Law of Tort, Criminal Law, and Bills of Exchange.

The same principle of the two years' cycle applies to the Law of Property and Equity. For those who enter upon their second year in 1940-41 the subjects taken will be as follows : Equity (including Trusts), Administration of Assets, Equitable Remedies, Company Law, Partnership.

This will be followed in the third year by the following subjects: The Law of Property, The Law of Succession.

The relation of the above courses to the prescribed Examinations.

At the end of the first year of study one paper will be set upon each of the courses indicated above with the exception of the History of the Courts, which is reserved for the paper on Legal History at the end of the third year. At the end of the second year of study, the paper on the Common Law will be set upon the whole of the subjects taken in the lectures on the Common Law during the second year of study: and the paper on the Law of Property and Equity will be set upon the whole of the subjects taken in the lectures during the second year of study.

At the end of the third year of study, the papers on Jurisprudence and Legal History will be set upon ground covered by the courses given upon those subjects together with the supplementary reading recommended. The essay for the ordinary degree will be set upon a legal topic for which no special preparation is required. The paper on the Common Law will be set upon the subjects covered during the third year of study, and so also will the paper on the Law of Property and Equity. The paper on Conflict of Laws will be set (for Honours candidates only) upon the ground covered in lectures and by the reading recommended.

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Tuition Fees

For the degree of LL.B.

Final Examination of the Law Society.

- Statutory Course for the Certificate under the Solicitors Acts, 1932 and 1936.
- £15 11s. per session (including Union Fee).

 \pounds II IIS. per session.

£11 11s. for the Full Course if taken during three consecutive terms. (An additional fee calculated at the Separate Subjects rate will be charged if the course is spread over a longer period than three consecutive terms.)

Separate Subjects : for each lecture hour per week.

NOTE.--(Applicable to separate subjects only).

 f_{4} per session.

- i. When more than one lecture hour per week is attended in any *one class* the fee for each hour beyond the first will be f_2 per session.
- ii. For two terms, three-quarters of the above amounts will be charged. For one term, half the above amounts will be charged.
- Fees for the higher degrees can be ascertained by application to the University.

The Statutory Year

Section 32 of the Solicitors' Act, 1932, provides that a person articled to a solicitor shall not be admitted to the Final Examination unless he satisfies the Law Society that he has, during a period of one year, complied with the requirements of the Society as to attendance at a course of legal education at a law school approved by the Society. The attendance may be before service under articles, or during such service.

Section 7 (I) of the Solicitors' Act, 1936, provides that a person articled after 1st January, 1937, must (except with the consent in writing of the Law Society) commence the attendance at a course of legal education at a Law School not later than fifteen months after the execution of his articles.

The compulsory attendance is not required from one who has passed the Final Examination for the degree of LL.B.

Attendance must be during three or more academic terms, each of not less than five weeks' duration, amounting to at least 72 hours, in periods of not less than two hours per week.

The usual practice amongst students reading for the Intermediate Examination is to attend on the day when the lectures are given on Property, Contract and Tort in the first year of study. This provides a four hour day over some 25 weeks, giving an ample margin for the attendance of 72 hours. No allowance can be made for absence due to any cause including illness either on the part of the student or of the lecturer. Students are therefore advised to attend regularly, and to note that the third term must be kept even though the statutory number of attendances has been completed.

A person attending a statutory course will be required, in pursuance of regulations made by the Law Society, to submit himself to terminal examinations for the purpose of satisfying the Society of his diligence and application during attendance. If a person fails to satisfy the Society, the Society may refuse to count, as part of the attendance, the whole or any part of the period in respect of which the examination has been held.

Railway Fares

The Yorkshire Board of Legal Studies will pay onethird of the fares of articled clerks residing out of Leeds and attending lectures at the University. In the case of persons entering into articles after they have commenced attendance such payment will be made retrospective to the commencement of their attendance.





UNIVERSITY STAFF

FACULTY OF SCIENCE

Dean of the Faculty: Professor SPAUL. Sub-Dean (Science and Technology): Dr. VERSEY.

Mathematics

(See also Faculty of Arts)

Professor of Applied Mathematics and Head of Department: S. BRODETSKY, M.A., Cambridge, Ph.D., Leipzig.

Professor of Pure Mathematics : H. S. RUSE, M.A., Oxford, D.S., Edinburgh.

Reader in Mathematical Analysis : R. M. GABRIEL, M.A., Cambridge.

Reader in Statistics : B. I. WELCH, M.A., Oxford, Ph.D.

Senior Lecturer in Mathematics : C. W. GILHAM, M.A., Cambridge, B.Sc, London.

Lecturers : H. D. URSELL, M.A., Cambridge.

N. B. SLATER, M.A., Edinburgh, M.A., Ch.D., Cambridge.

H. L. PRICE, M.A., Cambridge, Ph.D., Leeds.

Assistant Lecturer : W. BARRETT, B.A., Oxford, Doctorate d'Université, Paris.

Physics

Cavendish Professor and Head of Department: R. WHIDDING-TON, C.B.E., M.A., D.Sc., F.R.S., Late Fellow of St. John's College, Cambridge.

Professor of Theoretical Physics : E. C. STONER, Sc.D., F.R.S., Late Fellow of Emmanuel College, Cambridge.

Reader in X-Ray Physics: G. W. BRINDLEY, M.Sc., Manchester, Ph.D., Leeds.

Senior Lecturers : J. EWLES, M.A., Cambridge ; F. A. LONG, B.Sc., London.

Lecturers: J. McDOUGALL, M.A., Ph.D., Cambridge; C. CURRY, B.Sc., Ph.D., Durham; F. E. HOARE, M.Sc., Ph.D., London, A.R.C.S.

Assistant Lecturer: R. S. TEBBLE, B.Sc., Durham.

Temporary Assistant Lecturer : R. HEASTIE, B.Sc., London. Research Assistant : K. ROBINSON, B.Sc., Leeds.

Inorganic and Physical Chemistry

Professors: M. G. EVANS, D.Sc., Manchester; E. G. COX, D.Sc., Bristol, F.Inst.P.

Reader in Colloid Chemistry: F. L. USHER, D.Sc., London.

Senior Lecturers: R. S. BRADLEY, M.A., Cambridge; J. COLVIN, Ph.D., Liverpool; J. HUME, B.Sc., Edinburgh, A.R.I.C.; G. F. SMITH, Ph.D., Wales and Cambridge.

Brotherton Research Lecturer in Physical Chemistry: G. S. RUSHBROOKE, B.A., Ph.D., Cambridge.

Lecturers: C. H. DOUGLAS CLARK, D.Sc., London, A.R.C.S., A.R.I.C., D.R.I.C.; F. J. GARRICK, M.A., Oxford; J. W. BELTON, D.Sc., Ph.D., Liverpool; †R. SPENCE, Ph.D., D.Sc., Durham; W. WILD, Ph.D., Leeds, A.R.I.C.; J. N. BAXENDALE, M.Sc., Mancheste^{*}

Research Assistants : H. WHITAKER, M.Sc., Leeds; C. E. SEAMAN, Ph.D., Leeds.

Organic Chemistry

- Professor: FREDERICK CHALLENGER, D.Sc., Birmingham, B.Sc., London, Ph.D., Gottingen, F.R.I.C.
- Senior Lecturer and Honorary Reader in Organic Chemistry: J. W. BAKER, D.Sc., London, F.R.I.C.
- Senior Lecturers: H. BURTON, Ph.D., D.Sc., London, M.Sc., Sheffield, F.R.I.C.; W. A. WIGHTMAN, M.A., Oxford, A.R.I.C.
- Lecturers: F. R. GOSS, D.Sc., Ph.D., London, F.R.I.C.; E. ROTHSTEIN, D.Sc., Ph.D., London, A.R.C.S.; P. A. BRISCOE, B.Sc., Bristol.

Assistant Lecturer : K. BOWDEN, Ph.D., London, D.I.C., F.R.I.C. Research Assistant : A. AUDSLEY, Ph.D., Leeds.

Zoology

Professor : ERIC A. SPAUL, D.Sc., Ph.D., London.

Reader in Entomology and Protozoology : Ll. LLOYD, D.Sc., Leeds.

Lecturers : H. HENSON, Ph.D., Birmingham ; T. KERR, M.A., Glasgow.

Lecturer (Honorary): Mrs. W. O. REDMAN KING, B.Sc., Leeds. Lecturer: J. G. SMYTH, Ph.D., Dublin.

Assistant Lecturer : Miss M. J. STANLEY, B.Sc., Liverpool.

Demonstrator : Miss M. B. HARLEY, B.Sc. London.

Botany

Professor : Miss IRENE MANTON, B.A., Sc.D., Ph.D., Cambridge.

Senior Lecturers: Miss LORNA I. SCOTT, M.Sc., London; R. BROWN, B.Sc., D.Sc., London; R. D. PRESTON, D.Sc., Ph.D.

The names of members absent on National Service are marked †.

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University Staff

Lecturers : W. A. SLEDGE, Ph.D., Leeds.

Temporary Assistant Lecturer: H. G. BAKER, B.Sc., London. Demonstrator: Miss DAPHNE J. OSBORNE, B.Sc., London. Honorary Demonstrator: Mis. W. R. GRIST, B.Sc., London. Research Assistant: Miss K. M. MATTINSON, B.Sc., Leeds. Museum Curator: Vacant.

Geology

Professor: W. Q. KENNEDY, D.Sc., Glasgow.
Senior Lecturer: H. C. VERSEY, D.Sc., Leeds, F.G.S.
Lecturers: J. E. HEMINGWAY, Ph.D., Leeds; Miss D. H.
RAYNER, B.A., Ph.D., Cambridge.

Geography (See Faculty of Arts)

Anatomy

(See also Faculty of Medicine)

Professor : ARCHIBALD DURWARD, M.D., New Zealand.

Lecturer in Histology : Vacant.

Lecturers : G. IAN BOYD, M.D., F.R.C.S., Edinburgh; R. J. SCOTHORNE, B.Sc., M.B., Ch.B., Leeds.

Demonstrators: N. BIRCH, M.B., Ch.B., Leeds; †H. N. BURWELL, M.B., Ch.B., Leeds; W. PATERSON, M.B., Ch.B., Leeds; J. G. BROCKIS, M.B., Ch.B., Leeds.

Physiology

(See also Faculty of Medicine)

Professor: A. HEMINGWAY, M.Sc., M.B., Ch.B., Leeds.

Professor of Pharmacology: W. A. BAIN, B.Sc., Ph.D., Edinburgh, F.R.S.E.

Reader in Bio-Chemistry: F. C. HAPPOLD, D.Sc., Ph.D., Manchester.

Senior Lecturer : H. R. NOLTIE, M.A., B.Sc., Aberdeen.

Lecturers: G. WINFIELD, M.A., Cambridge; A. SCHWEITZER, M.D., Cologne, Ph.D., London; E. NEIL, M.D., Leeds.

Senior Lecturer in Pharmacy and Pharmaceutical Chemistry : A. W. LUPTON, M.C., Ph.C., M.P.S.

Part-time Lecturer in Physiology and Hygiene : Vacant.

The names of members absent on National Service are marked †.

Lecturer in Biochemistry : F. W. CHATTAWAY, M.Sc., London, A.I.C.

Demonstrators : F. M. PARSONS, B.Sc., M.B., Ch.B.; C. R. M., REDWOOD, M.R.C.S., L.R.C.P.

Assistant Lecturer in Pharmacy : J. G. DARE, Ph.C.

Assistant Lecturer in Pharmacological Chemistry : P. HEY, Ph.C.

Bacteriology

(See also Faculty of Medicine)

Professor : J. W. McLEOD, O.B.E., M.B., Ch.B., Glasgow, F.R.S.

Reader in Clinical Pathology : J. GORDON, M.D., D.P.H., Leeds.

Reader in Public Health Bacteriology: K. I. JOHNSTONE, B.Sc., Ph.D., M.B., Ch.B.

Lecturers : E. A. HORNE, M.A., B.Sc., M.B., Ch.B., Aberdeen; K. S. ZINNEMANN, M.D.

Temporary Lecturer : D. E. DOLBY, Ph.D., Birmingham.

Demonstrators : Mrs. BETTY DAWSON ; Miss B. WHEATLEY, M.B., Ch.B., Leeds.

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DEGREES IN SCIENCE

ORDINANCE V

(a) Degrees in Pure Science

1. The degrees in Pure Science¹ shall be : Bachelor of Science (B.Sc.) Master of Science (M.Sc.) Doctor of Philosophy (Ph.D.) Doctor of Science (D.Sc.)

DEGREE OF BACHELOR OF SCIENCE

2. The degree of Bachelor of Science shall be conferred Ordinance either (i) as an Ordinary degree, or (ii) as a General Honours degree, or (iii) as a Special Honours degree.

3. All candidates for the degree of Bachelor of Science shall be required to have passed the examination for Matriculation or to have obtained a certificate of exemption therefrom, and thereafter to have pursued courses of study for not less than three academic years.

The record of students at their departmental Regulations examinations may be taken into account in deciding the results of degree examinations.

Candidates may, with the consent of the Dean of the Faculty in the case of Ordinary and General Honours Degrees or of the Head of the Department in the case of a Special Honours School, present subjects more in number and higher in grade than those required by the Ordinance for those proceeding to a degree. Additional subjects need not be confined to those prescribed in the Regulations for the Science degree.

Candidates presenting a subject at a higher grade and failing to pass therein may, at the option of the examiners, be recommended for a pass in a lower grade.

Candidates who satisfy the examination requirements of the Ordinary degree in two sessions must satisfactorily pursue a course of study in the third session approved by the Board of Science and Technology.

IGraduates in Pure Science may also proceed to the degree of Master of Education (M.Ed.)

Ordinance

Concessions to Higher School Certificate Holders

Students taking a Science Degree may be exempted by the Board of Science and Technology from the Introductory courses and corresponding examinations in the subjects already passed in the Higher School Certificate examination, or in an equivalent examination, provided that they have passed the examination at a sufficiently high standard and pursue an approved alternative course of study.

Applications for such exemptions should be made by the student (a) to the Head of the Department in which he is presenting himself for Honours in the case of a Special Honours candidate (b) to the Dean of the Faculty of Science in the case of any other candidate.

Ordinary Degree of Bachelor of Science

Ordinance

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4. Every candidate shall be required to attend approved courses of study and to pass the prescribed examinations *either* (i) in two principal subjects and two introductory subjects, *or* (ii) in two principal subjects and one subsidiary subject *or* (iii) in one principal subject, two subsidiary subjects and one introductory subject.

5. The courses of study shall extend over at least three* years for a principal subject, two years for a subsidiary subject and one year for an introductory subject.

6. The whole examination in any subject must be taken at one and the same time; but candidates may present themselves for examination in any subject or subjects when they have completed the prescribed course or courses. The examinations will ordinarily be held in June of each year.

7. Candidates may choose from the subjects specified in the *Regulations for the Ordinary degree*, provided that Mathematics or Physics or Chemistry be taken as one of the subjects, and that such other restrictions as are set forth in the Regulations be observed.

*Note.—For students who have been granted exemption from the first year of the Principal or Subsidiary Courses, the Principal and Subsidiary Courses shall extend over at least two years and one year respectively.

Degree of Bachelor of Science with Honours

(N.B.—The following Articles 8-13 apply to both the General Honours and the Special Honours Schools).

8. All candidates shall be required to attend approved Ordinance courses of study extending over three or four years, and to pass the prescribed examinations, as defined under the Regulations for the General Honours degree and the various Special Honours Schools.

9. Names of candidates who have passed the examination for the degree of Bachelor of Science with Honours will be published in such form as to distinguish the Honours School in which severally they may have passed; the names of those who have passed in Honours being drawn up in three classes, and each class being arranged in alphabetical order.

10. Candidates who have not acquitted themselves so as to deserve Honours, but have reached the standard of the Ordinary degree may be recommended for that degree. They will not be allowed to present themselves a second time for the same Honours examination.

11. Subject to the provision of Articles 17 and 21 below, every candidate for the degree of Bachelor of Science with Honours shall ordinarily be required to present himself for examination at the end of the third or fourth or fifth academic year from the time when he has entered upon one of the courses of instruction approved by the University for such degree, unless he shall present a medical certificate of illness satisfactory to the Senate. The examination shall ordinarily be held in June of each year.

12. Candidates who have passed the examination for the Ordinary degree of Bachelor of Science may, during the following session, proceed with the course of study in an Honours School and may present themselves for examination for the Honours degree in the fourth or fifth session of their University course.

13. Candidates who have passed the Honours examination in any of the Honours Schools may, during the following session, proceed with the course of study in another

Degrees in Science

Honours School and may thereafter present themselves for examination in this second Honours School in the fourth or fifth session of their University course.

General Honours School

Ordinance

14. The General Honours degree shall be awarded on an examination of a higher standard than that required for the principal subjects of the Ordinary degree examination.

15. Candidates shall normally present themselves for examination in two subjects at General Honours standard to be taken at one and the same time; in addition, candidates must satisfy the examiners in either (a) one other subject at subsidiary standard, or (b) two other subjects at introductory standard.

16. Duly qualified candidates may, with the consent of the Dean of the Faculty of Science, present in place of 15 (a) or 15 (b) either a principal subject or a third subject at General Honours standard. In the latter case, this subject shall be taken into account, in the same way as the other two main subjects in assessing the general result of the examination.

17. Candidates who, after taking examinations for General Honours, propose to proceed to Special Honours, Medicine, Applied Science or other approved courses of study, may present themselves for the General Honours examination at the end of their second year, if approved by the Senate after reports from the Heads of Departments concerned. In no case will a candidate be admitted to a degree until he has completed attendance on approved courses for three academic years after matriculation.

18. The class awarded to a candidate shall be determined on the results of the examination in the subjects carried to General Honours standard and taken as a whole, but no credit will be given for any subject in which the candidate fails to attain a reasonable minimum standard. 19. Candidates are allowed a choice of the subjects specified in the Regulations for the General Honours degree, provided that Mathematics or Physics or Chemistry be included for at least one year.

Special Honours Schools

20. Candidates may choose one of the Special Honours Ordinance Schools specified in the Regulations for the Special Honours degree, and must follow the course of study prescribed for each Special Honours School.

21. Candidates who shall present evidence satisfactory to the Senate that they are qualified to enter upon a course of research may receive permission to pursue such a course, and to offer a thesis on their work in place of part or the whole of the Honours examination; but no candidate shall be excused the whole of the Honours examination unless he shall have satisfied the examiners in the subject of his Honours School as a principal subject for the Ordinary degree and in the other subjects prescribed for that Special School.

Each application for the recognition of research work must be made to the Senate not later than the last day of the October preceding the Honours examination, together with a statement of the intended subject of research, and a summary of the course of work actually pursued must be presented not later than the first day of the May preceding the Honours examination.

Candidates whose thesis does not satisfy the examiners shall not receive the Honours degree, but may be recommended for the Ordinary degree.

22. Candidates in one Special Honours School who propose to proceed afterwards to another Special Honours School, Medicine, Applied Science or other approved courses of study, may be examined at the end of the second year if approved by the Senate after reports from the Heads of Departments concerned. In no case will a candidate be admitted to a degree until he has completed attendance in approved courses for three academic years. Degrees in Science

DEGREES OF BACHELOR OF SCIENCE IN PURE SCIENCE

I. Ordinary Degree

Regulations

I. Introductory, subsidiary and principal subjects can be selected as follows, subject to the restrictions laid down in Ordinance V, Articles 4-7:—

Introductory : Mathematics Physics Chemistry Zoology Botany Geology Geography

Subsidiary : Mathematics Statistics Physics Chemistry Zoology Botany Physiology A one year course in Arts selected from the first year subjects for the Ordinary B.A. degree.

*Any approved course in Technology.

Geology Geography Human and Comparative Anatomy Bacteriology Anthropology †Any approved course in Technology

Principal : Mathematics Physics Chemistry Zoology Botany Physiology Geology

Geography Human and Comparative Anatomy Bacteriology Pharmacology Pharmacy

• The following courses have been approved :	Fuel and Metallurgy. Fuel and Refractory Materials. Metallurgy and Refractory Materials. General Engineering I.
† The following courses have been approved:	Plant Physiology and Horticulture. Civil Engineering. Engineering IIs. Fuel and Metallurgy Metallurgy. Refractory Materials.

2. Students taking Mathematics as a principal or subsidiary subject may not take Statistics as a subsidiary subject, but may take Statistics S. and Mathematical Laboratory M.L. in place of an introductory subject.

3. Candidates presenting Human and Comparative Anatomy as a principal or subsidiary subject are required to take Introductory Zoology in their first year of study.

4. Candidates presenting Physiology or Bacteriology as a principal or subsidiary subject are required to take Introductory Botany or Introductory Zoology in their first year of study.

5. Candidates presenting Pharmacology as a principal subject are required to take Introductory Botany or Introductory Zoology in their first year of study.

6. Candidates presenting Pharmacy as a principal subject are required to take Introductory Botany in their first year of study.

7. In the Final examination a paper will be set containing passages of French and German for translation into English, relating to the principal subject or subjects of a candidate's degree course. All candidates may take this paper, and marks will be awarded for correct renderings of such passages. Candidates will be allowed the use of dictionaries at this Language Test examination.

8. Examiners will take account of the command of English language shown by candidates.

II. General Honours School

I. Candidates must choose at least two subjects Regulations from the following list :---

Mathematics Physics Chemistry Zoology Botany Physiology Geology Geography Human and Comparative Anatomy 2. Candidates must choose the additional subject or subjects, whether principal, subsidiary or introductory, from the lists prescribed for the Ordinary B.Sc. degree.

3. In the Final examination a paper will be set containing passages of French and German for translation into English, relating to the principal subject or subjects of a candidate's degree course. All candidates may take this paper, and marks will be awarded for correct renderings of such passages. Candidates will be allowed the use of dictionaries at this Language Test examination.

III. Special Honours Schools

Regulations I. Candidates may choose a Special Honours School from the following list :---

MathematicsPhysiologyPhysicsBiochemistryPhysics with ElectricalGeologyEngineeringHuman and ComparativeChemistryAnatomyZoologyBacteriologyBotanyPharmacology.

2. All candidates will be required to present themselves for a Degree examination in each subject of their Honours School on completion of their course in that subject.

Degree and Departmental Examinations

Regulations I. Degree Examinations:

- (a) The examinations will ordinarily be held in June of each year, but supplementary examinations in introductory subjects will also be held in September. Candidates will be accepted for the supplementary examinations in any subject only with the special permission of the Senate.
- (b) Every candidate will be required to present himself at the degree examination in each subject at

the end of the session in which he has completed his course of study in that subject, unless he has obtained the permission of the Board of Science and Technology to defer his examination.

2. Departmental Examinations :

- (a) In addition to the Degree examinations, Departmental examinations will be held at times and on conditions determined by the Head of the Department concerned. All students studying for a degree are required to submit themselves to such departmental examinations in their subjects of study.
- (b) In courses extending over more than one session students may not commence the more advanced work of a succeeding session unless they have done the work required throughout the course to the satisfaction of the Head of the Department and have passed the Departmental examinations.

3. Conditions of entry:

Entries for the June examinations—both Degree and Departmental—shall in all cases be made through the Registrar. Only those students whose lecture and laboratory attendances are approved by the Heads of Departments concerned, and whose entry forms are received before 1st March, will be admitted to the examinations.

N.B.—The attention of students is drawn to the General Regulations for Students, Clause 11, respecting departmental examinations.

Prescribed Subjects of Study and Examination

(For further details see under Courses in Science)

I. Ordinary Degree

MATHEMATICS.

Introductory Course (one session). Subsidiary Course (two sessions) :--Ist year : Mathematics Intro. 2nd year : Mathematics F1 and F2. Principal Course (three sessions) :--Ist year: Mathematics Intro. 2nd year: Mathematics FI and F2. 3rd year: Mathematics F3 and F4.

STATISTICS (as a Subsidiary subject).

1st year: Mathematics for Applied Science students. J. 2nd year: Statistics S. and Mathematical Laboratory M.L.

PHYSICS.

Introductory Course extends over one session. Three lectures in each week with three hours in the laboratory.

Subsidiary Course (two sessions) :--

1st year: Physics Intro.

2nd year: Physics F1. with six hours laboratory.

Principal Course (three sessions) :--

1st year: Physics Intro.

and and

3rd years: Physics F1 and F2 with six hours laboratory each week.

CHEMISTRY.

Introductory Course (one session.) Chemistry Intro., with laboratory work.

Chemistry Intro.

Chemistry F1.

Chemistry F2.

Chemistry F3.

With laboratory work.

Principal Course (three sessions) :---

Chemistry Intro., F1, F2, F3, and laboratory work in the Inorganic, Organic and Physical Chemistry laboratories.

ZOOLOGY.

Introductory Course :--

Zoology Intro., two lectures and four hours laboratory weekly.

Subsidiary Course (two sessions) :--

Course arranged in consultation with the Professor.

Principal Course (three sessions) :--

ist year: Zoology Intro., with four hours laboratory. 2nd and

3rd years: Zoology F Courses (A) and (B) (two successive sessions). Three lectures and at least six hours laboratory work weekly.

BOTANY.

Introductory Course :--

Botany Intro., six hours a week for session,

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Subsidiary Course (two sessions) :--Ist year: Botany Intro. or Botany FI (A or B), with three hours laboratory. 2nd year: Botany FI (A or B), with six hours laboratory. Principal Course (three sessions) :--Ist year: Botany Intro. 2nd and 3rd years: Botany FI (A and B), with six hours laboratory work for two sessions.

HUMAN AND COMPARATIVE ANATOMY.

Principal Course :--

1st year: Zoology Intro.

and and

- 3rd years: Anatomy I and II, and selected parts of Anatomy III as defined in Special Honours school.
- N.B.—(i) The work covered in the above course will not be the same as that required for the 2nd M.B., Ch.B. examination, and it is not intended for medical students.
 - (ii) No course in Anatomy covering a period of only one year may be offered for the Ordinary B.Sc. degree.
 - (iii) Students taking Zoology as a subsidiary or a principal subject may take the above two-years course in Anatomy in place of a subsidiary subject.

PHYSIOLOGY.

Subsidiary Course :-

1st year: Zoology Intro. and Botany Intro.

and year: Physiology IIB and IID.

Note.—It is not contemplated that candidates taking Physiology as a subsidiary subject for the Ordinary Degree will be medical students.

Principal Course.

ist year: Course A. Zoology Intro. and Botany Intro. or approved Intro. subject.

> Course B. (For students with adequate H.S.C. qualifications in Chemistry and Physics) Zoology Intro. A and Botany Intro. A or approved Intro subject.

and year : Physiology and Biochemistry IIB and IID.

3rd year : Physiology and Biochemistry IIC and IIE and one of the following options.*

- (a) Comparative Physiology.
- (b) Work Physiology.
- (c) Nutrition and Dietetics.

NOTE.—(i) Students taking Course A must take Physics Intro. and Chemistry Intro. in the first year and Chemistry F_3 in the second year to complete the Subsidiary course in Chemistry. (ii) Students taking Course B must take Chemistry F_4 and F_5 in the first year to complete the subsidiary course in Chemistry.

*Students who intend to proceed to a professional qualification in Nutrition and Dietetics must take option (c) and Chemistry and Bacteriology as subsidiary subjects.

GEOLOGY.

Introductory Course :-

Geology Intro: Three hours' lectures, three hours laboratory. Field work: three expeditions (one in each term).

Subsidiary Course (two sessions) :---

1st year: Geology Intro.

and year: Geology FI (three hours), with six hours laboratory.

Geology Field Course: alternate Saturdays throughout the session.

Principal Course (three sessions) :---

1st year: Geology Intro.

2nd and

3rd years: Geology F1 and F2 three hours; Scheme A (Palaeontology) lecture course, two hours; Scheme B (Petrology), lecture course, two hours, with six hours laboratory.

Geology Field Course : alternate Saturdays throughout the session.

GEOGRAPHY.

Introductory Course :--

Geography Intro., with three hours laboratory.

Subsidiary Course (two sessions) :--

1st year: Geography Intro.

2nd year: Geography FI, with six hours laboratory. Principal Course (three sessions):--

ist year: Geography Intro.

2nd year : Geography F1, with six hours laboratory.

ard year: Geography F2, with six hours laboratory.

BACTERIOLOGY.

Subsidiary Course (two sessions) :--

1st year: Zoology Intro. or Botany Intro.

and year : Bacteriology VIIA. and VIIB. (ii).

Bacteriology IXA.

Principal Course (three sessions) :--

1st year: Zoology Intro. or Botany Intro.

and year: Bacteriology VIIA. and VIIB. (ii) and IXA.

3rd year: Bacteriology IXB. and Laboratory Work.

Students will be expected to obtain a reading knowledge of French and German before the end of their course, and their knowledge of these languages will be tested by means of an examination consisting of passages for translation

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into English. The use of dictionaries will be allowed at this Language Test. All candidates will be required to take this paper, and to satisfy the examiners in the translation of both these passages.

PHARMACOLOGY.

Principal Course (three sessions) :--Ist year: Zoology Intro. or Intro. A or Botany Intro. or Intro. A. 2nd year: Physiology IIB and IID. 3rd year: Physiology IIC and IIE.

Pharmacology IA and II.

PHARMACY.

Principal Course (three sessions) :---

1st vear: Botany Intro. or Intro. A.

2nd year : Pharmacy I (including Pharmaceutical Chemistry, Pharmaceutics and Pharmacognosy).

3rd year: Pharmacy II (including Pharmaceutical Chemistry, Pharmaceutics and Bacteriology).

II. General Honours Degree

MATHEMATICS.

Mathematics F1, F2, F3, F4, G.

PHYSICS.

Physics Intro., F1, F2 and Honours lectures (9 hours lectures and laboratory work each week). In addition special reading will be prescribed.

CHEMISTRY.

A course equivalent to the principal course for the Ordinary B.Sc. degree together with certain Honours courses and laboratory work.

ZOOLOGY.

The principal course for the Ordinary B.Sc. degree, together with such Honours lectures during one session as the Professor may determine.

BOTANY.

The principal course for the Ordinary B.Sc. degree, together with attendance at the Honours lectures during one session.

HUMAN AND COMPARATIVE ANATOMY.

Anatomy I, II and selected portions of Anatomy III with the addition of special studies to be arranged by the Professor of Anatomy, the whole to cover a period of three years.

N.B.—Zoology up to at least introductory standard must be taken in the first year.

PHYSIOLOGY.

1st year : Introductory subjects.

and year: Physiology IIB. and IIE.

3rd year: Physiology IIc and IIF, together with attendance at Honours lectures and practical work. GEOLOGY.

year: Geology Intro.

1st year: 2nd and

3rd years: Geology F1 and F2, with six hours laboratory work.

Attendance at the Honours lectures (two hours per week) will be required in the third session.

Geology Field Course : alternate Saturdays throughout the session.

GEOGRAPHY.

The Principal course for the Ordinary B.Sc. degree, together with attendance at selected Honours lectures and discussion classes (not less than 3 hours per week) during one session.

NOTE.—In the case of specially well prepared candidates, modifications of the above courses may be arranged to enable them to present themselves for the General Honours Examination after two session, under Article 17 of the Ordinance.

III. Special Honours Degree

MATHEMATICS.

Students in the Special Honours School of Mathematics will take the Special Honours courses in Mathematics together with one selected additional subject from Arts, Science, or Applied Science up to the standard of a Subsidiary subject in Science after consultation with the Head of the Department of Mathematics. Students wishing to take this additional subject at the standard of a Principal subject may upon producing satisfactory evidence of their knowledge of the subject be excused the one-year or Introductory course. Students may be allowed with the consent of the Head of the Department of Mathematics, to substitute for one subject at the Subsidiary standard (i) two additional subjects at the one-year or Introductory standard, or (ii) Statistics and one additional subject at the one-year or Introductory standard.

PHYSICS.

Three Years Course :---

Ist year: Physics Intro. and FI, with nine hours laboratory.

Mathematics F1 and F2.

Chemistry Intro. or an approved alternative course.

2nd year: Physics F2 and H, with nine hours laboratory Mathematics F3 and F4.

3rd year: Physics H, with twelve hours laboratory.

Four Years Course :---

ist year : F

Physics Intro.

Mathematics Intro. and F2.

Chemistry Intro. or an approved alternative course.

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Honours Degree of B.Sc.: Courses

2nd year:	Physics F1.
	Mathematics F1 and F3.
3rd year :	Physics F2 and H.
	Mathematics F ₄ .
4th year:	Physics H.

Together with three hours laboratory for one session, in addition to laboratory work as for the Three Years Course.

Honours students are recommended to attend lectures in their and or 3rd years on some subject other than Physics, such as History, English, Philosophy, Economics, Engineering, Agriculture, Textiles. No examination in the chosen subject will be required, although one may be taken for test purposes if desired.

PHYSICS WITH ELECTRICAL ENGINEERING.

Three Years Course :---

ıst year:	Physics Intro. and F1. Mathematics F1 and F2. Chemistry Intro.
2nd year:	Mathematics F3 and F4. Physics F2 and H (certain lectures omitted). Physics laboratory. Nine hours.
	Electrical Engineering IIF.
	Electrical Engineering Laboratory. Three hours.
3rd year:	Physics H (certain lectures omitted). Physics Laboratory. Nine hours.
	Electrical Engineering. Two subjects chosen
	from IIIF (1), IIIH, IIIJ or IIIK.
	Electrical Engineering Laboratory. Three hours.

Examinations.—Electrical Engineering IIF will be taken at the end of the second year as a qualifying subject, while in the Final Honours examination, candidates will be examined on the subject matter of the two chosen Electrical Engineering subjects together with selected portions of the normal four papers in Physics.

CHEMISTRY.

Students in the Special Honours School of Chemistry will take the Honours courses in Chemistry, together with Physics Introductory and FI, with laboratory work, and Mathematics Intro.

Additional Courses : An additional course or courses selected from the following list :--

Physics F2.

Mathematics F3 and F4.

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Botany for Chemists. Engineering. Agricultural Chemistry. Some other branch of Applied Chemistry. Some other subject cognate to Chemistry.

Approval of the additional course or courses must be obtained from the Head of the Department.

Students will be expected to obtain a reading knowledge of French and German before the end of their course, and their knowledge of these languages will be tested by means of an examination consisting of passages for translation into English. The use of dictionaries will be allowed at this Language Test. All candidates will be required to take this paper, and to satisfy the examiners in the translation of both these passages.

ZOOLOGY.

Four Years' Course (which may be shortened to three years if the student is sufficiently prepared to begin the Final Course in his first session).

1st year: Zoology Intro.

Physics Intro. (or Mathematics Intro.). Chemistry Intro. (unless satisfactory evidence of previous knowledge is given). One other Intro. subject.

- and and 3rd years: Zoology F. (A. and B.), together with one other principal or two subsidiary subjects.
- 4th year: Zoology H., with full-time laboratory work, including advanced study with special reference to an approved problem or subject.

N.B.—Candidates proceeding to Special Honours in Zoology, Botany or Geology after General Honours may, in addition to attendance upon the courses in the subject selected for Special Honours, be required to take additional courses in subjects which are included in the Regulations for the Special Honours. In such cases the relevant Departmental Examinations may be accepted as qualifying towards the Special Honours degree.

Students are strongly urged to obtain a reading knowledge of French and German before the end of their course.

BOTANY.

Four Years' Course (which may be shortened to three years provided that previous knowledge of the subject enables the student to commence attendance upon the FI Course in the first session). Ist year : Botany Intro.

Physics Intro. (or Mathematics Intro.).

Chemistry Intro. (unless satisfactory evidence of previous knowledge of this subject can be given).

One other Introductory Course.

and and

3rd years : Botany FI (A and B) together with attendance at Honours lectures in third year, with six hours laboratory.

> One other principal subject or two subsidiary subjects.

4th year : Botany H., with full-time Laboratory work, including the necessary study of a special problem with a view to presentation of a thesis as an integral part of the Honours Examination.

HUMAN AND COMPARATIVE ANATOMY.

Course A :-

ıst	year:	Physics Intro.
		Chemistry Intro
		Zoology Intro.
		Botany Intro.

and year: Anatomy I (including Systematic Human Anatomy, Embryology, Histology, Neurology).

Physiology (or another subject approved by the Professor of Anatomy),

Anatomy II (including Systematic Human 3rd year: Anatomy, Advanced Embryology and Histology).

> Further course in Physiology (or another subject approved by the Professor of Anatomy).

Anatomy III consisting of special courses in ₄th year: Anatomy including Comparative Primate Morphology, Physical Anthropology, Comparative Neurology, and other special fields as may be arranged.

Course B :-

Students taking the normal course for the M.B., Ch.B. degrees may, on the recommendation of the Professor of Anatomy and with the permission of the Board of the Faculty, be admitted to the Honours school subsequent to passing Part II of the and M.B., Ch.B. examination. Four terms will then be devoted to the study of Anatomy III.

Degrees in Science

Students will be expected to obtain a reading knowledge of French and German before the end of their course, and their knowledge of these languages will be tested by means of an examination consisting of passages for translation into English. The use of dictionaries will be allowed at this Language Test. All candidates will be required to take this paper, and to satisfy the examiners in the translation of both these passages.

PHYSIOLOGY.

Course A :--

1st year :

Physics Intro. Chemistry Intro. Zoology Intro. Botany Intro.

2nd year: Physiology IIB and IID. Chemistry F4.

Candidates must attain a satisfactory standard in the Departmental Examination in F3.

3rd year: Physiology IIc, IIE. and V.

4th year: Physiology V.

Candidates must take *one* other subject at a principal standard or *two* other subjects at a subsidiary standard. The subjects approved are :---

- Principal: Chemistry (in this case HI or H3 must be taken as additional), Physics, Botany, Zoology, Anatomy.
- Subsidiary: Chemistry, Physics, Botany, Zoology, Bacteriology.

Candidates should consult the Professor of the subject or subjects selected in regard to the work required. All such courses must be taken before the commencement of the candidate's fourth year of study.

Students who do not offer Anatomy as a principal subject must take the medical course in Histology in the Department of Anatomy in the 2nd or 3rd year.

Course B :--

Students taking the normal course for the M.B., Ch.B. degrees who reach a sufficient standard in Chemistry F4 and F5, or who take Chemistry F2 or F3, or Physics F1 in their first year may on the recommendation of the Professor of Physiology and with the permission of the Board of the Faculty be admitted to the Honours School subsequent to passing Part II of the 2nd M.B., Ch.B. examination. One year shall be devoted entirely to Physiology V.

Students are strongly urged to obtain a reading knowledge of French and German before the end of their course. BIOCHEMISTRY.

Ist year :	Zoology Introductory	
	Botany Introductory.	
	Inorganic Chemistry F1'	•
	Physical Chemistry F2.	

2nd year : Organic Chemistry F3 Colloids. Physiology and Biochemistry.

3rd year : Advanced Organic Chemistry (two terms). Biochemical technique and method General Biochemistry Biochemistry of disease

either Physiology or Comparative Physiology of plants and animals or Bacteriology

4th year :

Either Advanced Physiological Chemistry, or Bacteria Chemistry and Immunochemistry Tutorial Biochemical Laboratory and investigation work An additional subject.

GEOLOGY.

Geology Intro; F1; F2; F3 or F4; H1.

- One subsidiary subject which will normally be Chemistry F2, Mathematics, Zoology or Engineering IIS.
- One introductory subject which will normally be Physics, Botany, General Engineering or Metallurgy and Refractory Materials.

Surveying.

- At least one additional subject, as approved by the Head of the Department.
- In addition, candidates will be required to conduct an investigation, which shall include geological mapping, and to present a thesis.

See also N.B. under Zoology.

Students will be expected to obtain a reading knowledge of French and German before the end of their course, and their knowledge of these languages will be tested by means of an examination consisting of passages for translation into English. The use of dictionaries will be allowed at this Language Test. All candidates will be required to take this paper, and to satisfy the examiners in the translation of both these passages.

BACTERIOLOGY.

The following Courses are prescribed for students taking this Honours School. Course A or Course B may be followed. The latter is suitable for students proceeding to a medical degree. Students who have an elementary knowledge of Chemistry are recommended to take Chemistry F2 in their first year, F3 in their second year, and HI in their third year.

Course A :-

ist year: Physics Intro.

Chemistry Intro. or F2. Zoology Intro.

Botany Intro.

Bacteriology IXA. 2nd year:

Chemistry F2 or F3.

Physiology I., or Physics FI, or Zoology FI, or Botany F1.

Bacteriology VII. 3rd year :

Chemistry F3, or H1, or H3. Physiology Vc. or VI., or Zoology F1, or Botany F1. Honours work in Bacteriology.

4th year:

Bacteriology IXB. and research.

Course B :---

Candidates may take the normal course for the M.B., Ch.B. degrees, taking in addition in their second year Bacteriology IXA., and Chemistry F2 or F3; and in their third year Chemistry F3 or H1 or H3. Subsequently to passing the Final M.B., Ch.B. Examination (Part I) they shall pursue the fourth year's Honours Course in Bacteriology. This fourth year shall be entirely devoted to bacteriological work.

Students will be expected to obtain a reading knowledge of French and German before the end of their course, and their knowledge of these languages will be tested by means of an examination consisting of passages for translation into English. The use of dictionaries will be allowed at this Language Test. All candidates will be required to take this paper, and to satisfy the examiners in the translation of both these passages.

PHARMACOLOGY.

Course A for those entering the University with H.S.C. Principal Physics and Chemistry or with passes in Physics and Chemistry at the Intermediate Examination of the Pharmaceutical Society.

1st year: Chemistry F4 and F5.

Zoology Intro. A.

Botany Intro. A. followed by-

Biochemistry, Histology, Pharmacognosy (in 3rd term).

and year : Physiology IIB and IID.

Chemistry F3.

Pharmacy I.

3rd year: Physiology IIc and IIE. Pharmacy II. Pharmacology Ia and II.

4th year: Pharmacology IB and III.

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Course B :---

Ist year: Physics Intro., Chemistry Intro., Zoology Intro., and Botany Intro.*

2nd year: Physiology IIB and IID. 3rd year: Physiology IIc and IIE. Pharmacology IA and II.

4th year : Pharmacology IB and III.

* Students excused any one of these subjects may substitute Mathematics Intro. for the subject for which exemption is granted.

Candidates must take one other subject at principal standard or two other subjects at subsidiary standard. If Chemistry is not included in the other subjects offered for the degree, evidence of having attained a sufficient standard in the departmental examinations in either Chemistry F4 or F3 is required. All additional courses must be completed before beginning the 4th year of study. (Nore.—If Pharmacy is chosen as the additional principal subject the candidate must take Course A above).

Course C :--

Students taking the normal course for the M.B., Ch.B. degrees who reach a sufficient standard in Chemistry (F4 and F5) of the 1st M.B. examination, in Physiology of the 2nd M.B. examination, and in Pharmacology of the Final M.B. examination, may, on the recommendation of the Reader in Pharmacology and with the permission of the Board of the Faculty, be admitted to the honours school subsequent to graduating M.B., Ch.B. One year shall be devoted entirely to Pharmacology III.

(b) Degrees in Applied Science

23. The degrees in Applied Science¹ shall be :--

Bachelor of Science (B.Sc.)

Master of Science (M.Sc.)

Doctor of Philosophy (Ph.D.)

Doctor of Science (D.Sc.)

DEGREE OF BACHELOR OF SCIENCE

24. The degree of Bachelor of Science shall be conferred Ordinance either (i) as an Ordinary degree, or (ii) as a Special Honours degree.

25. All candidates for the degree of Bachelor of Science shall be required to have passed the examination for Matriculation or to have obtained a certificate of exemption therefrom, and thereafter to have pursued courses of study for not less than three academic years.

1. Graduates in Applied Science may also proceed to the Degree of Master of Education (M.Ed.) Ordinance

Regulations

The record of students at their departmental examinations may be taken into account in deciding the results of degree examinations.

Candidates may, with the consent of the Dean of the Faculty in the case of Ordinary and General Honours Degrees or of the Head of the Department in the case of a Special Honours School, present subjects more in number and higher in grade than those required by the Ordinance for those proceeding to a degree. Additional subjects need not be confined to those prescribed in the Regulations for the Science degree.

Candidates presenting a subject at a higher grade and failing to pass therein may, at the option of the examiners, be recommended for a pass in a lower grade.

Candidates who satisfy the examination requirements of the Ordinary degree in two sessions must satisfactorily pursue a course in the third session approved by the Board of Science and Technology.

Concessions to Higher School Certificate Holders

Students taking a Science Degree may be exempted by the Board of Science and Technology from the introductory courses and corresponding examinations in the subjects already passed in the Higher School Certificate examination, or in an equivalent examination, provided that they have passed the examination at a sufficiently high standard and pursue an approved alternative course of study.

Applications for such exemptions should be made by the student (a) to the Head of the Department in which he is presenting himself for Honours in the case of a Special Honours candidate, (b) to the Dean of the Faculty of Technology in the case of any other candidate.

Ordinary Degree of Bachelor of Science

Ordinance 26. Every candidate shall be required to attend courses of study as set forth in the Regulations for his particular School of Applied Science.

> 27. The courses of study in each School of Applied Science shall extend over at least three years.

Degree of Bachelor of Science with Honours

28. Candidates shall be required to attend the pre-Ordinance scribed courses of study as defined under the Regulations for the various Special Honours Schools of Applied Science and to pass the prescribed examinations.

29. Names of candidates who have passed the examination for the degree of Bachelor with Honours will be published in such form as to distinguish the Honours School in which severally they may have passed; the names of those who have passed in Honours being drawn up in three classes, and each class being arranged in alphabetical order.

30. Candidates who have not acquitted themselves so as to deserve Honours, but have reached the standard of the Ordinary degree, may be recommended for that degree. They will not be allowed to present themselves a second time for the same Honours examination.

31. Every candidate for the degree of Bachelor of Science with Honours shall ordinarily be required to present himself for examination at the end of the third or fourth or fifth academic year from the time when he has entered upon one of the courses of instruction approved by the University for such degree, unless he shall present a medical certificate of illness satisfactory to the Senate. The examination shall ordinarily be held in June of each year.

32. Candidates who have passed the examination for the Ordinary degree of Bachelor of Science may, during the following session, proceed with the course of study in a Special Honours School and may present themselves for examination for the Honours degree in the fourth or fifth session of their University course.

33. Candidates who have passed the Honours examination in any of the Special Honours Schools may during the following session proceed with the course of study in another Special Honours School, and may thereafter present themselves for examination in this second Honours School in the fourth or fifth session of their University course.

Special Honours Schools

34. Candidates may choose one of the Special Honours Schools in Applied Science specified in the Regulations for the Special Honours Degree in Applied Science, and must follow the course of study as prescribed in the Regulations for each Special Honours School in Applied Science.

35. Candidates who shall present evidence satisfactory to the Senate that they are qualified to enter upon a course of research may receive permission to pursue such a course, and to offer a thesis of their work in place of part or the whole of the Honours examination; but no candidate shall be excused the whole of the Honours examination unless he shall have satisfied the examiners in the subject of his Honours School of Applied Science up to the standard of the Ordinary degree in that School.

Regulations

Each application for the recognition of research work must be made to the Senate not later than the last day of the October preceding the Honours examination, together with a statement of the intended subject of research, and a summary of the course of work actually pursued must be presented not later than the first day of the May preceding the Honours examination.

Candidates whose thesis does not satisfy the examiners shall not receive the Honours degree, but may be recommended for the Ordinary degree.

DEGREE OF BACHELOR OF SCIENCE IN APPLIED SCIENCE

Ordinary and Honours Degrees

Regulations Candidates may choose an Applied Science School (Ordinary or Honours) from the following list :---

Civil Engineering	Chemical Engineering
Mechanical Engineering	Chemistry of Leather
Electrical Engineering	Manufacture
Mining Engineering	Colour Chemistry and Dyeing
Gas Engineering	Agriculture
Fuel and Metallurgy	Textiles

N.B.—Detailed subjects of study for degrees in Applied Science (Ordinary or Honours) will be found set forth in the various Departmental prospectuses.

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Ordinance

Degree and Departmental Examinations

Ordinary Degree in Applied Science

In the Final examination a paper will be set containing Regulations passages of French and German for translation into English relating to the principal subject or subjects of a candidate's degree course. All candidates may take this paper, and marks will be awarded for correct renderings of such passages. Candidates will be allowed the use of dictionaries at this Language Test examination.

Examiners will take account of the command of English language shown by candidates.

Degree and Departmental Examinations

1. Degree Examinations :

- (a) Degree examinations as laid down by the Regulations will usually be held in June.
- (b) Every candidate will be required to present himself at the degree examination in each subject at the end of the session in which he has completed his course of study in that subject, unless he has obtained the permission of the Board of Science and Technology to defer his examination.

2. Departmental Examinations :

- (a) In addition to the Degree examinations, Departmental examinations will be held at times and on conditions determined by the Head of the Department concerned. All students studying for a degree are required to submit themselves to such Departmental examinations in their subjects of study.
- (b) In courses extending over more than one session students may not commence the more advanced work of a succeeding session unless they have done the work required throughout the course to the satisfaction of the Head of the Department and have passed the Departmental examinations.

3. Conditions of entry:

Entries for the June examinations—both Degree and Departmental—shall in all cases be made through the Registrar. Only those students whose lecture and laboratory attendances are approved by the Heads of Departments concerned, and whose entry forms are received before March 1st, will be admitted to the examinations.

N.B.—The attention of students is drawn to the General Regulations for Students, Clause II, respecting departmental examinations.

DEGREE OF MASTER OF SCIENCE

Ordinance

2 36. The degree of Master of Science may be conferred, on payment of the proper fee and subject to the conditions laid down in Articles 37 and 38:---

- (a) Upon Bachelors of Science of the University who have graduated with Honours of not less than one year's standing and upon other Bachelors in any Faculty of not less than two years' standing;
- (b) *Upon persons approved by the Senate who have been awarded, not less than two years before proceeding to the degree, an approved Diploma in Applied Science in the University.[†]
- (c) Upon Graduates of other Universities, who have been accepted by the Senate as candidates for the degree of M.Sc., and who have prosecuted approved research in the University for not less than two years.
- (d) *Upon persons whose qualifications by study in an approved Institution have been accepted by the Senate in lieu of a degree, and who have prosecuted approved research in the University for a period of two years or more, as determined by the Senate in each case.
- (e) *Upon persons who are not graduates, or have not passed the Final examination for a degree of an

The attention of persons who desire to avail themselves of Sections (e) and (d) is directed to Statute XIII, to Ordinance IX and to the particulars relating to the examination for Matriculation in the University Calendar.

† Holders of the following approved Diplomas will be considered for acceptance for the M.Sc. degree, subject to the approval of the Senate :—Diploma in Agriculture, in Civil Engineering, in Mechanical Engineering, in Electrical Engineering, in Mining Engineering, in Fuel and Metallurgy, in Gas Engineering, in Chemical Engineering, in Dyeing, in Colour Chemistry, in Leather Manufacture, in Textile Industries.

approved University, but who have satisfied the Senate that their educational attainments are adequate and who have pursued a course of advanced study or research in the University for a period extending over not less than three years.

37. Candidates for the degree of Master of Science shall in all cases prosecute research on a subject approved by the Board of the Faculties of Science and Technology. and shall thereafter present to the Senate a thesis embodying the results of their research. They shall also submit themselves to an examination if required.

38. Candidates who are required under Article 36. (c), (d) and (e) to prosecute research in the University for a period of two or more years may obtain permission from the Senate to spend one or more years in acquiring a competent knowledge of a new subject provided that the whole of the final year is devoted to post-graduate study and research.

39. The names of candidates who have satisfied the examiners shall be arranged in alphabetical order, and distinction may be awarded for work of exceptional merit at the discretion of the examiners.

I. Candidates admitted under the provisions of Regulations Article 36 (a) or (b) of the Ordinance shall be required to present a thesis, and to satisfy, such further test, if any, as the Senate shall deem expedient. They may be called upon to present themselves for an examinationwritten, or oral, or both-in the theme of their thesis.

Candidates admitted under the provisions of Articles 36(c), (d) or (e) shall be required to fulfil the following conditions :---

- (a) To be registered as students of the University.
- (b) To pursue a course of advanced study or research under the supervision of the Head of the Department concerned.
- (c) To give evidence to the Senate at the end of the first year of their period of study that their work has been satisfactory, and at the end of their course they shall be required to present a thesis, and to satisfy such further test, if any.

as the Senate shall deem expedient. They may be called upon to present themselves for an examination,—written, or oral, or both in the theme of their thesis.

2. A candidate shall not be permitted to submit as his thesis one for which a degree has been awarded in this or any other University, or which is under consideration for the award of a degree in another University; but he shall not be precluded from incorporating in his thesis any part of such work provided that he states his desire to do so at the time of his application for acceptance as a candidate and in the thesis itself indicates the part of the work so incorporated.

3. A copy of the thesis submitted in support of the application will be retained in the University Library.

N.B.—The latest date of entry and payment of fee for the June examination is 1st February in each year. The thesis (which must be submitted not later than 1st May) should be typewritten and at least two copies should be supplied.

DEGREE OF MASTER OF EDUCATION (see under Degrees in Arts).

DEGREE OF DOCTOR OF PHILOSOPHY

rdinance

40. The Degree of Doctor of Philosophy may be conferred on payment of the appropriate fee and subject to the conditions contained in Articles 41 and 42 :—

- (a) On persons who are registered graduates of the University of Leeds or graduates of an approved University.
- (b) On the holder of a Diploma awarded by an approved institution of university rank not empowered to confer degrees, provided that the course of study in the subject for which the Diploma has been awarded has extended over not less than three years of full-time study.
- (c) In exceptional cases on the holder of a Diploma of the University of Leeds, provided that the Senate is satisfied regarding the course of study towards such Diploma and the standard attained by the candidate in the examination for the Diploma.

41. Except as provided in Article 42, all candidates for the Degree of Doctor of Philosophy are required to pursue in the University for at least two calendar years an approved full-time course of advanced study and research, under the direction of the Head of the Department concerned or of a member of the University staff appointed by the Senate on his recommendation; provided that candidates may be permitted to devote such periods as may be deemed advisable by the Senate to fulltime study and research in other approved Universities or Institutions, while remaining under the direction of the University or of persons nominated by the University. subject to candidates in all cases spending in the University not less than one academic year or its equivalent as determined by the Senate.

42. When laboratory work is not required for the subject of the thesis, the normal requirement of two calendar years of full-time study and research may, at the discretion of the Senate, be waived in the case of persons admitted under Article 40 (a). Such candidates will be required to pursue a part-time course of advanced study and research in the University for a minimum period of three calendar years. Frequent personal contact between the supervisor and the candidate to the satisfaction of the relevant Committee will be required during the period.

NOTE .--- Candidates wishing to avail themselves of the provisions of this Article should normally have previously obtained a Master's degree of this or of another approved University by the presentation of a thesis or dissertation. Only candidates with high qualifications who are strongly recommended by the Head of the Department concerned will be accepted under Article 45.

1. Before entering on the course of advanced study and Regulation research, candidates are required :----

- (a) To have attained the age of 21 years.
- (b) To submit to the Senate for its approval the course of advanced study and research proposed by them and to present evidence satisfactory to the Senate that they are qualified to undertake the proposed course.
- (c) To register as students of the University and to pay the prescribed fees for tuition.

Degrees in Science

2. On completing the course of advanced study and research candidates are required :—

- (a) To present a thesis on the subject of their advanced study and research, and to satisfy the examiners that it contains original work worthy of publication, and that it is of a sufficient standard of merit to qualify for the degree of Doctor of Philosophy.
- (b) To submit themselves for an oral examination (except in the case of Mathematics) on matters relevant to their thesis and, if required, for a written examination and to satisfy the examiners in the examination as well as in the thesis presented.

3. The application of a candidate for admission to the course for the degree must give particulars of his educational career and qualifications as well as the subject of his proposed course of advanced study and research. The application should be addressed to the Registrar.

NOTE.—A candidate is advised, before making application to the Registrar, to consult the Head of the Department which is concerned with the subject he proposes to study.

4. A candidate is required during his course to devote his whole time to his advanced study and research; but in exceptional cases the Senate is prepared to allow the candidate to undertake a limited amount of outside work which, in its judgment, would not interfere with the prosecution of his proposed course of advanced study and research.

5. A candidate will not be permitted to submit as his thesis one for which a degree has been conferred upon him in this or any other University; but he shall not be precluded from incorporating in his thesis any part of the work already submitted by him with a view to a degree for which he has been a successful candidate, provided that in his application to the University for admission to the course he states his desire to do so, and in the thesis itself indicates the part of the work which has been so incorporated.

Degree of D.Sc.

6. It will be generally convenient that the candidate's course should begin either at the opening of the academic year in October, or during the previous Long Vacation; but the Senate is prepared to consider applications for leave to begin the course at some other time in the academic year. The course must in any case extend over two calendar years or their equivalent.

7. Towards the completion of his course the candidate. giving if possible three months' notice to the Registrar, must make application to be examined and must submit, as soon as possible afterwards, two copies of a thesis, which must be accompanied by a short abstract. Theses must be bound in a standard form, particulars of which may be obtained from the Registrar. A copy of the thesis will be retained in the University Library.

DEGREE OF DOCTOR OF SCIENCE

43. The degree of Doctor of Science is conferred by the Ordinance University upon Graduates of the University who shall be deemed by the Senate, after considering a report from one or more of the Boards of Faculties. to have distinguished themselves by their original contributions to science.

Provided that the Senate may, in such cases as it shall think fit, after considering a report from one or more of the Boards of Faculties, also require candidates to pass such an examination as it may from time to time determine.

44. A Graduate of the University may make application for the degree of Doctor of Science in the sixth, or any subsequent year from the date of graduation.

45. If the application be approved by the Senate, the degree may be conferred at the first convenient date thereafter.

Application for the degree of Doctor of Science Regulations shall be made in writing to the Registrar before ist February in any session. It should be accompanied by three copies of the thesis and/or

Diplomas in Science and Technology

publications submitted in support of the application. Theses not already published shall be drawn up in a form suitable for publication. In the case of work submitted under joint authorship, the applicant shall be required to indicate to the satisfaction of the Senate his own share in the joint production. A copy of the thesis submitted in support of the application will be retained in the University Library.

A candidate shall not be permitted to submit in chief or sole support of his application for the degree a thesis for which a degree has been awarded in this or any other University, or which is under consideration for the award of a degree in another University; but he shall not be precluded from submitting in additional support of his application a thesis for which a degree has already been awarded or from incorporating (in whole or in part) such work in the thesis submitted, provided he clearly indicates the work thus submitted or incorporated.

N.B.—The latest date for application and payment of fee is 1st February in any year.

DIPLOMAS IN SCIENCE AND TECHNOLOGY

Ordinance

46. Diplomas shall be granted by the University, in such subjects as the Council may from time to time determine, to students who pursue the courses of study and pass the examinations prescribed.

47. The Council is empowered to make from time to time Regulations under which such Diplomas shall be awarded.

48. The award of Diplomas under the provisions of this Ordinance is delegated to the Senate.

Regulations

I. Candidates for Diplomas are required to give satisfactory attendance upon all the subjects which form part of their course of study, and to present themselves for any departmental examinations that may be held in the same. The record of students at their departmental examinations will be taken into account in deciding the results of Diploma examinations.

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2. At the close of the course, candidates will be required to present themselves for such examination in the main subject of study as may be prescribed.

3. Some deviation from these courses may be sanctioned in special cases, and students who on entering upon a Diploma course produce evidence that they possess a sufficient knowledge of the work done during a part of the course will be allowed to dispense with a certain amount of attendance. Applications for exemption from attendance should be made to the Head of the department concerned, who shall bring them before the Standing Committee of the Senate appointed to deal with such matters.

4. Diplomas are granted by the University in the following subjects :---

Agriculture Biology Animal Biology Civil Engineering Mechanical Engineering Electrical Engineering Mining Engineering Mining and Metallurgy. Gas Engineering Fuel and Metallurgy Colour Chemistry Dyeing Leather Manufacture Textile Industries.

In addition the University grants postgraduate Diplomas in the following subjects :—

> Gas Engineering Chemical Engineering Fuel and Metallurgy Fuel and Refractory Materials Fuel Technology.

(For Regulations governing the award of these Diplomas see the respective departmental prospectuses).

COURSES IN SCIENCE

MATHEMATICS

Introductory Course

Mondays, Tuesdays, Wednesdays and Fridays at 9 a.m. Subjects : Calculus, Statics and Dynamics, Geometry, Algebra.

Fr. Pure Mathematics .

Mondays, Wednesdays and Fridays at 12 (noon). Subjects : Algebra, Plane Geometry, Calculus.

F2. Applied Mathematics

Tuesdays and Thursdays at 12 (noon). Subjects : Statics, Dynamics, Hydrostatics.

F3. Pure Mathematics

Mondays, Wednesdays and Fridays at 10 a.m. Subjects: Partial Differentiation; Elementary Theory and Applications of Power Series; Differential Equations; Analytical Geometry of Three Dimensions; Spherical Trigonometry Fourier Series; Computation.

F4. Applied Mathematics

Mondays, Wednesdays and Fridays at 12 (noon).

Subjects : Vectors, Advanced Statics, Particle Dynamics, Rigid Dynamics in two dimensions, Lagrange's Equations.

E1. Pure Mathematics for Applied Science Students

Mondays, Wednesdays and Fridays at 10 a.m. More advanced Calculus; Differential Equations; Analytical Geometry of Three Dimensions; Spherical Trigonometry; Fourier Series; Computation.

E2. Applied Mathematics for Applied Science Students

Mondays, Wednesdays and Fridays at 12 (noon). More advanced Statics, Particle and Rigid Dynamics in Two Dimensions; Gyroscopes; Hydrostatics.

Physics

G. (General Honours) Pure and Applied Mathematics

At hours to be arranged.

Subjects : Selected portions of more advanced branches of Pure and Applied Mathematics.

Honours Courses

The Honours Course in Mathematics consists of the study of those general branches of both Pure and Applied Mathematics, with which every graduate in Mathematical Honours is expected to be familiar. In addition the student is asked to choose that special branch of mathematics in which he is particularly interested and attends special lectures on this subject and its ancillary subjects.

S1. Statistics (Introductory)

At hours to be arranged.

Subjects: Selected portions of Pure Mathematics as a basis for the study of Statistics. Elementary treatment of Statistical Data with practical applications. (The course is primarily intended for students of Commerce.)

S2. Statistics

At hours to be arranged.

Subjects : Mathematical theory of Statistics including practical applications.

PHYSICS

Chair endowed in 1884 by public subscription in memory of the late Lord Frederick Cavendish, first President of the Yorkshire College

LECTURE COURSES

Introductory Course-A

The course will cover the main branches of Physics in an elementary manner, with experimental demonstrations. Suitable text books will be recommended by the lecturer. It is desirable that prospective students should have an elementary knowledge of trigonometry and mechanics.

Introductory Course-B

This course is designed primarily to meet the needs of future entrants to the Medical and Dental Schools and forms a preparation for the Pre-registration examination in Physics. The syllabus is similar to that for Physics Introductory A.

F1. Final Subsidiary Course

This course is intended for students taking Physics as a subsidiary subject.

F2. Final Principal Course

This course is intended for students taking Physics as a principal subject.

Prospective students for either of the Final courses are required to have passed in the Introductory departmental examinations or to have been excused the Introductory course.

Acquaintance with the principles of the differential and integral calculus is necessary in these courses.

H. Honours Course

The complete course extends over two sessions.

Reading references, including both text books and original papers, are freely given during the course.

Honours students are recommended to attend lectures in their and or 3rd years on some subject other than Physics, such as History, English, Philosophy, Economics, Engineering, Agriculture, Textiles. No examination in the chosen subject will be required, although one may be taken for test purposes if desired.

Radio Courses

Special courses in Radio are given in conjunction with the F1, F2 and H courses.

PHYSICS LABORATORIES

Students' times of attendance in the laboratories are arranged at the beginning of the session, and must not be altered subsequently without permission.

The *minimum* of laboratory attendance required from students of various grades is shown on pages 14 and 19.

CHEMISTRY

LECTURE COURSES

Introductory Course

Mondays, Wednesdays, and Fridays, at 12 (noon), throughout the session.

FINAL COURSES

F1. Inorganic Chemistry

Mondays, Wednesdays, and Fridays, at 10 a.m., throughout the session.

F2. Physical Chemistry

Tuesdays, Thursdays, and Saturdays, at 10 a.m., throughout the session.

A course in Chemical Thermodynamics for students of Chemical Engineering and Metallurgy.

F3. Organic Chemistry

Tuesdays and Thursdays at 12 (noon), and Fridays at 4 p.m., throughout the session.

* F4. Medical Organic Chemistry

This course is held during the first and second terms.

*F5. Medical Physical Chemistry

This course is held during the first and second terms.

Chemistry for Engineers and Dental Metallurgy

Two lectures a week and a tutorial throughout the session. Times to be arranged at the beginning of the session.

*For particulars see Medical prospectus.

Courses in Science

HONOURS COURSES

Students wishing to take Honours Chemistry Course in three years must have passed principal Chemistry and Physics in Higher School Certificate at "Good" standard or introductory Chemistry and Physics in this or another approved University.

First Year Courses

GI. Inorganic and Physical Chemistry

Mondays, Wednesdays and Fridays at 10 a.m., during the *first and second* terms, and Tuesdays at 12 noon during the *second and third* terms.

A general introduction to the principles of chemistry.

Seminar

Mondays and Wednesdays at 12 noon and Saturdays at 10 a.m. throughout the session.

A course in the theory and the quantitative aspects of the laboratory work.

O1. Organic Chemistry

Mondays, Wednesdays and Fridays at 10 a.m. during the *third* term.

This, together with O₂ in the second year forms the first part of the general course in organic chemistry for students taking honours.

Second Year Courses

12. Systematic Inorganic Chemistry

Mondays, Wednesdays and Fridays at 9 a.m. throughout the session.

Inorganic Chemistry presented as a body of observational knowledge correlated by relationships of modern physicochemical theory.

P2. Physical Chemistry

Tuesdays at 9 a.m., Fridays at 12 noon and Saturdays at 10 a.m. throughout the session.

Chemical Thermodynamics and kinetic and statistical theory.

O2. Organic Chemistry

Mondays at 4 p.m., Thursdays and Saturdays at 9 a.m., throughout the session. (See OI above.)

Chemistry

Third Year Courses

H1. Inorganic Chemistry

Tuesdays, Thursdays and Fridays at II a.m. throughout the session.

H2. Physical Chemistry

Mondays, Wednesdays and Fridays, at 10 a.m. throughout the session.

H3. Organic Chemistry

Mondays, Wednesdays and Thursdays at II a.m. throughout the session.

Colloid Chemistry

A general course intended for honours students and others interested in the subject will be given.

Times will be arranged at the beginning of the session.

PRACTICAL CHEMISTRY

General Laboratory Courses

There are laboratory courses and seminars in conjunction with the lecture courses. Students' time of attendance in the laboratories are arranged at the beginning of the session and must not be altered subsequently without permission.

Practical Course in Sanitary Chemistry

Tuesdays and Thursdays, from 2 to 5 p.m.,¹ during the first and second terms.

This course is arranged on the lines laid down by the General Medical Council and is designed to meet the requirements of the Medical Officers of Health.

It will include practical instruction or demonstrations in the sanitary examination of water, air and food, and on the properties of gases, and the laws of heat.

Special fee £,8 8s

¹ These hours are subject to re-arrangement.

ZOOLOGY

LECTURE COURSES

Introductory Course

Lectures on Mondays and Fridays at 11 a.m. throughout the session. Practical work on Tuesdays from 2 to 4 p.m. and on Wednesdays from 10 to 12 (noon) throughout the session.

The course includes elementary comparative anatomy and physiology, the elements of reproduction and development, with an introduction to histology.

Course for First M.B., Ch.B. Examination

Classes on Thursdays and Fridays from 10 a.m. to 1 p.m. during the first and second terms of the first year of the medical course.

F. Final Course (Principal)

Lectures on Tuesdays and Thursdays at 11 a.m. throughout the session, and on Wednesdays at 9 a.m.

Groups A (Vertebrates) and B (Invertebrates) will be taken in alternate years each occupying one session together with courses of lectures upon evolutionary evidence and theories of evolution, cytology and genetics, entomology, parasitology, experimental zoology, ecology and animal behaviour.

Final Course (Subsidiary)

The course is arranged in consultation with the Professor.

H. Honours Courses

The hours for Honours (Special and General) lectures and the advanced work will be arranged with students at the beginning of the session.

DIPLOMA IN ANIMAL BIOLOGY

Students from Training Colleges, who have completed the normal Training College course for the Teaching Certificate, may qualify for this Diploma by one year's full-time study in the Zoological Department, and by satisfying the Examiners at the end of the session.

Botany

Students preparing for this Diploma will ordinarily be required to pursue the following courses of lectures and practical work, unless exemption from particular courses be granted by the Head of the Department on the ground of previous knowledge, or to facilitate special studies :---

- I. Introductory Degree Course (Intro.).
- 2. A special course (to be arranged) including a period at the Marine Laboratory.

The Examination for the Diploma will occupy two days, and will include two papers together with practical examinations.

ZOOLOGICAL LABORATORY

The Zoological laboratory will be open daily from 9.30 a.m. to 5 p.m. (Saturdays, from 9.30 a.m. to 12.30 p.m.).

Each student is required to provide himself with a set of *dissecting instruments*, and a *biological drawing book* (to be obtained in the laboratory).

Microscopes may be hired from the University at the rate of 15s. each per session for elementary work, and \mathcal{L}_{1} 1s. each per session for advanced work

Students taking both Zoology and Botany may pay a composite fee of \pounds_1 zs. 6d. per session for elementary work or \pounds_1 ros. per session for advanced work.

These fees must be paid in advance to the Bursar immediately after the student has arranged with the Laboratory Steward for the loan of a microscope.

BOTANY

LECTURE COURSES

Introductory Course.

On Tuesdays and Thursdays from 9 to 10 a.m. and from 11 a.m. to 1 p.m. throughout the session.

This course includes the study of the form, structure, development and life history of the flowering plant with especial reference to the relation of form and structure to function. Experimental study of the simpler problems in plant metabolism, transpiration, &c.

The principles of classification and systematic botany will be briefly considered in the case of the flowering plants.

Intro. A. Course for First M.B., Ch.B. Examination

On Mondays and Wednesdays from 10 a.m. to 1 p.m. for the first two terms.

This course includes the study of the life history of the flowering plant with especial reference to the relation of form and structure to function.

Experimental study of the simpler problems in plant metabolism, involving an elementary study of permeability, tissue respiration, photo-synthesis, translocation of food substances, &c.

The study of the life history of some Algæ and Fungi in especial relation to the phenomena of saprophytism and parasitism in contrast to the normal metabolism of the green plant.

Experimental methods for investigation of relations between micro-organisms such as yeast and the medium in which it grows. Study of fermentation processes with methods of pure cultures.

FI. Final Course : Botany

Lectures on Mondays, Wednesdays and Fridays at 10 a.m. throughout the session.

A minimum of six hours laboratory work at hours to be arranged.

A. Comparative morphology: Algæ, Fungi and Bryophyta.

Physiology of metabolism.

Cytology and heredity.

B. Comparative morphology : Pteridophyta, Gymnosperms and Angiosperms.

Ecology. Systematic Botany.

Physiology of growth and water relations.

Courses A and B are held in alternate years, the two years' course will prepare for the Final B.Sc. Examination.

Geography

Subsidiary Course. Three lectures and six hours laboratory work throughout the session, at hours to be arranged. The course will include a brief review of the comparative morphology of the main groups and experimental plant physiology.

H. Honours Courses

General Honours students take the three years work as specified in the Introductory and Final course above and in the third session also attend special lectures and give additional attendance in the laboratory.

Special additional courses of Lectures will be given for Special Honours students at II a.m. on Mondays, Wednesdays and Fridays throughout the Session. They will include advanced lectures in morphology and physiology in the form of short courses on special topics.

Laboratory courses will be arranged in consultation with the Professor.

BOTANICAL LABORATORY

The Botanical laboratory will be open daily from 9.30 a.m. to 5 p.m. except on Saturdays.

Microscopes may be hired from the University at the rate of $\pounds I$ is. each per session for Botany only or $\pounds I$ is. for Botany and Zoology. These fees are charged for the use of a miscroscope during the hours of official laboratory classes only. The fees must be paid in advance to the Bursar immediately after the student has arranged with the Laboratory Steward for the loan of a microscope.

Each student is required to provide himself with a pocket lens, a drawing book and a set of instruments.

PHYSIOLOGY AND BACTERIOLOGY

For particulars of courses in these departments, apply to the Professor concerned.

COURSES IN NUTRITION AND DIETETICS

Students who wish to follow careers requiring a knowledge of nutrition and dietetics, *e.g.* dieticians, food supervisors, etc., are recommended to follow a degree

Courses in Science

course including Chemistry and Physiology (with option (c), see p. 15) as Principal subjects and Bacteriology as a Subsidiary subject. But some other science or applied science subject may be taken instead of Bacteriology.

It will usually be necessary to obtain a professional qualification after graduation, e.g. a Diploma in Dietetics, and intending students are recommended to obtain advice from the Tutor to Women Students or the Academic Sub-Dean.

GEOGRAPHY

Students intending to offer Geography as a principal subject must pass in Geology at the introductory stage.

Introductory Course

General Geography.

Lectures: two hours per week throughout the session (Tuesdays and Fridays at 9 a.m.).

Tutorials and practical work of not less than three hours per week at times to be arranged.

FI Courses

A.—Principles of Human Geography (two hours per week throughout the session).

B.—The Geography of a selected area (one hour per week).

C.—Tutorials and practical work at times to be arranged (6 hours per week).

F2 Courses

Three of the following courses, normally A. and B. and either C. or D.

A .--- A study of a selected area (one hour per week).

B.---A study of a selected area (one hour per week).

C.-Economic and Political Geography (two hours per week).

D.-Human Geography (two hours per week).

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Geology

Tutorials and practical work at times to be arranged. All students are required to undertake a Regional Survey under the supervision of a member of the staff.

All students are required to attend class excursions. At intervals, vacation courses are arranged in conjunction with other British Universities for the intensive study of type regions at home and abroad.

GEOLOGY

LECTURE COURSES

Introductory Course

Lectures on Mondays, Wednesdays and Fridays at 10 a.m. throughout the session.

Subjects: The elements of mineralogy; igneous, sedimentary and metamorphic rocks; processes of denudation and deposition; movements of earth's crust; volcanoes and earthquakes; Historical Geology; the interpretation of fossil fauna and flora; the building of the British Isles; the elements of Economic Geology.

Practical Work: Three hours per week throughout the session.

Subjects : Examination of hand specimens of common rock forming minerals, ores and other minerals of economic importance; rocks and fossils; interpretation of geological maps; elementary crystallography.

Field Work: Excursions to important districts in Yorkshire will be made during the session.

FINAL COURSES

FI.

A.—Mondays and Fridays at 2 p.m. General Stratigraphy.

B.—Tuesday at 9 a.m. Economic Geology.

F2.

Three hours per week at hours to be arranged. Subjects: Advanced Dynamical Geology; Detailed study of Sedimentation; Glacial Geology.

F3. Final Courses in Palæontology

F. 3*a*.—One lecture a week throughout the session for all students taking Geology as a principal subject in the first year of their Final course.

Subjects: The general outlines of Palaeontology; morphology of selected groups of Invertebrates; relation of Geology and Palaeontology; the principal faunal assemblages.

F. 3b.—One lecture a week for all students presenting Palaeontology at Final and Honours (Scheme A) standard.

Subjects: Taxonomic and evolutionary study of the Invertebrates; Zonal Palaeontology; Faunal Provinces; Vertebrate Palaeontology; Palaeobotany.

F4. Final Courses in Petrology

F4a.—One lecture a week for all students taking Geology as a principal subject in the first year of their Final course.

Subjects: Rock-forming minerals and their optical properties. Classification of igneous and sedimentary rocks; metamorphic rocks.

F4b.—One lecture a week for all students presenting Petrology at Final and Honours (Scheme B) standard.

Subjects: The genesis of igneous rocks. Distribution of igneous rocks. Detailed examination of sedimentary rocks. Metamorphic processes.

HONOURS COURSES

H1. Honours Course in Geology

Special additional courses of lectures will be given for students reading for Honours at times to be arranged.

Field Course

For all students other than those taking Introductory Geology.

A course of practical instruction in the field will be given on alternate Saturdays during the session. Visits will be made to districts within reach of Leeds to study

Anthropology

the geological features and also for training in geological mapping.

During the Easter Vacation one week will be devoted to the study of some special area not accessible in the ordinary course.

ANTHROPOLOGY

First Year

Anthropology I (General Ethnology)

Two or three lectures a week and three hours' practical work.

The concept of human races and the limitations of classifications of mankind on the basis of race. A comparative study of the physical criteria employed to distinguish racial types. The distribution and regional grouping of racial types. Problems of the relationships of racial types to geographical environment. The geographical setting of early modern man. The idea of racial drifts.

The meaning and content of culture. Culture (including language) versus race. Elementary comparative study of language. The classification of peoples in relation to language. Regional studies of primitive economies and their relation to environment. The geographical background of the ancient civilizations of the Near East, India, China and the Aegean. The dawn of civilization in Europe. The material cultures of pre-Columbian America. Diffusion and independent origins.

Second Year

Either Anthropology II (Physical Anthropology)

Two or three lectures a week and six hours' practical work.

The comparative anatomy of the man-like apes and man (Primates) with special reference to the skeleton and brain. The evolution of man. Palæontology and the antiquity of man. The classification and distribution of living races of mankind. The physical characters of races of living man and the methods of anthropometry.

Or Anthropology III (Social Anthropology)

Three lectures a week.

The scope of social anthropology. Historical, comparative and functional method of approach. The investigation of the nature and structure of human society by the comparative study of communities of divers kinds. Forms of social structure. The family and kinship. Patrilineal and matrilineal organization. The extension of kinship, clans, tribes and nations. Regulation of sexual life. Rules of marriage and sex division in relation to economic, religious and social activities. Primitive law, land tenure, property and inheritance. Political organization. Chieftainship, kingship, secret societies. The sanctions of authority. Genesis and growth of moral ideas, and of magico-religious customs and beliefs.

Note.—Students wishing to take these courses are advised to consult the Professor of the Philosophy and History of Religion.

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DEPARTMENTS OF

CIVIL, MECHANICAL AND ELECTRICAL ENGINEERING

The work of these Departments is intended to provide a systematic training in the application of scientific principles to engineering purposes, and is not intended in any way to supersede the practical training received in engineering works and offices. An apprenticeship or pupilage in such works or offices is essential for every Engineering student.

The scientific training at the University must be regarded as a means of acquiring the principles that underlie the art of Engineering, and the training in the Works as necessary for acquiring the art itself.

It is desirable that all students, whether taking up Civil, Mechanical or Electrical Engineering, should have at least one year's practical experience in Engineering Works before taking up the University course. This, however, is not essential and students may be admitted direct from school.

Though the Engineering courses are designed primarily to suit students intending to be Civil or Mechanical or Electrical Engineers, the subjects in the Civil Engineering course are such as should be studied by Mining Engineers, and by Architects, and the course prescribed for Mechanical Engineers, or parts of it, would be found of direct practical utility to students who are afterwards to be engaged in any occupations connected with manufactures.

It is hoped that all Engineering students will join the Students' Engineering Society.

COURSES OF STUDY

The basis upon which the courses have been organised may be briefly stated as follows :---

N

In the first year of their studies all Engineering students will concentrate mainly upon the pure sciences, viz., Mathematics, Physics and Chemistry.

In the second year they will continue with their Mathematical studies, and, at the same time will be placed in a position to acquire a broad perspective view of all the Applied Sciences bearing upon Engineering practice to which their first year studies are fundamental. No specialisation is attempted in the first and second years. All students, whether Civil, Mechanical, or Electrical, pursue the same courses.

In the third year specialisation under the three branches of Civil, Mechanical and Electrical is provided. During this year in addition to their specialised Engineering studies, the Civil Engineering students will pursue a course in Geology, and the Mechanical and Electrical Engineering students a course in Fuel and Metallurgy. All the students will also take a short course in Applied Economics.

The courses are set out in detail below. Students pursuing them may prepare for the Honours or Ordinary Degree of B.Sc. or the Diploma of the University, in Civil, Mechanical or Electrical Engineering.

Diploma Students who pursue the courses set out for the Honours Degree may be awarded a Diploma with Distinction provided they reach a sufficiently high standard.

> Courses for the Honours Degree of B.Sc. in Civil Engineering, Mechanical Engineering and Electrical Engineering

First Year :

Mathematics for Applied Science Students. Physics Introductory.

Physics Laboratory.

Chemistry Introductory.

Chemistry Laboratory.

General Engineering I.

Second Year:	
General Engineering II., comprising-	
Strength of Materials	IIA (I).
Structures	IIA (2).
Heat Engines	IIB.
Theory of Machines	IIc.
Hydraulics	IID.
*Surveying	IIE.
Electrical Engineering	IIF.
Drawing and Design	IIx.
Engineering Laboratory.	in mail have
Mathematics F3 and F4 (full courses).	sar mabi
Third Year Civil Engineering :	
Civil Engineering (Hons.), comprising-	
Strength of Materials	IIIA (I).
Theory of Structures	IIIA (2).
*Surveying	IIIE.
Public Works Engineering	IIIG.
Drawing and Design	IIIY.
Engineering Laboratory.	
and one course selected from the fol	lowing :—
Heat Engines	IIIB.
Theory of Machines	IIIc.
Hydraulics	IIID.
Theory of Electrical Machines	• •
Electrical Communications I	
Electrical Communications II	IIIkii.
Electric Power Engineering	IIIL.
†Geology.	
Applied Economics.	
Third Year Mechanical Engineering :	
Mechanical Engineering (Hons.), compris	sing-
Strength of Materials	IIIA (I).
Heat Engines	IIIB.
Theory of Machines	IIIc.
Hydraulics	IIID.
Drawing and Design	IIIx.
Engineering Laboratory.	cm15.

* Easter Vacation Course in addition.

† Field work plus Vacation Course (optional) in addition.

Courses in Technology

aı	nd one course selected from the fo	ollowing :
	Theory of Structures	IIIA (2).
3	Surveying	IIIE.
	Theory of Electrical Machines	IIIF (I).
	Public Works Engineering	IIIG.
	Electrical Communications I	IIIĸi.
	Electrical Communications II	IIIĸi.
	Electric Power Engineering	IIIL.

Fuel and Metallurgy. Applied Economics.

Third Year Electrical Engineering :

Electrical Engineering (Hons.), comprising-

Theory of Electrical Machines IIIF (1).

Electrical Engineering Laboratory.

Mechanical Engineering Laboratory.

and four courses selected from the following in such a way as to include at least two electrical subjects and at least one non-electrical subject :-

Strength of Materials	IIIA (I).
Theory of Structures	IIIA (2).
Heat Engines	IIIB.
Theory of Machines	IIIc.
Hydraulics	IIID.
Surveying	IIIE.
Theory of Electrical Machines	IIIF (2).
Public Works Engineering	IIIG.
Electrical Communications I	IIIĸi.
Electrical Communications II	IIIkii.
Electric Power Engineering	IIIL.

Fuel and Metallurgy.

Applied Economics.

Courses for the Ordinary Degree of B.Sc. in Civil, Mechanical and Electrical Engineering

First Year:

Mathematics for Applied Science Students. Physics Introductory.

Physics Laboratory.

Chemistry Introductory.

Chemistry Laboratory.

General Engineering I.

*Easter Vacation Course in addition.

Second Ye	ear:	
Gener	al Engineering II., comprising	
-	Strength of Materials	IIA (I).
55	Structures	IIA (2).
1	Heat Engines	IIB.
	Theory of Machines	IIc.
	Hydraulics	IID.
	*Surveying	IIE.
	Electrical Engineering	IIF.
	Drawing and Design	IIx.
	Engineering Laboratory.	
Mathematics F3 and F4 (short courses).		
Third Year Civil Engineering :		
Civil Engineering (Ordinary), comprising-		

Thir

l Engineering (Ordinary), comprise	ng
Theory of Structures	IIIA (2).
*Surveying	IIIE.
Public Works Engineering	IIIG.
Drawing and Design	IIIY.
Engineering Laboratory.	
and one course selected from the fo	ollowing :—
Strength of Materials	IIIA (I).
Heat Engines	IIIB.
Theory of Machines	IIIc.
Hydraulics	IIID.
Theory of Electrical Machines	IIIF (I).
Electrical Communications I	IIIĸi.
Electrical Communications II	IIIĸ ii.
Electric Power Engineering	. IIIL.
• •	

†Geology.

Applied Economics.

Third Year Mechanical Engineering :

Mechanical Engineering (Ordi	nary)	, comp	rising—
Strength of Materials	111		IIIA (I).
Heat Engines			IIIB.
Theory of Machines			IIIc
0		14	IIIX.
Engineering Laborator	y.		

*Easter Vacation Course in addition.

†Field Work plus Vacation Course (optional) in additior

and one course selected from the following :---

Theory of Structures	IIIA (2).
Hydraulics	IIID.
*Surveying	IIIE.
Theory of Electrical Machines	IIIF (I).
Public Works Engineering	IIIG.
Electrical Communications I	IIIĸi.
Electrical Communications II	IIIĸii.
Electric Power Engineering	IIIL.

Fuel and Metallurgy.

Applied Economics.

Third Year Electrical Engineering :

Electrical Engineering (Ordinary), comprising-

Theory of Electrical Machines IIIF (I).

Electrical Engineering Laboratory.

Mechanical Engineering Laboratory.

and three courses selected from the following in such a way as to include at least one electrical subject and at least one non-electrical subject :—

Strength of Materials	IIIA (I).
Theory of Structures	IIIA (2).
Heat Engines	IIIB.
Theory of Machines	IIIc.
Hydraulics	IIID.
*Surveying	IIIE.
Theory of Electrical Machines	IIIF (2).
Public Works Engineering	IIIG.
Electrical Communications I	IIIĸi
Electrical Communications II	IIIkii.
Electric Power Engineering	IIIL.

Fuel and Metallurgy. Applied Economics.

DEGREE AND DIPLOMA EXAMINATIONS

Students are recommended to take the B.Sc. Degree Course in Civil or Mechanical or Electrical Engineering (Ordinary or Honours). Students intending to read for a degree must pass or obtain exemption from, the examination for Matriculation conducted by a Joint Board of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham, before taking the Engineering Course.

*Easter Vacation Course in addition.

The work done in the Laboratories and Drawing Office will be taken into consideration in the degree examinations.

Candidates for Diplomas are required :-

- (a) To give satisfactory attendance in the subjects which constitute the Honours or Ordinary degree course.
- (b) To present themselves for any departmental examinations that may be held in the subjects constituting their course of study.
- (c) To make formal entry for the Final Diploma Examination, on the prescribed form, not later than 1st March of the last session of the course, and to pay at the same time the prescribed examination fee.
- (d) To pass the examinations held at the end of their course.

The record of students during their course in the Laboratories and Drawing Office will be taken into account in awarding the Diploma.

A student producing evidence of adequate previous scientific training may, upon application to the Senate, be exempted from a portion of the normal course and may qualify for the diploma upon a shortened period of study.

A Diploma may be granted to a student reading for a degree upon the results of the degree examination, provided a satisfactory standard is attained.

The subjects of examination are detailed below.

Honours Degree of B.Sc. in Civil Engineering, Mechanical Engineering and Electrical Engineering

First Year Examination. Mathematics for Applied Science Students. Physics Introductory. Chemistry Introductory. General Engineering I.

Final Examination.
CIVIL ENGINEERING-
‡General Engineering II.
Mathematics F3 and F4 (full courses).
Civil Engineering (Hons.), comprising-
Strength of Materials IIIA (1).
Theory of Structures IIIA (2).
Surveying IIIE.
Public Works Engineering IIIG.
Laboratory, two days.
and one of the following :
Heat Engines IIIB. Theory of Machines IIIC.
TTT TTT
Theory of Electrical Machines IIIF (1).
Electrical Communications I IIIki.
Electrical Communications II IIIk ii.
Electric Power Engineering IIIL.
Geology.
Applied Economics.
Mechanical Engineering-
[†] General Engineering II.
Mathematics F3 and F4 (full courses).
Mechanical Engineering (Hons.), comprising—
Strength of Materials IIIA (I).
Heat Engines IIIB.
Theory of Machines IIIc.
Hydraulics IIID.
Laboratory, two days.
and one of the following :
Theory of Structures IIIA (2).
Surveying IIIE.
Theory of Electrical Machines IIIF (I). Public Works Engineering IIIG.
Electrical Communications I IIIKi.
Electrical Communications I IIIKi.
Electric Power Engineering IIIL.
Fuel and Metallurgy.
Applied Economics.
Electrical Engineering—
‡General Engineering II.
Mathematics F3 and F4 (full courses).
Electrical Engineering (Hons.), comprising-
Theory of Electrical Machines IIIF (I).
Electrical Engineering Laboratory.
Taken at the end of second year.

and four subjects selected from the following in such a way as to include at least two electrical subjects and at least one non-electrical subject :---

Strength of Materials	IIIA (I).
Theory of Structures	IIIA (2).
Heat Engines	IIIB.
Theory of Machines	IIIc.
Hydraulics	IIID.
Surveying	IIIE.
Theory of Electrical Machines	IIIF (2).
Public Works Engineering	IIIG.
Electrical Communications I	IIIĸi.
Electrical Communications II	IIIĸii.
Electric Power Engineering	IIIL.
0 0	

Fuel and Metallurgy.

Applied Economics.

Ordinary Degree of B.Sc. in Civil Engineering, Mechanical Engineering and Electrical Engineering

First Year Examination.

Mathematics for Applied Science Students. Physics Introductory. Chemistry Introductory. General Engineering I.

Final Examination.

CIVIL ENGINEERING-

	ising— IIIA (2). IIIE.
and one of the following :	
Strength of Materials Heat Engines Theory of Machines Hydraulics Theory of Electrical Machines Electrical Communications I Electrical Communications II Electric Power Engineering	IIIA (I). IIIB. IIIC. IIID. IIIF (I). IIIK i. IIIK ii IIIL.
Geology.	

Applied Economics.

Taken at the end of second year.

Courses in Technology

MECHANICAL ENGINEERING-

[†]General Engineering II.

Mathematics F3 and F4 (short courses).

Mechanical Engineering (Ord.)), con	nprising
Strength of Materials		IIIA (I).
Heat Engines		IIIB.
Theory of Machines		IIIc.
10000		

Laboratory, one day.

and one of the following :--Theory of Structures ... IIIA (2). Hydraulics IIID. Surveying IIIE. Theory of Electrical Machines IIIF (1). Public Works Engineering IIIC. Electrical Communications II IIIK i. Electric Power Engineering IIIL.

Fuel and Metallurgy.

Applied Economics.

ELECTRICAL ENGINEERING-

[†]General Engineering II.

Mathematics F3 and F4 (short courses).

Electrical Engineering (Ord.), comprising-

Theory of Electrical Machines IIIF (1).

Electrical Engineering Laboratory,

and three subjects selected from the following in such a way as to include at least one electrical subject and at least one non-electrical subject :---

IIIA (1).
IIIA (2).
IIIB.
HIC.
IIID.
IIIE.
IIIF (2).
IIIG.
IIIR1.
IIIKü.
IIIL.

Fuel and Metallurgy.

Applied Economics.

Taken at the end of second year.

The Institution of Civil Engineers

All Civil Engineering students should aim at ultimately becoming Members of the Institution of Civil Engineers. The Charter of the Institution of Civil Engineers also permits all Mechanical and Electrical students to become Members of the Institution provided the requirements as regards practical training and experience are fulfilled as set out in the By-Laws of the Institution.

The first step is to become a Student of the Institution and for admission to Studentship it is necessary to pass or obtain exemption from the Common Preliminary Examination of the Engineering Joint Examination Board. A list of the exempting qualifications together with full particulars as to the procedure for enrolment in this grade may be obtained from the Secretary of the Institution of Civil Engineers, Great George Street, London, S.W.I.

All Engineering students of this University, who have passed the Common Preliminary Examination or its equivalent, are eligible to apply for admission as a Student of the Institution. After admission they are entitled to attend the meetings and visits of the Yorkshire Association of the Institution of Civil Engineers and to receive copies of the Journal of the Institution. Miller Scholarships and Prizes, value from f_{10} - f_{120} , are awarded by the Institution for papers read by Students at either the Local Associations or at Headquarters.

The Ordinary and Honours Degrees of B.Sc. in Civil, Mechanical or Electrical Engineering exempt students from Sections A and B of the Associate Membership Examination which is a necessary qualification for the higher grade of Associate Member. All candidates, however, must pass Section C of that examination dealing with Specifications, original Drawings and Bills of Quantities.

Every candidate for election into the class of Associate Members must be more than 25 years of age and must fulfil the requirements concerning practical training and experience in accordance with any one of the groups of qualifications set out in the By-Laws of the Institution.

The Institution of Mechanical Engineers

All Mechanical Engineering students should aim at ultimately becoming Members of the Institution of Mechanical Engineers. The first step is to become a Student Member and for admission to this grade of membership it is necessary to pass, or obtain exemption from, the Common Preliminary Examination. Particulars of the exempting qualifications and full information as to the procedure for enrolment may be obtained from the Secretary, The Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W.I.

In connection with the higher grade of Associate Membership, exemptions from the whole of the appropriate examination (Sections A, B and C) is granted by the Institution to students of this Department who secure the degree of B.Sc. with Honours in Civil, Mechanical or Electrical Engineering.

An Ordinary B.Sc. degree in Civil, Mechanical or Electrical Engineering exempts from Sections A and B. Higher degrees in Engineering exempt from Sections A, B and C.

Election to Associate Membership cannot take place until the candidate is over 25 years of age and has also satisfied the Institution that he has had sufficient practical experience in mechanical engineering. The intermediate grade of Graduateship of the Institution may be entered pending the acquisition of the qualifications for Associate Membership. Election to Graduateship necessitates passing, or obtaining exemption from, Sections A and B of the Associate Membership Examination.

There is a Local Branch of the Institution of Mechanical Engineers which promotes visits to Engineering establishments and provides lectures on Engineering topics. The meetings and visits are open to all classes of members.

Marine Engineers

The Engineering Department of this University is recognised by the Marine Department of the Board of Trade as an institution in which candidates for Marine Engineering certificates can obtain a portion of their training.

The Institution of Electrical Engineers

All Electrical Engineering students should aim at altimately becoming members of the Institution of Electrical Engineers.

The first step is to become a Student Member of the Institution. Full particulars as to the procedure for enrolment in this grade may be obtained from the Secretary of the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, London, W.C.2.

All Electrical Engineering students of this University are eligible for election as Students of the Institution.

The Ordinary and Honours Degrees of B.Sc. in Electrical Engineering and the Diploma in Electrical Engineering are recognised as educational qualifications for Associate Membership. The Ordinary and Honours Degrees of B.Sc. in Civil, Mechanical, and Mining Engineering are also recognised, provided that the candidate has passed in at least two distinct Electrical Engineering subjects, one of which must have been taken at the Final Examination for the degree.

There is a local Centre of the Institution. Papers accepted by the Institution are read and discussed at the meetings of the Local Centre. The meetings are open to all classes of members.

There is in addition a Local Students' Section, controlled by a Chairman, Secretary and Committee, elected by the students themselves, which selects its own papers and arranges its own visits to engineering establishments.

SYLLABUS OF COURSES

General Engineering I

Materials; Boilers; Steam Engines; Steam Turbines; Internal Combustion Engines; Air Compressors and Motors; Refrigerators; Hydraulic Machinery; Transmission of Power.

Manufacture, physical and mechanical properties of building materials, including stone, bricks, cement, concrete and timber. Methods of construction in masonry, brickwork, concrete, steelwork and timber. Foundations; Timbering of excavations; Floors and roofs; Piles and piling; Retaining walls, dams and arches. General principles of road-works, railways, water supply works, drainage and sewerage. Elementary principles of Surveying. Surveying instruments.

Fundamental principles; Ohm's law and Kirchoff's laws applied; Elementary principles of electric machinery, measuring instruments; Electric and magnetic circuits.

(Drawing Office).

Geometrical and machine drawing.

General Engineering II

IIA (1). Strength of Materials

Stress, strain and elasticity; Mechanical properties and tests; Suddenly-applied loads; Bending moments and shearing forces; Theory of bending and stress distribution in beams; Slope and deflection of beams; Built-in beams; Columns and struts; Torsion and combined stresses in shafts and helical springs; Thin cylinders; Failure and fatigue of metals.

IIA (2). Theory of Structures

Bending moments and shearing forces for simple beams with moving loads; Influence lines for simply supported beams; Equivalent uniformly distributed loads. Forces in statically determinate framed structures with dead loads; Roof trusses and braced girders. Complete

design of a plate girder ; Reciprocal figures for combined wind and dead loads on roof trusses ; Design in detail of a roof truss.

IIB. Heat Engines

Thermodynamics; Theory of the steam engine; Theory of the internal combustion engine; Steam turbines and condensers.

IIc. Theory of Machines

Kinematics of machines; Belts; Gears: Friction of dry and lubricated surfaces; Roller and ball bearings; Flywheels; Governors; Balancing.

IID. Hydraulics

Hydrostatic pressure ; Floating bodies.

Principles of Hydraulics; Discharge from orifices, notches and weirs; Flow in pipes and channels; Measurement of stream discharge; Fluid friction; Transmission of power by fluids; Water hammer; Impact of water; Theory and operating characteristics of turbines and pumps.

ILE. Surveying

Chain surveying; Surveying instruments; Traverse surveying; Measurement of heights and levelling; Tacheometry.

IIF. Electrical Engineering

Principles of direct current circuits; Principles of alternating current circuits; Alternating current measurement. Principles of alternating current machines; Principles of direct current machines.

IIx. Drawing and Design

(Drawing Office)

The design of bearings; Couplings; Clutches; Spur, bevel and spiral gearings, etc. and Engine details.

Bending moment and shear force diagrams from funicular polygon; Graphical determination of moments, centroids and moments of inertia of sections; Deflection and slope of beams from bending moment diagrams; Beams of varying cross-section; Design of plate girder and roof truss.

General Engineering IIs

This course has been arranged for students from the Departments of Fuel and Mining. It consists of courses in Strength of Materials, Heat Engines, Hydraulics and Electrical Engineering, together with Laboratory and Drawing Office Work. The class hours are as under :--Lecture.-Tuesdays, Wednesdays, Thursdays, Fridays

at 9 a.m. (Electrical Engineering Theatre).

Laboratory.—Tuesday and Thursday afternoons. Drawing Office.—Friday afternoons.

Engineering III

IIIA (1). Strength of Materials

Compound stresses and strains; Principal stresses in beams; Unsymmetrical bending; Slope and deflection of beams; Propped beams; Built-in and continuous beams; Shear stress and deflection in beams; Advanced theory of struts and torsion; Helical springs; Thick cylinders and spheres; Rotation of rings and discs; Hooks; Flat plates; Transverse vibrations; Stress analysis and fatigue; Developments in testing.

IIIA (2). Theory of Structures

Statically Determinate Structures; Plate girders and braced girders under moving loads; Curved girders; Arches; Suspension bridges; Dams, Earth Pressure on Retaining Walls; Pressure in coal-hoppers, grain bins, silos; Foundations; Statically Indeterminate Structures; Masonry and Reinforced Concrete Structures; Structural Welding and Design of Welded Structures; Soil Mechanics.

IIIB. Theory of Heat Engines

Advanced theory of steam engines; Steam turbines; Internal combustion engines; Transmission of power by compressed air; Mechanical production of cold.

IIIc. Theory of Machines

Dynamics of the steam engine; Connecting rods and coupling rods; Balancing; Flywheels; Governors; Velocity and acceleration diagrams; Theory of film lubrication; Vibration and vibrographs; Whirling of shafts; Torsional oscillations of crank shafts; Gvroscopes.

IIID. Hydraulics

Advanced theory of discharge from orifices, weirs and notches; Viscous resistance of fluids; Non-uniform flow in channels; Jet propulsion of ships; Hydraulic machinery; Turbines; Surge tank; Centrifugal pumps; Reciprocating pumps; Tidal power; Advanced theory of water hammer; Applications of the principle of dynamical similarity.

IIIE. Surveying

Advanced theory of surveying instruments; Base line measurement; Triangulation; Plane table surveying; Hydrographic surveying; Tacheometry; Setting out of lines and levels of works including railway curves; Application of astronomy to surveying; Photographic surveying.

IIIF. Theory of Electrical Machines

Part I.—Theory of direct and alternating current generators and motors, transformers and converters.

Part II.—Advanced theory and design calculations for the types of electrical machinery which form the subject of Part I.

IIIG. Public Works Engineering

Railways.—Location of Railways, and design in regard to gradients and curves; Embankments, cuttings, earthwork calculations, tunnels and river crossings Trackwork and theory of points and crossings. Signalling and safety devices.

Water Supply.—Rainfall and sources of supply from streams, wells and boreholes. Reservoirs, and compensation water; pipelines; aqueducts, syphons and valves. Water analysis and purification, distribution and waste prevention.

Sanitation.—Drainage and buildings; Sewerage of Rural and Urban districts. Quantity and analysis of sewage; Purification and disposal of sewage.

Refuse collection and disposal and Public Cleansing.

Roads.—Construction and maintenance of modern road surfaces, including macadamised, paved, bituminous, asphalt and concrete roads.

Heating and Ventilation.—Systems of heating and ventilation, with calculations and principles of design.

Visits.—During the Session visits will be arranged to a number of Public Works in the vicinity and students will be required to present satisfactory reports of the works visited.

III K i. Electrical Communications I

Theory of networks and lines; Reflection phenomena and impedance matching; Filters; A.C. Bridges; Repeaters and other valve circuits; Carrier systems; Electro-acoustic apparatus.

III k ii. Electrical Communications II

Resonant circuits; Amplifiers and oscillators; Highfrequency feeders and aerials; Electromagnetic radiation; Modulation and demodulation; Radio transmitters and receivers; Television.

IIIL. Electric Power Engineering

Transmission calculations and theory; Applications of switchgear and rectifiers and control apparatus; Theory of insulation and high-voltage problems.

IIIx. Drawing, Design and Graphics (Mechanical)

Design of spur and helical, straight and spiral bevel, and worm gears, and the determination of the bearing loads. Selection and mounting of ball and roller bearings; preloading. Limits, fits and tolerances. Selection of materials and working stresses. Welded joints. Special

problems in mechanical design. Detailed analysis of manufacturers designs.

Velocity and acceleration diagrams for complex mechanisms, balancing of engines, whirling speeds of turbine rotors, critical speeds of crankshafts, general vibration problems, analysis of vibrograph and torsiograph records.

IIIY. Drawing and Design (Civil)

Graphical determination of maximum and minimum forces in structures subject to moving loads; Design of braced girders, roof trusses and other steel and reinforced concrete structures; Design of welded structures.

Graphical treatment of arches; Suspension bridges; Retaining walls; dams, etc.

Engineering Laboratories

Experimental work in connection with the various classes will be conducted in the Engineering Laboratories throughout the course.

Engineering II: Tuesday and Thursday afternoons. Engineering III: Monday and Friday afternoons.

Post-Graduate Courses in Engineering

Facilities are available for advanced study and research in the departments of Civil, Mechanical and Electrical Engineering. The equipment in all the main laboratories affords opportunity for research work, while a number of smaller laboratories have been equipped with extensive research appliances suitable for individual work in many of the branches of Engineering.

Time Tables

Time tables will be published in the Department at the beginning of each term.

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DEPARTMENT OF MINING

Assisted by the Drapers' Company of the City of London, and by the West Yorkshire Coal Owners' Association, and the West Riding County Council

The Department of Mining at the University of Leeds affords excellent facilities for the training of young men who intend to practise the art of coal or metalliferous mining, petroleum engineering, or of the salesmanship and distribution of coal. Situated in the heart of a mining district where the most up-to-date mining methods are practised and where are found some of the deepest and best equipped modern British collieries, the Department has the cordial support of those actively engaged directing the collieries and metal mines of the district.

All students have an opportunity of gaining a wide knowledge of the practical application of the principles of mining, so that eventually they will be equipped to take an active part in the direction of mining concerns whether as company directors, mine agents, salesmen managers or surveyors or mining metallurgists, or alternatively, to act as inspectors of mines under H.M. Government. There are many opportunities for the mining engineer to follow an attractive career in the oil industry, particularly in the work of exploration and exploitation of oilfields. Foreign students are welcomed and every endeavour is made to meet their various requirements.

The well equipped laboratories in the many departments of the University, in particular, the Physical, Chemical, Geological, Metallurgical, Engineering and Mining Laboratories are open to the mining students, who therein gain a scientific foundation upon which is built their knowledge of the art of Mining.

The Staff of the Department is greatly assisted by the Mining Advisory Committee composed of eminent mining and petroleum engineers, coal owners and scientists. This Committee helps to maintain active contact between the Mining Department and Industry,

which contact is of great assistance to students of the University.

The courses have been arranged to meet the requirements of those who intend to become :—

I. Colliery Directors, Agents and Managers.

2. H.M. Inspectors of Mines.

3. Metal Mine Managers and Engineers.

4. Colliery Salesmen and Distributors.

5. Mine Surveyors.

2

6. Colliery, Mechanical and Electrical Engineers.

7. Mining Metallurgists.

8. Petroleum Engineers.

The degree courses are primarily intended for the systematic training of students who can devote at least three years to the study of the scientific principles underlying the practice of the various industries for which they are preparing themselves.

Students are expected to supplement the University course by attending at a mine or works to obtain practical experience and arrangements are made where necessary to enable this to be done.

Special facilities are provided for postgraduate research work both in the laboratories of the Department and in mines and works outside, and every help is afforded to graduates who, on passing into the industry, find themselves confronted with problems which can be advantageously worked out in conjunction with a well equipped scientific laboratory. Provision is also made to meet the requirements of duly qualified students who wish to take advantage of part of the regular courses of instruction, whilst graduates of other Universities will be admitted as research students.

COURSES OF STUDY

The courses of study are arranged as follows :----

- I. B.Sc. Honours in Mining, four years' course.
- 2. B.Sc. Honours in Mining, three years' course and one year of approved research work.
- 3. B.Sc. in Mining, three years' course.
- 4. B.Sc. in Mining and Metallurgy, three years' course.
- 5. Diploma in Mining, three years' course.

Mining

- 6. Diploma in Mining and Metallurgy, three years' course.
- 7. Course on Mine Surveying.
- 8. Course on Colliery, Mechanical and Electrical Engineering.
- 9. Course on Preparation, Analysis, Sale and Distribution of Coal.

Students entering for the degree course are required to have passed (or obtained exemption from) the examination for Matriculation conducted by the Joint Board of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham.*

Colliery Managers' Certificates of Competency under the Coal Mines Act, 1911

Graduation as B.Sc. in Mining Engineering, or Mining and Metallurgy, or the possession of the Diploma in Mining Engineering or Mining and Metallurgy of the University of Leeds, has been recognised by the Board of Trade as equivalent to two years' experience at a mine for the purposes of the Colliery Managers' Certificate under the Coal Mines Act, 1911. Further information may be obtained on application to the Secretary to the Board for Mining Examinations, Ministry of Fuel and Power, 7, Millbank, Dean Stanley Street, Westminster, London, S.W.I.

The University of Leeds is an institution approved by the Board of Trade in respect of its Degree of B.Sc. in Mining, Diploma in Mining, B.Sc. in Mining and Metallurgy and Diploma in Mining and Metallurgy.

Surveyors' Certificates under the Coal Mines Act, 1911

The University of Leeds is one of the Institutions approved by the Board of Trade for the purpose of training students for Surveyors' Certificates under the Coal Mines Order, and students who pass satisfactorily this course are admitted as candidates for the Mines Department Surveyor's Certificate, with two years' experience in Surveying.

^{*}All inquiries regarding the examination for Matriculation, including applications for exemption, should be addressed to the Secretary to the Board, the Joint Matriculation Board, 315, Oxford Road, Manchester, from whom also a complete syllabus of the examination may be obtained.

Courses in Technology

The following courses at the University have been approved and enable candidates to obtain exemption from two of the four years practical experience ordinarily required :---

1. Ordinary B.Sc. Degree Course in General Mining.

2. Diploma Course in Mining.

3. The Course in Mine Surveying.

Union of South Africa.

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The B.Sc. Honours degree in Mining is recognised as an approved degree under Regulations 297 and 301(2)(a) of the Mines, Works and Machinery Regulations.

Special Lectures

Lectures are given from time to time by specialists in particular branches of Science, Art and Medicine outside the ordinary mining courses but which are of particular interest to students of the Mining Department. These lectures are not included in the syllabus of each course as shown hereafter.

I. Honours B.Sc. Degree Course in General Mining (Four Years Course)*

This course of instruction is arranged for students who desire to qualify themselves as Mining Engineers, Surveyors, or Assayers, and also for those who intend, in the future, to take charge of mining and prospecting operations in the colonies or foreign countries. Students are required to devote the vacations to obtaining practical experience in mines, and they should call upon the Head of the Department, immediately before the Christmas vacation of their first year at the University, to obtain advice regarding the necessary arrangements.

During the first year of the degree course the student will normally attend classes and take examinations in Mathematics, Physics, Chemistry and Engineering.

During the second year he will take courses in Engineering (Mechanical and Electrical), Mining and Mathematics.

^{*}Graduation as B.Sc. in Mining has been recognised by the Board of Trade as equivalent to two years' experience at a mine for the purposes of the Colliery Manager's Certificate.

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During the third year he will attend courses in Geology, Fuel and Metallurgy, Surveying and Mining.

In the fourth year he will devote his attention mainly to Mining and Geology.

The four year's course will thus include a systematic training in the Science and Applied Science Subjects which are essential to the study of Mining.

The student will qualify for the degree by attendance upon the courses detailed below, and by passing the corresponding examinations.

Students are strongly urged to obtain a reading knowledge of French and German before the end of their course.

Syllabus							
LOUIS LOUIS LOUIS		Hours per	Week.				
First Year.		Lectures.					
Mathematics J.		4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
Chemistry Intro.		3 (and 1 tut	orial) 5				
Physics Intro.		3					
	101	3	ALC: NOT ALC: NOT A				
	••	3	3 .				
Mining		1					
Second Year.							
Mathematics F ₃ , F ₄		6	a destant the				
Engineering II	• •	7	12				
Mining		I	1. To 1 - C				
Third Year			and the second				
			101 102 000				
Geology Intro		3	4				
Mining and Surveying		3	12				
Fuel and Metallurgy		2	. 3				
Engineering IIIG		T	-				
0 0							
Fourth Year.							
Mining and Surveying		8	6				
Geology FI		3	6				
Economic Geology							
		* · · ·	-				
Industrial Economics	101	I	-				

2. An alternative Four Years' Course for the Honours Degree

(The fourth year being devoted to approved research.)

This course is designed to meet the needs of students, who, having entered for the Ordinary Degree Course (see 3 below), satisfy the Head of the Department of their capacity to read for Honours in Mining, and are allowed,

Courses in Technology

after completing the Ordinary Degree Course, to spend a fourth year in approved research with a view to qualifying for the Honours Degree.

3. Ordinary Degree Course

During the first year of the degree course the student will normally attend classes and take examinations in Mathematics, Physics, Chemistry and Engineering.

During the second year he will take courses in Engineering (Mechanical and Electrical), Geology, Mine Surveying, Fuel and Mining Metallurgy and Mining.

During this third year he will mainly devote his attention to Mining, including ore dressing and laboratory work, Mine Surveying and Assaying.

The student is also required to devote the vacations to obtaining practical experience in mines.

The three years course will thus include systematic training in Mathematics, Physics, Chemistry, Engineering and Geology in addition to the study of the special branch of Applied Science, namely Mining.

The student will qualify for the B.Sc. degree by attendance upon the courses detailed below and by passing the corresponding examinations; he will also be required to translate satisfactorily a passage from a modern language.

	Syllabus					
		Hours per Week.				
F	irst Year.		Lectures.	La	boratory.	
	Mathematics J		4		-	
	Chemistry Intro.		3 (and	I tutorial)	5	
	Physics Intro		3		4	
	General Engineering		3		3	
	Mining		I		-	
S	econd Year.					
	Engineering IIs		4		9	
	Geology Intro.		3		3	
	Fuel and Metallurgy		2		3	
	Surveying		I		3	
	Mining		I		-	
T	hird Year.					
	Economic Geology		I		-	
	Industrial Economics	š	I		-	
	Mining and Surveyin	g	II		14	
	Engineering IIIG		I		-	

Mining

4. Degree Course in Mining and Metallurgy

This course of instruction is arranged for students who desire to specialise in the preparation of minerals for the market and the extraction of metals from their ores.

It is so arranged that the First and Second Years are similar to the First and Second Years of the Mining B.Sc. course, while the third year consists of a careful blending of Assaying, Geology, Metallurgy—in particular the extraction of metals—and Mining.

The course will include systematic training in Mathematics, Physics, Chemistry, Engineering and Geology, in addition to the study of the special branches of Applied Science, namely Assaying, Metallurgy and Mining.

The student will qualify for the B.Sc. degree by attendance upon the courses detailed below, and by passing the corresponding examinations.

Students are strongly urged to obtain a reading knowledge of French and German before the end of their course.

Synabus					
	Hours per	Week.			
First Year.	Lectures.	Laboratory.			
Mathematics	4 .				
Chemistry Intro		utorial) 5			
Physics Intro.	3 .	4			
General Engineering I	5				
	3 *	• 3			
Mining	1 .				
Second Year.					
Engineering IIs .	4 .	. 9			
Geology Intro	3	. 3			
Surveying	2 .	. 3			
Fuel	г	· 3 · 3			
Non-ferrous Metallurgy II.	I				
Industrial Economics	T				
Mining	1				
Minning	1 - 1	-			
Third Year.					
Mining F1, F2, F4	-				
	5 .	- 14			
Ferrous Metallurgy IV	I.	. –			
Non-ferrous Metallurgy III	Ι.				
Economic Geology	Ι.	. 3			
Engineering IIIG	Ι.	2			
• • •					

Syllabus

Courses in Technology

5. Diploma Course in Mining Engineering* (Three Years Course)

This course is arranged for those who intend to devote their attention to coal mining at home, and who, at the same time, desire to obtain a liberal training in the scientific principles underlying their profession, but for some reason are unable to take the B.Sc. Degree Course.

I. During the Course-

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- (a) To attend the same course as candidates for the Ordinary B.Sc. Degree in Mining.
- (b) To present themselves for any Departmental examinations that may be held in the subjects forming any part of their course of study. The record of students at their Departmental examinations will be taken into account in deciding the results of the Diploma examination.
 - (c) To obtain four months' experience at a mine during the vacations, unless the candidate shows to the satisfaction of the Head of the Department that he has had adequate previous experience at mines before entering on the course.

II. At the end of the Course-

- (a) To reach a satisfactory standard in any Final examination which may be set. In the subject of Mining a Diploma student takes for his Final examination the same Final Principal Mining papers as are set for the Ordinary degree of B.Sc.
- (b) To translate into English a passage of French or German relating to the principal subject of the Diploma Course. A foreign student who can show that he has received a good general education will be exempted from this language test.

*The possession of the Leeds University Diploma in Mining Engineering has been recognised by the Board of Trade as equivalent to two years' experience at a mine for the purposes of the Colliery Manager's Certificate.

III. A diploma may be granted upon the degree course provided that the subjects studied for the degree include those prescribed for the Diploma, and that the other conditions are complied with.

A student producing evidence of adequate previous scientific or practical training may, upon application to the Senate, be exempted from a portion of the normal course and may qualify for the diploma upon a shortened period of study.

A diploma with distinction may be awarded to a student when work is adjudged to be of outstanding merit.

6. Diploma Course in Mining and Metallurgy

Candidates for this diploma will attend the course set out above and must satisfy the requirements *mutatis mutandis* for the Diploma in Mining as given above.

A diploma with distinction may be awarded to a student when work is adjudged to be of outstanding merit.,

7. Course on Mine Surveying

This course of one day per week for two years includes lectures on Mine Surveying, Office Work, and Field and Underground Work in Surveying, particulars of which are given in subsequent pages.

To meet the convenience of external students, all lectures and practical instruction in surveying are given on Monday (First Year) and Thursday (Second Year).

To meet the case of external students whose knowledge of Mathematics is below degree standard, a special preliminary course consisting of one lecture per week, together with office work, will be given on Mondays.

Fee, £8 8s. od. each year.

Courses in Technology

8. Course on Colliery, Mechanical and Electrical Engineering

This course is designed to meet the requirements of those who intend to become Colliery, Mechanical and Electrical Engineers. It includes the study of the latest developments of the application of machinery to mining operations both at the surface and underground.

9. Course on the Preparation, Analysis, Sale and Distribution of Coal

This course is arranged for those who are at present engaged or intend to be engaged in the preparation of coal for the market and the sale of the finished product. It consists of lectures dealing with the analysis of coal and the various methods employed in the cleaning and disposal of coal. The lecture course will be supplemented by a laboratory course, which will include practical analyses of coal, the preparation of washability curves and tests with coal cleaning appliances.

Degree of Doctor of Philosophy (Ph.D.)

The Degree of Ph.D. will be awarded to graduates of this and other approved Universities who complete a course of advanced study and research extending over two years in the Department, and also satisfy the other conditions laid down for this degree.

Mining

LECTURE COURSES

Mining F1, F2, F3 and F8

Fı

Preliminary Geology Prospecting and Boring Ownership of Minerals Breaking Ground and Blasting Sinking Supports Methods of Working

Fa

F3

Transmission of Power Coal Cutters and Conveyors Explosions and Coal Dust Spontaneous Combustion Rescue Apparatus Outbursts of Gas, Construction of Dams

F8

Efficiency of Mining Machinery Mineral Valuation Leases and Mining Law Hot and Deep Mines Health and Hygiene

Preparation of Minerals and Coal F4

A course of one lecture a week will be given during the session on Fridays.

The syllabus will include :---

(a) Ore Dressing.—General principles, hand-dressing, comminution systems, sizing, water classification, water concentration, flotation concentration, magnetic, electrostatic, pneumatic and centrifugal separation. Ore dressing plants, flow-sheets, control of operations.

(b) Coal Cleaning.—Screening and sizing. Principles of coal washing, modern methods.

 (\vec{t}) Appliances using horizontal continuous water currents.

(ii) Appliances using vertical continuous water currents.

- (iii) Combinations of (i) & (ii).
- (iv) Jigging appliances.
- (v) Appliances using mechanical impulses.

(vi) Flotation processes.

Dry cleaning methods. Extraction of dust. Control of operations. Selection of a cleaning plant. Washability curves.

Lectures will be supplemented by practical laboratory work in both ore dressing and coal cleaning.

Winding Ventilation Haulage Pumping

Lighting

Mine Surveying F5, F6 and F7

During the session a course of lectures will be given on Monday and Thursday.

Course F5

Introduction and general remarks on the aims and objects of surveying and mine surveying.

Principles underlying the methods of linear and angular measurements used by the mine surveyor.

Accessories, devices, parts and attachments common

to many surveying instruments. Consideration of their uses, objects, causes of failure, design, improvement, testing, and adjustment.

Instruments used for the direct measurement of length; accuracy attainable, use, testing, and adjustment.

Instruments used for the measurement of angles; use, testing, and adjustment.

Instruments depending on the earth's magnetism and instruments for recording the continual changes in the direction of the magnetic meridian; their testing, use and adjustment.

Levelling instruments and instruments used for determining the relative position of points vertically with regard to one another or to a given datum.

Mine surveying methods, work and problems.

Care of instruments.

Course F6

Errors in observed data, their amount, influence, and elimination.

Fundamental considerations concerning the form and size of the earth together with the consideration of geographical and astronomical relations, as far as these affect the work of the surveyor and mine surveyor.

Determination of the direction of the astronomical and magnetic meridians.

Connection of surface and underground surveys by various methods, their relative accuracy and suitability in various cases. Tacheometry, plane table work.

- Setting out railway connections, railway sidings, curves, gradients, roadways, levels, drifts, headgears, enginefoundations, cuttings, embankments, pipe-lines, and engineering work generally.
- Office work; calculations from observed data connected with survey work, the checking and adjustment of errors and data, the graphical representation of data on plans and sections, the use and limitations of graphical records, calculation and determination of areas, volumes; preparation and reproduction of plans, sections, &c.; Ordnance Survey publications, their construction and use.

Course F7

Plotting of triangulation surveys and solution of surveying problems.

Equipment

The equipment of the Department has been designed and installed to serve three purposes :

- (a) To supplement the general training received by the student in the other departments of the University, and direct it to Mining applications.
- (b) To provide apparatus and instruments for the investigation of problems at the mines, and for testing the consumption of power and general efficiency of haulage, winding, pumping, ventilating, and coal washing plants.
- (c) To provide appliances for the detailed study and practical application of methods of ore dressing.

The equipment therefore embraces the following :

For Investigations and Tests at Mines

Apparatus necessary for

Air compressor and compressed air transmission tests. Complete boiler trials. Complete ventilation tests. Pump efficiency tests Steam engine tests. Sampling and analysis of mine gases, fuels, &c. For Laboratory Work.

The following apparatus is provided :

Air compressor and metering devices.

Apparatus for analysis of mine air.

Apparatus for analysis of coal and mine dusts.

Apparatus for coal washing tests, including froth flotation.

Balances for assay work.

Bomb and other calorimeters.

Centrifugal pump.

Experimental fans and gallery, with various modern forms of manometers and air meters.

Furnaces for assay work.

Hygrometers.

Kata thermometers.

Microscopes.

Ore dressing plant, including large Blake Marsden crusher, rolls, ball mill, screens, jigs, classifiers, sand tables, slime table, magnetic separator, flotation units, &c.

Photometric bench and photometers.

Mine rescue apparatus.

Rock drills.

Safety lamps and gas testing chambers.

Westphal balance, Redwood viscometer, Pensky-Marten oil tester, etc.

For Surveying.

The apparatus includes :

Micrometer theodolite.

Two mining theodolites each equipped with three tripod outfit.

Two standard theodolites.

Two optical scale theodolites.

Miners dials.

Invar tape, steel measuring tapes.

Levels, including precise level. Levelling staves, ranging poles, &c.

Plane table.

Hand instruments for prospecting and preliminary surveying, including box sextant, Abney level, prismatic compass, Brunton's Mine Transit, etc.

Equipment for shaft plumbing.

Eidograph for the enlargement and reduction of plans.

Planimeters, computing scale, Fuller's slide rule, tacheometrical slide rule.

Calculating machine. British and continental mathematical tables.

Mining

Laboratory Work

The laboratory course extending over the last two years includes the following :

Analysis of mine atmospheres, flue gases, producer gas, etc.

Assaying of ore and metallurgical products.

Calorimetry.

Coal washing tests.

Commercial analysis of fuel.

Carbonisation tests.

Examination of mine dusts.

Measurement of air flow.

Fan efficiency tests running (1) singly, (2) in series, and (3) in parallel.

Photometry.

Practical methods of mine gas detection.

Practical work in ore dressing, including tests on the efficiency of the various appliances used.

Practice in use of various forms of rescue apparatus. Pyrometry.

Testing of air compressors : transmission of compressed air ; air consumption of rock drills.

Oil testing.

The laboratory instruction is supplemented by testing the efficiencies of boilers, fans, air-compressors, etc., at collieries.

Office Work

The work in the Drawing Office will include the following:

- 1. Calculations and practical exercises connected with work and problems in mine surveying.
- 2. The preparation and reproduction of mine plans and sections.
- 3. The drawing and design of mining machinery and plants and mine structures.

The Office Work will be based upon the lectures on Mining Engineering and Mine Surveying given during the session. Every student will be held responsible for the instruments, apparatus or machinery with which he is working, and will be required to make good any damage caused by him. A deposit of \pounds_1 will be required from which the cost of stationery supplied, laboratory note books and diary of practical training will be deducted. The balance will be returned in the event of no damage being done to instruments, apparatus or machinery, but the student's liability is not limited to the amount of the deposit.

In the case of occasional students and of students taking additional or extra work in the Laboratory or in Surveying, the fees will depend on the time spent on such work.

Field and Underground Work in Surveying

During the session, at times to be arranged, instruction will be given in Field Work and Underground Surveying. Students will be required to go through a systematic course of work in the following :—

- 1. The use of surveying instruments.
- 2. Determination of the constants of instruments.
- 3. Errors of instruments; their elimination and adjustment.
- 4. Methods of securing the degree of accuracy necessary in particular kinds of work.
- 5. Adjustment of observations.
- 6. Astronomical observations for azimuth.
- 7. The survey of the surface of a mineral property including reconnaissance, triangulation, traversing, levelling, tacheometry, and detail work.
- 8. The survey of the underground excavations of a mineral property, including traversing and detail work.
- 9. The connection of surface and underground surveys.
- 10. Curve-ranging and setting-out work in general.

During the course, each student is required to spend a period of at least four weeks in the field. A practical course in mine surveying is held during the summer

Mining

vacation, commencing immediately after the last day of term, for a period of a fortnight. The work is carried out at a coal or metalliferous mine, and includes triangulation, correlation of surface and underground surveys, underground traversing and surface detail surveying. The field observations are reduced and plotted in the Final Year, and each student so prepares a complete plan of a mining area.

Incidental expenses for the carriage and insurance of instruments will be liquidated by a charge on each student not exceeding \pounds_1 . Any balance remaining after settling accounts will be returned to students.

Vacation Practical Work

The diary of practical training and reports will be completed and should be certified by the management as the student's own work. These will be submitted to the Department for approval at the end of the summer vacation.

Mining Excursions

During the session excursions will be made to mines and works where mining machinery is manufactured. The object of these excursions will be to give students an insight into practical methods, mining practice generally and the writing of reports.

University Mining Society

The membership of this Society includes both present and past students. It forms one of the most attractive features of the department, its principal function being to arrange for the reading of papers on mining subjects by acknowledged experts. All papers read during the season are published in the Society's own journal.

Colloquium

During their final year students are given valuable training in presenting papers on mining subjects for discussion among themselves.

Departmental Library

Apart from the main University Library where every authoritative book on all technical subjects is obtainable, there is now a Departmental Library, which is always kept up to date in mining literature. All the principal mining journals and periodicals published in this country, America, South Africa, France and Germany are also accessible to students.

Scholarships and Grants

Valuable scholarships are awarded by the various educational authorities which enable students to attend the courses given in the Mining Department. Particulars of these may be obtained from the authorities concerned or from the Head of the Department. Research grants are made from time to time to enable post-graduate students to carry out research work.

Scholarships have been funded by the West Yorkshire Coal Owners Association, the Shell Petroleum Company, Briggs' Collienes Limited, Messrs. Hugh Wood & Company, Ltd., and Messrs. Richard Sutchffe Limited. These are awarded from time to time, after interview and are available to candidates who have satisfied the matriculation requirements. For further details see Scholarships Prospectus.

Meetings of the Midland Institution of Mining Engineers and the Yorkshire Branch of the National Association of Colliery Managers are held from time to time in the Department.

Students are recommended to apply for admission to the Institution of Mining Engineers as student members.

DEPARTMENT OF COAL GAS AND FUEL INDUSTRIES WITH METALLURGY

This Department of the University was established in 1907 under the name of Department of Fuel and Metallurgy, and was the first of its kind in the British Universities. The buildings now occupied were erected and equipped in the year following out of funds provided by the West Yorkshire Coal-owners, supplemented by a special donation of f1,000 by Messrs. George Bray & Co. Ltd. At the death of the late Sir George Livesev in 1010. a fund was raised by the Institution of Gas Engineers to provide a memorial to him, and this was applied to the endowment of the Chair filled by the Head of the Department. The work of the Department is carried out with the help of an Advisory Committee known as the Coal Gas and Fuel Industries (Livesey Professorship) Committee. Through the generosity of Mr. Henry Woodall, the department has since been enlarged by the donation of an additional laboratory and experimental gas plant which forms a permanent memorial to the late Sir Corbet Woodall. In 1941, and again in 1943, the Joint Standing Finance Committee of the National Gas Council. the Institution of Gas Engineers, and the British Commercial Gas Association, made generous donations to provide equipment for the expanding needs of the Department.

In 1944 Mr. Charles Brotherton made provision for a Brotherton Lectureship in Chemical Engineering and equipment in this field; several concerns have also assisted with special plant.

In 1945 Mr. Charles Brotherton made a further provision of \pounds 55,000 towards the erection of a new building when this becomes possible.

Courses of Study

In this Department the curriculum is arranged to provide degree courses in Gas Engineering, Chemical Engineering, Metallurgy, and Fuel and Metallurgy; and postgraduate Diploma courses in these subjects and in Fuel and Refractory Materials. Diplomas in Gas Engineering and in Fuel and Metallurgy are also awarded to students who, although not having satisfied the requirements of the Northern Universities Joint Matriculation Board, have completed satisfactorily, and passed the examination on, a prescribed course of study.

The courses have been arranged to equip students with a broad and practical training for responsible positions in industry. After providing a grounding in Mathematics, Physics, Chemistry and Engineering, they are arranged specially to meet the requirements for entry into the selected industry. The main lecture courses provide an exposition of the principles underlying the industrial processes concerned, importance being also attached to the acquisition of a general knowledge of the design and construction of plant, and of the chemical engineering methods appropriate to these industries. Actual practice is dealt with more particularly by outside lecturers.

The courses in Gas Engineering and Fuel Technology deal chiefly with the manufacture and distribution of coal gas, by-product coking processes, the production and application of gaseous fuels for heating, lighting and power purposes, as well as the properties and uses of solid and liquid fuels generally.

The Chemical Engineering Courses extend over four years and provide a broad training particularly to meet the needs of those passing into the contracting side of the gas industry or likely to be responsible for plant design and control in the chemical industry generally.

The courses in Metallurgy deal with the general methods for the concentration and preliminary treatment of ore deposits, design and control of furnaces used in the metallurgical industries, principles of ferrous and non-ferrous process metallurgy, general properties of metals and alloys, physical metallurgy, metallography.

The courses in Refractory Materials deal with the properties of raw materials, their conversion into and the testing of finished products. They are designed to meet

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the needs of students entering the fuel-using industries as well as those interested in the manufacture of refractory and allied products such as glazed and enamelled wares.

Research Work.—The Department co-operates with the Gas Research Board in research supported by the Board and guided by a Joint Research Committee of the Board and the University. A group of research chemists is working under this scheme on *ad hoc* problems of the gas industry at present dealing with (*a*) the high pressure gasification of coal, (*b*) some catalytic syntheses complementary thereto and (*c*) the combustion characteristics of town gas.

A group of research Metallurgists is engaged upon investigations sponsored by the Alloy Steels Research Committee of the British Iron and Steel Research Association. These investigations include a study of the high temperature oxidation of alloy steels and also the overheating and burning of steel.

The general equipment of the various sections of the Department also affords post-graduate students and others special facilities for original research in (a) the carbonisation and gasification of coal, (b) metallurgy, (c) refractory materials, (d) high pressure gas reactions, (e) fuel and combustion problems generally and (f) the design of semi-scale plant, etc.

Private Industrial Research.—Arrangements may be made whereby individuals or industrial concerns may use the laboratories of the Department for their own investigations and if necessary by their own employees. The requisite conditions for such work may be obtained on application to the Head of the Department.

B.Sc. Courses

Students who can devote three or four years to attendance in this Department are strongly recommended to take one of the B.Sc. degree courses offered. Before commencing the degree course, however, students must pass or obtain exemption from the examination for Matriculation, conducted by the Joint Matriculation 4

Board of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham. A special examination will be held to meet the cases of those who have been engaged in Commerce and Industry for at least three years and have reached the age of nineteen years. (See the Syllabus of the Joint Matriculation Board obtainable from the Secretary, 315, Oxford Road, Manchester.)

During the first year each degree student will normally attend classes in Mathematics, Physics, Chemistry, Engineering, and the General Introductory Course of the Department.

In subsequent years the Courses will be differentiated according as the student is preparing for a degree in Gas Engineering (pp. 4 and 5), Chemical Engineering (p. 6), Metallurgy (pp. 7 and 8), or Fuel and Metallurgy (p. 9). The courses are set out below under these headings.

The student will qualify for the B.Sc. degree by satisfactorily attending the courses and passing the requisite examinations.

Students are expected to spend up to two unbroken months of the long vacation in approved works in order to acquire an insight into works practice. They are recommended to spend the vacation at the end of the first session in engineering shops, and at the end of later sessions at gas works, coke ovens, metallurgical, refractory brick or other chemical engineering plants.

I. Ordinary B.Sc. Degree Course in Gas Engineering

First Yea	Hours	per week.		
Mathematics for Applied Sci	ience stud	lents		4
Physics, Introductory				3
Physics, Laboratory				3
Chemistry, Introductory				3
Chemistry Laboratory				91
*Engineering I (3 hrs. lectur	es, 3 hrs.	drawing	5)	6
General Introductory Cours	se			I

*Details of these courses which are given in the Engineering Department are summarised in an Appendix.

Second Year Course

Chemistry F_2 (or as recommended)			3
General Engineering IIs			4
Gas Engineering I			I
Gas Engineering II			I
Physical Chemistry Laboratory	1		TE
Fuel and Metallurgical Laboratory	5	14	15
Engineering Laboratory			3
Engineering Drawing			3

Third Year Course

				Hou	rs per week.
Gas Engineering III					I
Gas Engineering IV					I
Gas Engineering V					I
Chemical Engineering III	(Ist	Term)			r
Refractory Materials II.					r
Fuel and Chemical Engi	neeri	ng Labo	oratory		22
Colloquium					I

Students may also attend courses chosen in consultation with the Head of the Department from the following : Organic Chemistry F3, Colour Chemistry IV, Colloid Chemistry, Civil Engineering, Applied Economics, German, Metallurgy I, and Coal Cleaning.

Special Lecture Courses to be taken during the second or third years

Gas Engineering VI ... Manufacture of Coal Gas. Gas Engineering VII ... Principles of Gas Distribution and Utilisation. Gas Engineering VIII ... By-Product Coking Processes.

II. Honours B.Sc. Course in Gas Engineering

Honours in Gas Engineering will be awarded to candidates who, having obtained the Ordinary degree and being recommended as suitable to proceed with an Honours course, shall have spent one year in research,

^{*}Details of these courses which are given in the Engineering Department are summarised in an Appendix.

[†] This list is subject to variation, either by substitution or addition, according to the arrangements for special lecture courses which may be in vogue during any particular session or sessions.

advanced study or in the preparation of a thesis on some industrial process, to the satisfaction of the examiners, attendance at the University during this fourth year not being compulsory.

A degree student in Gas Engineering who with the approval of the Senate carries out research work and submits a thesis upon it, and who also satisfies the conditions for the pass degree, may be awarded an Honours degree at the end of the third year.

III. Ordinary and Honours B.Sc. Degree Course in Chemical Engineering

First Year Course

As Gas Engineering Course (p. 4).

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Second Year Course

			110ms	per week.
Gas Engineering I			 	I
Gas Engineering II			 	I
Mathematics F ₃			 	3
General Engineering IIs			 	4
Chemistry F ₂			 	3
Physical Chemistry Labo	oratory		 	12
Engineering Laboratory			 	6
		-		

Third Year Course

Mathematics F ₄					3
Physics F ₁					3
Chemistry F ₂ '					3
Chemistry F ₃					3
Chemical Engineeri	ng IV				I
Physics Laboratory					6
Colloquium					I
Chemical Engineer	ing and	Organic	Chem	istry	
Laboratory					IO

Fourth Year Course

Chemical Engineering I, II, III,	and V	
(selected subjects)		5
Metallurgy I		I
Gas Engineering III		I
Refractory Materials II		I
Engineering, Strength of Materials I	II, A.I	I
Engineering, Theory of Structures II	, A.2	I
Economics and Works Costing		I
Applied Chemistry Tutorial		Ι
Colloquium		I
Chemical Engineering Laboratory		17

Provision will also be arranged for training in workshop practice.

Ordinary and Honours students in Chemical Engineering will follow the same courses but certain special papers will be set in the final examination for Honours candidates.

IV. Ordinary B.Sc. Degree Course in Metallurgy

First Year Course

I II SL A COL O	ourse		
		Hour	s per week.
Mathematics for Applied Scien	ce stude	nts	4
Physics Introductory			3
Physics Laboratory			3
Chemistry Introductory or F ₁			3
Chemistry Laboratory			91
General Introductory Course			I
Metallurgy I			I
Metallurgy Laboratory			5

Second Year Course

Metallurgy II					I
Metallurgy III					I
Metallurgy IV					I
Gas Engineering I					I
Economic Geology					1
Geology Laboratory					2
Engineering I					3
Engineering Drawing					3
Chemistry F					3
Colloquium					I
Physical Chemistry and	Meta	llurgy	Labora	tory	II

Third Year Course

Metallurgy	V				• •	I
Metallurgy	VI				• •	I
Metallurgy	VIII					I
General Eng	gineering 1	IIs, Stre	ngth d	of Mate	rials	I
Refractory 1	Materials	II or II.	Ι			I
Gas Enginee	ering III					I
Engineering	Laborato	ry				3
Colloquium						I
Metallurgy 1	Laborator	y				19

V. Honours B.Sc. Degree in Metallurgy First Year Course

As Ordinary Degree Course in Metallurgy.

Second Year Course

Metallurgy II				ĩ
Metallurgy III				I
Mathematics F ₃				3
Chemistry F ₂				3
Engineering I				3
Engineering Drawing				3
Physical Chemistry or	Fuel	and	Metallurgy	
Laboratory				15

Third Year Course

			HOUL	s per w	eek.
Metallurgy IV				Ī	
Metallurgy VI				I	
Metallurgy VIII				I	
Gas Engineering I				I	
General Engineering IIs, S	Strength	of Materia	.ls	I	
Electrical Engineering IIs,	, F			I	
Refractory Materials II .				I	
Mathematics F4, or Phy	vsics, X-	Ray crys	stal		
analysis, Electrical and					
Metals, or Chemistry F2	· · ·			3	
Colloquium				I	
Engineering and Metallurg	y Labor	atories		18	

Fourth Year Course

Personal morth and

1	Research work and :		
	Metallurgy V		I
	Metallurgy VII		I
	Refractory Materials III		I
	Gas Engineering III		I
	Economic Geology and Geology Labo	ratory	3
	Economics and Works Costing		I
	Colloquium		I
	Metallurgy Laboratory		20

In addition to the above lectures, Ordinary and Honours Metallurgy students must also attend during the second and third years the special lectures given in the Department by outside lecturers, in Metallurgy and in By-Product Coking Processes (Gas Engineering VIII).

VI. Ordinary and Honours B.Sc. Course in Fuel and Metallurgy

First Year Course

As Gas Engineering course.

Second Year Course

				Hours per week.
Gas Engineering I			• •	I
Gas Engineering II		• •		I
Metallurgy I	**	• •		I
General Engineering IIs				•• 4
Chemistry F ₂				3
Physical Chemistry Labo	oratory			I2
Engineering Laboratory				•• 3
Engineering Drawing			• •	•• 3

Third Year Course		Hours	per week.
Gas Engineering III and IV			2
Metallurgy II			I
Metallurgy IV			I
Chemistry F ₃			3
Refractory Materials II	• •		r
Colloquium	1	• •	I
Fuel and Metallurgical Laboratories	• •	1	
Organic Chemistry Laboratory		5	-1

Fourth Year Course

Chemical Engineering IV and V	 	2
Metallurgy V	 	I
Metallurgy VI	 	I
Metallurgy VIII	 	I
Refractory Materials III	 	I
Colloquium	 	I
Fuel and Metallurgical Laboratory	 	19
Economics and Works Costing	 	I

Ordinary and Honours Fuel and Metallurgy students must attend the special lecture course in By-Product Coking Processes (Gas Engineering VIII) during the second or third year.

Ordinary and Honours students in Fuel and Metallurgy will follow the same courses but certain special papers will be set in the final examination for Honours candidates.

VII. Diplomas and Diploma Courses

Diplomas in (1) GAS ENGINEERING:

(2) FUEL AND METALLURGY:

- (a) To give satisfactory attendance upon the subjects which form any part of the course of study.
- (b) To present themselves for any departmental examinations that may be held in the subjects forming part of their course of study. The record of students at their Departmental examinations will be taken into account in deciding the results of the Diploma examination.
- (c) To make formal entry, on the prescribed form, not later than March 1st of the last session of the course, and to pay at the same time the prescribed examination fee.
- II. At the end of the Course—
 - (a) To reach a satisfactory standard in any final examination which may be set.
 - (b) To translate into English a passage of French or German technical literature. A foreign student who can show that he has received a good general education will be exempted from this language test.
- III. A Diploma may be granted upon a degree course provided that the subjects studied for the degree include those prescribed for the Diploma, and that the other conditions are complied with. In such case, if the candidate is a graduate of this University, the fee for the Diploma is reduced to \pounds_1 .

A student producing evidence of adequate previous scientific or practical training, may, upon application to the Senate, be exempted from a portion of the normal course and may qualify for the Diploma upon a shortened period of study.

The University Diploma in Gas Engineering or Fuel and Metallurgy, will be granted to candidates who have taken one of the courses following, to the satisfaction of the Head of the Department. These courses are arranged for Gas Engineers and Metallurgists who, while wishing to secure a certificate of successful study, cannot for any reason take the B.Sc. degree :—

(a) a three years' course, the same as for the B.Sc. degree.

- (b) a two years' course for students exceptionally prepared in general science.
- (c) a two years' course for students exceptionally prepared in technical subjects.
- (d) a four years' course to be arranged for students serving an apprenticeship or its equivalent in Gas Engineering or Metallurgy. This course might occupy three days per week or equivalent time for the first year, and at least two and a half days per week or its equivalent in the three succeeding years. A works' report in this case might be submitted for consideration in applying for the Diploma.

(a), (b), (c) and (d) would lead up to the same Diploma.

There will be a final examination for the diploma which will be the same as that in the principal subjects of the final examination for the degree of B.Sc. in Gas Engineering or Fuel and Metallurgy. The Fee for this examination is \pounds_{6} .

VIII. Diplomas and Degree Courses for Post-Graduate Students

A Diploma in (i) Gas Engineering, (ii) Chemical Engineering, (iii) Fuel and Metallurgy, (iv) Fuel Technology, (v) Fuel and Refractory Materials will be awarded to graduates of this or some approved University who have graduated with Physics, Chemistry, Engineering, or Metallurgy as a principal subject, or to persons whose qualifications have been accepted by the Senate in lieu of a degree, and who have attended for at least one year an approved course of lectures and laboratory work, and have passed an examination thereon. Students taking this special Diploma course must put in a full attendance at the University for at least one year.

Honours Degrees of B.Sc. in Gas Engineering or Fuel and Metallurgy may also be conferred upon candidates who, having graduated in Science at this or an approved Courses in Technology

University, with Chemistry or Engineering as a principal subject, shall have subsequently (1) completed the course and passed the examination required for the diploma in Gas Engineering, Fuel and Metallurgy, or Fuel and Refractory Materials; and (2) spent an additional year in research in the Department, to the satisfaction of the examiners.

IX. Post-Graduate Diploma in Fuel Technology

	Hours per week
General Introductory Course	1
Gas Engineering I, II, III, IV	•• 4
Refractory Materials II	I
General Engineering	2
Utilisation of Fuels	I
Chemical Engineering IA	I
Laboratory: Fuels, Refractory Materials,	
Chemical Engineering	20
Practical Work on Industrial Plant	as arranged
i lactical work on meruschal i lant	as all allgeu

X. Post-Graduate Diploma in Fuel and Refractory Materials

	Hours	s per week
General Introductory Course		Ĩ
Gas Engineering II		I
Chemical Engineering III		I
Economic Geology		I
Refractory Materials II		I
Refractory Materials III		I
Refractory Materials IV		I
Economic Geology Laboratory		3
Fuel Laboratory and Refractory Materials		0
Laboratory	·	17

XI. Ph.D. Course

The Degree of Ph.D. will be awarded to graduates of this and other approved Universities who complete a course of advanced study and research extending over two years in the Department, and also satisfy the other conditions laid down for this Degree.

XII. Supplementary Courses

"Introductory Subjects"

The following courses may be offered as Introductory Subjects for the Ordinary Degree of B.Sc. in Pure Science ----

Fuel and Metallurgy.-General Introductory Course I. and Metallurgy I (General) with laboratory work for three hours per week throughout the Session.

Fuel and Refractory Materials.—General Introductory Course I and Refractory Materials I, with laboratory work for three hours per week throughout the Session.

"Subsidiary Subjects"

The following courses may be offered as Subsidiary Subjects for the Ordinary Degree of B.Sc. in Pure Science :--

Fuel and Metallurgy.

1st Year-General Introductory Course I and Metallurgy I (General) with laboratory work for three hours per week throughout the Session.

and Year—Gas Engineering I and II with laboratory work for six hours per week throughout the Session.

Fuel and Refractory Materials.

1st Year-General Introductory Course I and Refractory Materials I (Introductory) with laboratory work for three hours per week throughout the session.

2nd Year-Refractory Materials II and III with laboratory work for six hours per week throughout the session.

Metallurgy.

- 1st Year-General Introductory Course I and Metallurgy I (General) with laboratory work for three hours per week throughout the Session.
- and Year-Metallurgy II, IV and VI, with laboratory work for six hours per week throughout the Session.

"Additional Subjects" for Honours in Pure Science

The following courses may be offered as Additional Subjects for the Honours Degree of B.Sc. in Pure Science :---

Fuel and Metallurgy.—General Introductory Course I and Metallurgy I (General).

Fuel and Refractory Materials.—General Introductory Course I and Refractory Materials I.

Metallurgy and Refractory Materials.---Metallurgy I (General) and Refractory Materials I.

Degree Course in Mining and Metallurgy

Students preparing for the Degree of B.Sc. in Mining and Metallurgy are required to attend courses in the Department, viz.: Metallurgy I, Metallurgy II and Metallurgy IV.

Details of the Degree in Mining and Metallurgy will be found in the Prospectus of the Mining Department.

Diploma of the Institution of Gas Engineers

A graduate of the University of Leeds in Gas Engineering who wishes to take the Diploma of the Institution of Gas Engineers will not be required to take the written examination for that Diploma. He will, however, be required (a)to produce evidence of satisfactory professional experience, (b) to present either a thesis according to the Regulations of the Institution or a recently published work of his own, and (c) to submit to an oral examination. For further details, applications should be made to the Secretary of the Institution of Gas Engineers, 1, Grosvenor Place, London, S.W. 1.

Institution of Civil Engineers

A graduate of the University of Leeds in Gas Engineering or in Fuel and Metallurgy with Honours wishing to become a member of the Institution of Civil Engineers will be exempted from Sections A and B of the Associateship Examination. Graduates with Ordinary Degrees in Gas Engineering or Fuel and Metallurgy will be exempted from Section B only of the same examination. In all cases exemption from Section B includes exemption from "Engineering Drawing." For further details application should be made to the Secretary, The Institution of Civil Engineers, Great George Street, Westminster, S.W.1.

Institute of Fuel

Graduates in Gas Engineering and Fuel and Metallurgy, and also those who have obtained Diplomas in these subjects, will be exempted from the requirements in Section B of the Education Scheme of the Institute.

SYLLABUS OF LECTURE COURSES

I. General Introductory Course

One hour a week throughout the session.

This course will be taken in the first year by all students preparing for Degrees and Diplomas in this Department. It is also intended for students of Science and Technology who wish to acquire a general knowledge of fuel and ancillary subjects. An elementary knowledge of chemistry is essential on taking this course.

The formation, composition, properties and testing of natural fuels. The carbonisation process and its products. Gas works and coke-oven plant. Blue and carburetted water-gas, producer gas, blast-furnace gas, natural gas and oil gas. The measurement of temperature in works practice. Steam raising. Recuperation and regeneration in furnaces. Furnace types. Refractory materials. Liquid fuels. Synthetic fuels.

Gas Engineering I

One hour a week.

Calorimetry of solid, liquid and gaseous fuels. Thermoelectric, electrical resistance, radiation and optical pyrometry. Photometry and illumination. The measurement of gas flow under industrial conditions. The thermal and chemical balances of fuel processes.

Gas Engineering II The Physical Properties of Gases One hour a week.

The properties of gases and vapours at normal and at high temperatures and pressures. Vaporisation, liquefaction. The treatment of gases by solvents and solid absorbents. Specific heats of gases, Combustion calculations. Viscosity of gases and liquids. Newtonian and anomalous fluidity of liquids. The flow of gases through pipes. Thermal conductivity of gases.

Gas Englneering III Carbonisation and Gaseous Fuels

One hour a week.

Methods and results of investigation of the constitution of coal. The carbonisation process as studied in the laboratory and on the large scale. The properties of coke and their bearing on practice. The complete gasification of coal and coke in air steam and oxygen. The Lurgi process. The properties of different fuels for use in furnaces. The characteristics and effects of furnace atmospheres.

Gas Engineering IV

The Chemical Properties of Gases

One hour a week.

The course will deal with reaction velocity and reaction equilibrium in gaseous systems with reference to fuel and industrial processes. Reaction of carbon with oxygen, carbon dioxide, steam. The ignition of solid fuels. The water gas reaction. The behaviour at high temperatures of steam, carbon dioxide, ammonia, hydrogen sulphide, oxides of nitrogen, hydrocarbons. Gas purification reactions.

> Gas Engineering V Flame and Combustion

One hour a week.

Fundamental aspects of combustion, including thermochemistry, slow combustion and spontaneous ignition. structure of flames, radiation from flames, flame temperatures, flame spectra, burner problems, combustion characteristics, surface combustion, gaseous explosions.

The following three Courses (VI to VIII inclusive) will be given by specially appointed lecturers. A special prospectus is issued at the end of the first term and is obtainable on application to the Registrar.*

*These courses are open to persons not registered as day students. As a war measure they are given at 2 and 3.30 p.m.

Gas Engineering VI

The Manufacture of Coal Gas

A special course of 12 lectures during the second term in alternate sessions.

A. Carbonisation Practice.

Four lectures.

Gas-making coals and their behaviour when carbonised. Construction (including ironwork) of : horizontal and continuous vertical retorts, intermittent chamber ovens. Refractories. Heating of retorts, external and internal producers. Recovery of waste heat. Comparison of nature and yields of solid, liquid and gaseous products from the various types of gas-making plants. Thermal and economic efficiencies. Factors affecting design of plant, processes and composition of crude gas. Mechanical handling of coal and coke. Testing coals in the laboratory, and on the large scale. High and low temperature carbonisation in relation to production of solid smokeless fuel.

B. Water Gas Practice.

Two lectures.

General description of plant and recent developments of water gas technique. Theoretical consideration of the water gas reactions. Carburetting. Factors determining the operation of the plant. Control of plant. Recent developments in complete gasification.

C. Gas Purification Practice.

Six lectures.

Nature of the impurities in crude coal gas and the factors affecting their formation. General outline of purification processes. The principles of cooling and condensation. The function, design, and operation of air and water cooled condensers, tar fog extractors, etc. The electrical precipitation of tar. The principles of ammonia extraction. The constitution of ammoniacal liquor, with particular reference to still effluents. The design and operation of washers and scrubbers. The simultaneous removal of ammonia and hydrogen sulphide. The removal of cyanogen. The removal of

hydrogen sulphide. The design and operation of oxide of iron purifiers. The selection and preparation of oxides of iron. The removal of naphthalene. The recovery of benzole. The removal of organic sulphur compounds. The dehydration of gas. The contamination of gas on storage. The occurrence of gum in gas.

Gas Engineering VII

The Distribution and Utilisation of Gas

Special courses of lectures during the second term in alternate sessions.

Two lectures.

Gas and coke in the national fuel economy; comparative costs; the application of scientific principles to design and installation of gas appliances.

Two lectures.

The general principles of gas distribution and utilisation. Flow; load factor; governing; mains and services; meters; carcassing; installation of gas appliances; flue equipment, etc.

Two lectures.

The industrial utilisation of gas.

Gas Engineering VIII

By-Product Coking Processes

A special course of 8 lectures during the second term in alternate sessions.

Preparation and examination of coals for the coking process. Description of the development of by-product coking with its accessory processes. Manufacture of sulphate of ammonia, concentrated ammonia liquor, the recovery of benzene and toluene, removal of sulphuretted hydrogen, tar distillation. The utilisation of coke oven gas for the public supply. Technical discussion of the various types of modern coking installations. The control of such plants.

Refractory Materials I-Introductory

One hour a week throughout the Session.

This first-year course provides an introduction to to Refractory Materials and Ceramics in general. It deals with the manufacture and properties of the principal refractory materials and clay products, including pottery, glazed ware, electrical porcelain and chemical stone ware.

Refractory Materials II-

One hour a week throughout the Session.

This course is of principal interest to students of Fuel, Gas and Chemical Engineering and those intending to enter allied chemical industries such as the manufacture of glazed or enamelled ware. It deals with the raw materials available and their manufacture into the products used in the fuel, metallurgical, cement, glass and chemical industries. Chemical and Physical testing. Behaviour of refractory materials in service. The manufacture and use of high temperature insulating materials.

Refractory Materials III

One hour a week throughout the Session.

A more detailed treatment of the properties and manufacture of refractory materials used in the metallurgical industries is made in this course, which is intended mainly for candidates for the degree of Metallurgy with Honours and for the post-graduate Diploma in Fuel and Refractory Materials. The design and construction of metallurgical furnaces and the choice of refractories. Chemical and physical properties and service behaviour of silica, fire-clay, magnesite, chrome-magnesite and dolomite bricks. Monolithic furnace linings. Properties and testing of moulding sands.

Refractory Materials-IV.

One hour a week throughout the Session.

An advanced course designed for those specialising in Refractory Materials. A more detailed study of the principal refractory materials with special reference to the constitution of clays and its relation to their working properties. The properties and applications of sintered oxides and other special ceramics.

Chemical Engineering I

Two hours per week.

A. Industrial Heat Sources.—Steam, high temperature heating fluids, and electricity.

B. Study of Unit Operations and design of plant for the following operations. Size reduction. Mechanical, magnetic and density separation. Industrial use of phase relationship, distillation, gas absorption, crystallisation, liquid-liquid extraction. Evaporation. Drying. Refrigeration. Liquefaction of gases. Filtration. Mixing. Instruments. Flow sheets.

Complementary laboratory work (18 hours per week). The above unit operations will be studied on semiplant scale.

Chemical Engineering II

One hour a week.

Materials.—Metals—ferrous and non-ferrous, chemical and heat resisting alloys, effect of heat, anti-corrosive treatment.

Non-Metals—chemical stone-ware, glass, fused silica, glass lined and enamelled vessels, jointing materials, lutes, acid resisting cements, rubber, bitumen, plastic and other resisting coatings and paints. Preparation and testing. Timber.

Chemical Engineering III

One hour a week.

Furnace Design and Operation.—General principles of heat transfer in solid, liquid and gas-fired furnaces. Principles of heat transfer and conservation, preheating, recuperation and regeneration, insulation. Construction of, and materials used in, metallurgical and glass furnaces, refractory and cement kilns. Electric arc and high frequency furnaces. The theory and practice of radiant heating processes. The use of permeable refractory linings in furnace construction.

Chemical Engineering IV

One hour a week.

Basic Chemical Industries.

Chemical Engineering V

Selected Courses chosen in consultation with the Head of the Department.

One hour a week.

Selected Subjects : Gas Engineering VI and VIII ; Oil Technology; Industrial Catalysis; Ceramic Technology; Metallurgy: Glass, Glazes and Enamels; Water, Sewage, Sanitation; Organic Chemistry; High Pressure Reactions ; Colour Chemistry IV.

Metallurgy I-General

One hour a week throughout the Session.

This course is designed to meet the requirements of engineering students and includes a study of the structure and properties of metals and alloys in general with a more detailed study of the following-simple and alloy cast irons, and plain carbon and alloy steels. The forging and rolling of steel. Carburising, nitriding and cyaniding operations. The iron-carbon equilibrium diagram. The general heat treatment of steel. Macroand micro-examination of metals and alloys. The welding of metals. The properties and uses of bearing metals, brasses and light alloys. Atmospheric corrosion and its prevention.

Metallurgy II-Process Metallurgy

One hour a week throughout the Session.

This course deals with the natural concentration of metalliferous deposits in the earth's crust and their economic value. Preliminary treatment of metalliferous ores including roasting and preliminary smelting.

This course is supplementated by practical work in assaying and general analysis of ores.

Metallurgy III-Non-ferrous Process Metallurgy

One hour a week throughout the Session.

This course is a continuation of Metallurgy II, and will treat in more detail the smelting and refining operations of non-ferrous metallurgy.

Metallurgy IV-Iron and Steel

One hour a week throughout the Session.

(a) The Blast Furnace—The design of hot blast stoves and of the blast furnace. Interaction between ore and gases in the blast furnace. The effect of composition and temperature of slag on the properties of the pig iron produced. Modern development in blast furnace practice. The sintering of iron ores.

(b) The Manufacture of Steel.—The construction and working of modern open-hearth and Bessemer steel plant. The physical chemistry of acid and basic steel manufacture. Thermal and metallurgical factors which govern the efficiency of steel production.

(c) Electric Steel Manufacture.—Design and construction of modern arc and induction furnaces. The manufacture of steel in electric furnaces. The advantages of the electric process.

(d) The manufacture of ferro alloys.

Metallurgy V-Iron and Steel (Advanced) Metallurgy VI-Physical Metallurgy

One hour a week throughout the Session.

Thermal equilibria in metallic systems (metastable and labile states). Application of the phase rule to equilibrium diagrams. X-ray crystal analysis of metals and allovs. The Hume-Rothery Rule. Theories of hardening. Real and imposed allotropy. Inverse segregation. Heterogeneity in cast metals. Brittleness in metals. Precipitation hardening. Modification of alloys. Theories of oxidation and protective film formation on The structure and heat treatment of alloys metals. including alloy cast irons and special steels. Detailed study of the more important metallic systems. Principles of powder metallurgy.

Metallurgy VII-Physical Metallurgy (Advanced) Metallurgy VIII-Electrometallurgy

One hour a week throughout the Session.

The electrolytic refining of copper, lead, gold, silver, zinc. Production of super-purity aluminium **and** magnesium by the electrolytic process. The manufacture of electrolytic zinc. Electro plating.

Fuel and Metallurgical Colloquium

There will be a weekly colloquium held in the Department on Thursdays, at 4 p.m., for the discussion of questions relating to the technology of gases, fuel, metallurgy and refractory materials, and for the review of the current literature of those subjects.

Departmental Laboratories

The accommodation of the Department is arranged to There are provide for both teaching and research. general laboratories for both chemical and physical work with special provision for calorimetry and photo-Rooms are provided for furnaces and high metry. temperature work, and also a laboratory for the study of the application and flow of heat. A separate installation exists for the study of the heating and ventilating efficiency of gas appliances. There is a departmental workshop with skilled mechanics in chafge. A departmental museum and library is provided, and facilities for reading, writing and drawing. The Corbet Woodall laboratory is specially equipped for experimental work on a large scale. It is provided with a retort and purifying train for carbonisation tests, and two 1,000 cubic feet gas-holders by Clayton, Son & Co. Ltd., Leeds.

There are specially appointed laboratories for teaching and research work in Refractory Materials and in Chemical Engineering.

The metallurgical laboratories are equipped for the assaying of ores, general metallurgical and spectrographic and absorptiometric analysis. They contain modern apparatus for the metallographic and thermal examination of alloys, for tests of tensile strength, hardness and fatigue. A small rolling mill and a wire drawing mill are provided.

The laboratories will be open during the session from 9.30 a.m. to I p.m. and from 2 to 5 p.m. except on Saturday afternoons.

The practical instruction covers the following subjects :

(a) Analysis and testing of solid and liquid fuels.

Courses in Technology

- (b) Analysis of gases. Combustion characteristics of gaseous fuels.
- (c) Preparation, compression and liquefaction of gases. Use of high pressure gas.
- (d) Chemical and physical examination of tars.
- (e) Examination of raw materials and by-products of the manufacture of coal gas, coke and producer gas.
- (f) Examination of water for steam-raising and other industrial uses.
- (g) Pyrometry: thermoelectric, resistance, radiation and optical.
- (h) Calorimetry, photometry, radiometry, and the testing of gas heating and lighting appliances.
- (*i*) Measurement of the flow of gases and the transmission of heat.
- (j) Analysis of ores, slags, mattes, alloys, and other metallurgical products; spectrographic and absorptiometric analysis.
- (k) Macro- and micro-examination of metals and alloys.
- (*l*) Heat treatment of steel and certain non-ferrous alloys.
- (m) Tensile, fatigue and hardness measurements of metals and alloys.
- (n) Rolling and drawing of metals and alloys.
- (o) Metallographic and thermal examination of metals and alloys, the effects of hot and cold work, and heat treatment on the microstructure and physical properties of metals and alloys. Photomicrography.
- (p) Foundry work.
- (q) Chemical analysis and physical testing of refractory materials including determination of refractoriness, reversible and permanent thermal expansion, thermal conductivity, mechanical strength at high temperatures. The macro- and micro-structure of refractory products, and properties of heat insulating materials. Determination of the constitution of clays and minerals by thermal analysis. Properties and testing of moulding sands.
- (r) Unit chemical engineering operations. See page 20.

Special courses for outside students in any of the above subjects may be provided by arrangement with the Professor.

Students will also be encouraged to make themselves acquainted with the researches which are being carried out in the Department, the results of which will, at convenient intervals, be explained.

Each student will be furnished with a separate working table, and will be required to provide himself with a regulation set of apparatus. Special apparatus may be obtained on loan, subject to such conditions as may be prescribed by the Professor.

Students will be held liable for any damage arising from careless or unauthorised use of departmental equipment.

APPENDIX

Courses given in the Department of Engineering

General Engineering I

(FIRST YEAR)

Materials; Boilers; Steam Engines; Steam Turbines; Internal Combustion Engines; Air Compressors and Motors; Refrigerators; Hydraulic Machinery; Transmission of Power.

Manufacture, physical and mechanical properties of building materials, including stone, bricks, cement, concrete and timber. Methods of construction in masonry, brickwork, concrete, steelwork and timber. Foundations; Timbering of excavations; Floors and roofs; Piles and piling; Retaining walls, dams and arches. General principles of road-works, railways, water supply works, drainage and sewerage. Elementary principles of surveying. Surveying instruments.

Fundamental principles; Ohm's law and Kirchoff's laws applied; Elementary principles of electric machinery, measuring instruments; Secondary batteries.

(Drawing Office)

First, Second and Third Terms: Thursdays 2 to 5 p.m., and Fridays 2 to 4 p.m.

Geometrical and machine drawing.

General Engineering IIs

(SECOND YEAR)

Strength of Materials

Stress, strain and elasticity; Mechanical properties and tests; Suddenly-applied loads; Bending moments and shearing forces; Theory of bending and stress distribution in beams; Slope and deflection of beams; Built-in beams; Columns and struts; Torsion and combined stresses in shafts and helical springs; Thin cylinders; Failure and fatigue of metals. Reinforced concrete beams.

Heat Engines

Thermodynamics; Theory of the steam engine; Theory of the internal combustion engine; Steam turbines and condensers; Air compressors; Refrigerations.

Hydraulics

Hydrostatic pressure; Floating bodies.

Principles of hydraulics; Discharge from orifices, notches and weirs; Flow in pipes and channels; Measurement of stream discharge; Fluid friction; Transmission of power by fluids; Water hammer; Impact of water; Theory and operating characteristics of turbines and pumps. Application of the principles of dynamical similarity.

Electrical Engineering

Direct current generators and motors with their control gear. Alternating-current circuits. Theory and application of transformers and induction motors. Power transmission. Methods of measurement in alternating-current circuits.

SCHOLARSHIPS

Particulars of Scholarships and Fellowships awarded by the University are given in a special prospectus which may be obtained on application to the Registrar of the University. In addition, some local education authorities offer scholarships for persons already engaged in industry. Particulars of these should be obtained by application to the appropriate local education authority.

Certain Scholarships and Fellowships are specially associated with this Department, and the conditions of award are given below.

GAS RESEARCH FELLOWSHIP

The Fellowship, established by the Institution of Gas Engineers, of the value of \pounds_{325} per annum, will be awarded by the Senate, on the recommendation of the Board of Science and Technology, to a duly qualified candidate for the prosecution of post-graduate research in gas chemistry. Preference will be given to candidates who have signified their intention of entering the coal gas industry, or in default of any such candidate, to a person qualifying for some other branch of fuel industry.

The award of the Fellowship will be made annually during the month of June, after due advertisement of it in the technical press and other appropriate journals. Applications for the Fellowship must be made to the Clerk to the Senate on or before 1st May of each year.

It will always be within the power of the Senate, on the recommendation of the Board of Science and Technology, to renew the Fellowship to the holder of the same for a further period of a year, instead of proceeding to a fresh election.

The holder of the Fellowship will undertake research work in the University under the direction of the Livesey Professor of Coal Gas and Fuel Industries on some subject connected with the chemistry of gases and combustion. The selection of the subject, and the method of carrying on the work, will be left to the judgment of the Professor responsible for its direction. The University will provide, free of charge, all reasonable accommodation and facilities required for the prosecution of the research undertaken by the holder of the Fellowship, including working space and the use of the instruments and appliances installed as part of the equipment of the Fuel and Metallurgical Department. Any *special* expenses, not exceeding \pounds_{z5} , incurred during the prosecution of the research will be defrayed by the Institution of Gas Engineers.

A report of the research work carried out by the holder of the Fellowship will be submitted to the Council of the Institution of Gas Engineers, as well as to the Senate of the University, on or before 1st May of each year, together with copies of any papers published in connection with the research.

ARTHUR SMITHELLS SCHOLARSHIP

This scholarship was founded in 1926 from the balance, amounting to $\pounds 2,079$, of a fund raised to commemorate the services rendered to the University by Emeritus-Professor Smithells, Professor of Chemistry, 1885-1924. Its object is the elucidation by scientific research, in any department of the University, of the phenomena of combustion in the widest sense.

The scholarship, of the approximate annual value of \pounds 100, is tenable in the first instance for one year, and may be renewed for a similar period or periods. The appointment is made at the close of the third term.

The scholarship is open to graduates of the University. All candidates are required, when sending in their applications, to specify the subject in which they propose to undertake research.

The scholar is required to pursue research in a department of the University of Leeds, under the direction of the Head of the department, and to present a report of his work, such a report to be sent to the Registrar before 1st June.

Applications should be in the hands of the Registrar by 1st June.

CORBET WOODALL SCHOLARSHIP IN GAS ENGINEERING

This scholarship was endowed in 1915 by Sir Corbet Woodall, through the Institution of Gas Engineers and is to be held at the University of Leeds. The annual value of the scholarship is $\pounds 60$ and it is tenable for three years, with power of extension for a fourth year on the recommendation of the Senate to the Corbet Woodall Scholarship Committee. The continuation of the scholarship each year after the first will depend on the work done by the scholar in the previous year being reported to the Committee as satisfactory.

The scholarship is intended to enable a student to take a course of study in Gas Engineering at the University, in preparation for a responsible position as a gas engineer. Candidates for election to the scholarship are required (i) to produce evidence of having reached a standard of scientific or technological education sufficient to enable them to take advantage of the B.Sc. degree, or Diploma course in Gas Engineering, and (ii) to give an undertaking of their intention to follow the profession of gas engineer. On each vacancy the award of the scholarship will ordinarily be made during the month of June, after due advertisement in the technical press. The scholarship will be awarded by the Senate after consultation with the Corbet Woodall Scholarship Committee.

Each candidate is required to submit (i) a statement of his previous education and of his scientific or technological qualifications, (ii) testimonials (a) from the head of the institute in which he received his previous education, (b) it he has been already engaged in a gas engineering works, from the engineer of the works. The Senate, in conjunction with the Corbet Woodall Scholarship Committee, will determine what examination, if any, is necessary in order to guide them in the award of the scholarship.

The first award of the scholarship was made in 1916.

WILLIAM WALKER EXHIBITIONS

These Exhibitions are intended to enable students to obtain at Leeds University scientific instruction of an advanced character in the Technology of Coal and its

By-products and in the Technology of Leather. Each Exhibition is of the annual value of from $\pounds 70$ to $\pounds 90$ and (subject to the condition named below) is tenable for three years, with power of extension by the trustees for a fourth year in the case of an Exhibitioner who has shown exceptional promise during his course of training at the University. The continuation of the Exhibition each year after the first will depend on the work done by the Exhibitioner in the previous year being reported to the Trustees as satisfactory. The Trustees may, if they think proper, divide the income of each Exhibition between two candidates, or only award part of it in certain cases, as determined by circumstances.

Candidates for election to the Exhibitions must be natives of, or living in the Poor Law Unions of Whitehaven and Bootle, except the Urban District of Millom, and between the ages of 16 and 22.

Applications for leave to enter for the examination and any inquiries for further information should be addressed to the Secretary, Mr. A. C. Clifford, Secondary School, Whitehaven.

WILLIAM CARTWRIGHT HOLMES SCHOLARSHIP IN GAS ENGINEERING

This Scholarship was endowed in 1929 by Mr. P. F. Holmes and Mr. D. M. Henshaw as a memorial to William Cartwright Holmes of Huddersfield.

The Scholarship is held at the University of Leeds. The normal value of the Scholarship is f_{120} per annum,* and it is tenable for one, two or three years, with power of extension for a fourth year on the recommendation of the Senate to the William Cartwright Holmes Scholarship Committee, appointed by the Institution of Gas Engineers.

The continuation of the Scholarship each year after the first will depend on the work done by the Scholar in the previous year being reported to the Committee by the Senate as satisfactory.

The Scholarship is intended to enable a student to take a course of study at the University in preparation for a responsible position in Gas Engineering.

^{*}This value may be increased in necessitous cases.

Candidates for election to the Scholarship are required (i) to produce evidence of having reached a standard of scientific or technological education sufficient to enable them to take advantage of the B.Sc. degree or Diploma Course in Gas Engineering, and (ii) to give an undertaking of their intention to follow the profession of Gas Engineering.

As each vacancy occurs the award of the Scholarship will ordinarily be made during the month of June, after advertisement in the Technical Press.

The Scholarship will be awarded by the Senate after consultation with the William Cartwright Holmes Scholarship Committee.

Each candidate is required to submit (i) a statement of his previous education and of his scientific or technological qualifications; (ii) testimonials (a) from the head of the Institute or other organisation in which he received his previous education; (b) if he has been already engaged in a gas engineering works, from the Engineer or Manager of the works.

The Senate, in conjunction with the William Cartwright Holmes Scholarship Committee, will determine what examination, if any, is necessary in order to guide them in the award of the Scholarship.

COBB MEMORIAL FUND

On the retirement of Professor J. W. Cobb, C.B.E. (Livesey Professor of Coal Gas and Fuel Industries 1912-1938) a fund was raised to commemorate his services to the University and to industry. Contributions were received from friends within and without the University and from the industries—notably the Gas Industry—with which Professor Cobb's work had been connected. In accordance with his wish, the balance of the fund amounting to f_{769} was presented to the University in order that the income from it should be used to assist students in the Department of Coal Gas and Fuel Industries with Metallurgy to meet the cost of maintenance while at the University, or to cover other expenditure necessary for their studies or researches. Grants from the Fund are made by the Senate on the recommendation of the Head of the Department of Coal Gas and Fuel Industries with Metallurgv.

Applications should be in the hands of the Registrar not later than 1st May in each year.

CHARLES BROTHERTON SCHOLARSHIPS IN CHEMICAL ENGINEERING AND GAS ENGINEERING

In 1942 Mr. Charles Brotherton agreed to provide four scholarships of value up to \pounds 125 per annum in order to enable promising students to follow courses in Chemical Engineering and Gas Engineering in the Department of Coal Gas and Fuel Industries with Metallurgy.

The scholarships are tenable for periods up to four years in order to enable students to complete Honours courses, but continuation for each year after the first will depend on a satisfactory report on the work of the scholar.

The scholarships are open to applicants from school and to applicants who are already engaged in industry.

Candidates must be of British nationality and qualified to enter upon a degree course. Candidates must furnish particulars of their scholastic attainments, industrial or practical experience, other personal activities and interests. These particulars, with references as to character, must be supplied on a form to be obtained on application to the Registrar, The University, Leeds, 2.

Scholarships will be advertised in May each year and the first awards will date from the beginning of the session 1943-44.

The awards will be made after interview. Candidates will be required to attend at the University for this purpose.

Applications must be submitted to the Registrar not later than 1st August.

UNITED KINGDOM GAS CORPORATION SCHOLARSHIPS IN GAS AND CHEMICAL ENGINEERING

The United Kingdom Gas Corporation Ltd. have provided two Scholarships of value up to £120 per annum in order to enable promising students to follow courses in Gas Engineering and Chemical Engineering in the Department of Coal Gas and Fuel Industries with Metallurgy.

The Scholarships are tenable for periods up to four years in order to enable students to complete Honours courses, but continuation for each year after the first will depend on a satisfactory report on the work of the scholar.

The Scholarships are open to applicants from school and to applicants who are already engaged in industry.

Candidates must be of British nationality and qualified to enter upon a degree course. Candidates must furnish particulars of their scholastic attainments, industrial or practical experience, other personal activities and interests. These particulars, with references as to character, must be supplied on a form to be obtained on application to the Clerk to the Senate, The University, Leeds, 2.

Scholarships will be advertised in May each year and the first awards will date from the beginning of the session 1943-44.

The awards will be made after interview. Candidates will be required to attend at the University for this purpose.

Applications must be submitted to the Registrar not later than 1st August.

Courses in Technology

TIME TABLE

MONDAY

a.m.

9-10	Mathematics	J, Metallurgy II,	Chemical	Engineering I	V	
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- 10—11 Chemistry F1, Mathematics F3, Engineering I, Gas Engineering III.
- 11-12 Physics F1, Engineering I, Metallurgy VIII.

p.m.

12— 1 Mathematics F4, Chemistry Introductory, Metallurgy VI.

3-4 Gas Engineering V.

TUESDAY

a m

- 9-10 Mathematics J, Engineering IIs, Economic Geology, Metallurgy III.
- 10—11 Physics Introductory, Chemistry F2.
- 11-12 Chemistry F2¹, Gas Engineering I.
- p.m.
- 12- 1 Engineering IIA2, Chemistry F3, Fuel General Introductory.
- 2-5 Physics Laboratory, Engineering Laboratory.
- 2-3 Chemical Engineering I.
- 3-4 Chemical Engineering II.

WEDNESDAY

a.m.

- 9-10 Mathematics J, Engineering IIs, Metallurgy I.
- 10-11 Chemistry F1, Mathematics F3, Metallurgy Ia.
- 11—12 Physics F1, Physics F2, Engineering IIIA1, Fuel General Introductory.

p.m.

12— 1 Mathematics F4, Chemistry Introductory, Applied Economics.

THURSDAY

a.m.

p.m.

- 9-10 Engineering IIs, Chemical Engineering III.
- 10-11 Physics Introductory, Chemistry F2, Metallurgy VII.
- 11-12 Chemistry F2¹, Gas Engineering II.
- 2- I Chemistry F3, Metallurgy V.
- 2-5 Engineering Drawing.
- 2-3 Chemical Engineering I.

FRIDAY.

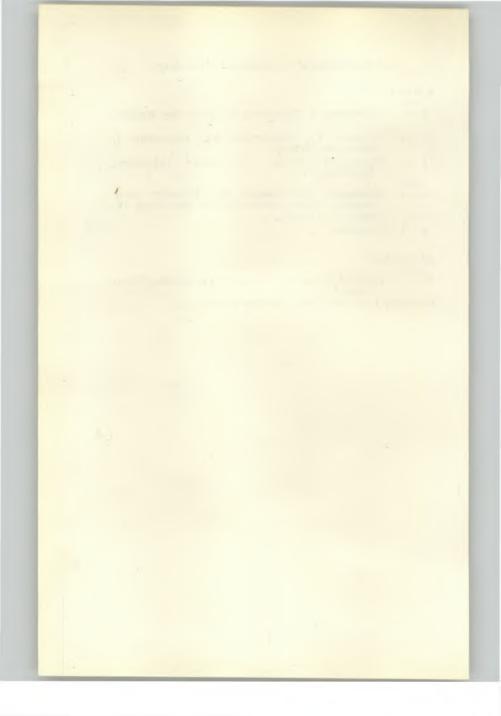
- a.m. 9—10 Mathematics J, Engineering IIs, Refractory Materials III.
- 10—11 Chemistry F1, Mathematics F3, Engineering I, Refractory Materials I.
- 11—12 Physics F1, Physics F2, Geology Laboratory, Metallurgy IV.
- p.m.
- 12— 1 Mathematics F4, Chemistry F2¹, Chemistry Introductory, Geology Laboratory, Gas Engineering IV.
- 2-5 Engineering Drawing.
- 4-5 Chemistry F3.

SATURDAY

a.m.

10—11 Physics Introductory, Chemistry F2, Chemical Engineering V.

Chemistry Laboratory times arranged as convenient.



TEXTILE INDUSTRIES

Endowed by the Worshipful Company of Clothworkers of the City of London

The Department comprises the following sections:

- (a) Woollen Yarn Manufacture.
- (b) Worsted Yarn Manufacture (English and Continental systems).
- (c) Designing, Weaving, and Textile Manufacturing.
- (d) Finishing of Textile Fabrics.
- (e) Textile Testing.
- (f) Research.

Each technical section is equipped with the necessary machinery for demonstrating the various processes of manufacture. These sectional plants, besides being used for teaching purposes, are employed in connection with the research work which is undertaken by the staff and advanced students. To promote post-graduate research work Fellowships and Scholarships are offered by the University and other bodies.

Courses of Study

The courses of instruction are designed to meet the requirements of

- (a) Controllers of industry
- (b) Inside Managers (Combing, Spinning, Weaving and Finishing)
- (c) Textile Designers
- (d) Merchants
- (e) Research Workers.

Although students are admitted for shorter periods, the normal courses of study extend over three years, and in some cases, over four years. Students who have matriculated are recommended to take one of the degree courses of study. The following are the principal courses of study:

- (A) Honours Degree of B.Sc. in Textiles.
- (B) Ordinary Degree of B.Sc. in Textiles.
- (C) Ordinary Degree of B.Com., with Textiles as a principal subject.
- (D) Diploma in Textile Industries, awarded principally for technological work.

A.-Honours Degree of B.Sc. in Textiles

The course for the Honours Degree of B.Sc. in Textiles extends over four years, except in the case of students who may be excused attendance at the Introductory (first year) Courses in Mathematics, Physics and Chemistry, on account of a high standard attained in the Higher School Certificate Examination. Depending on the section of the industry for which they are intended, students may choose either Physics, Chemistry or Engineering as the main subject ancillary to Textiles, and details of the three options are given below. It should, however, be noted that Honours in Textiles may also be obtained after graduation in the Ordinary Degree of B.Sc. in Textiles as shown on page 4.

Option I. (Physics as main ancillary subject). First Year Third Year

Mathematics J. Physics Intro. Chemistry Intro. General Engineering I. Textile Industries Preliminary. Materials Study I.

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110000 2000

Physics F2. Woollen Yarn Production II. Worsted Yarn Production II. Cloth Structure II. Loom Study II. Textile Calculations. Cloth Finishing I. Textile Testing. Textile Chemistry II.

Fourth Year

Materials Study II. Woollen Yarn Production III. Worsted Yarn Production III Cloth Structure III. Complex Textiles. Colour Study II Cloth Finishing II Cloth Finishing II Cloth Analysis II Mill Design and Management Experimental Dyeing Textile Physics II

Second Year

Mathematics F3', F4'. Physics F1. Woollen Yarn Production I. Worsted Yarn Production I. Cloth Structure I. Loom Study I. Colour Study I. Cloth Analysis I.

Option II. (Chemistry as main ancillary subject).

First Year

Mathematics J. Physics Intro. Chemistry Intro. General Engineering I Textile Industries Preliminary Materials Study I

Second Year

Inorganic Chemistry F1. Organic Chemistry F3. Worsted Yarn Production I Cloth Structure I Loom Study I Cloth Analysis I Third Year

Physical Chemistry F2. Woollen Yarn Production I Worsted Yarn Production II Cloth Structure II Loom Study II Textile Calculations Colour Study I Textile Testing Textile Chemistry II

Fourth Year

Materials Study II Woollen Yarn Production II Woollen Yarn Production III Worsted Yarn Production III Cloth Structure III Complex Textiles Colour Study II Cloth Finishing I Cloth Finishing II Cloth Analysis II Mill Design and Management Experimental Dyeing Textile Physics II

Option III. (Engineering as main ancillary subject).

First Year

Mathematics J. Physics Intro. Chemistry Intro. General Engineering I Textile Industries Preliminary Materials Study I

Second Year

Mathematics F3', F4' Engineering II S. Engineering II C. Worsted Yarn Production I Cloth Structure I Loom Study I Colour Study I Third Year Woollen Yarn Production I Worsted Yarn Production II Cloth Structure II Loom Study II Textile Calculations Colour Study II Cloth Analysis I Textile Testing Textile Chemistry II Textile Physics II

Fourth Year Materials Study II Woollen Yarn Production II Woollen Yarn Production III Worsted Yarn Production III Cloth Structure III Complex Textiles Cloth Finishing I Cloth Finishing II Cloth Analysis II Mill Design and Management Experimental Dyeing Before the end of their course, students will be expected to obtain a reading knowledge of French and German, and their knowledge of these languages will be tested by means of an examination consisting of passages for translation into English. The use of dictionaries will be allowed at this examination, in which candidates will be required to satisfy the examiners.

в

(I) Ordinary Degree of B.Sc. in Textiles

First Year

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Mathematics J. Physics Intro. Chemistry Intro. Textile Industries (Preliminary) Materials Study I Woollen Yarn Production I Worsted Yarn Production I

Second Year

Two of the following :---(1) Mathematics F3', F4' (2) Physics F1 (3) Organic Chemistry F3 (4) Physical Chemistry F2 Cloth Structure I Loom Study I Textile Calculations Colour Study I Cloth Analysis I

Third Year

Materials Study II Woollen Yarn Production II Woollen Yarn Production III Worsted Yarn Production II Worsted Yarn Production III Cloth Structure II Complex Textiles Loom Study II Colour Study II Cloth Finishing I Cloth Analysis II Textile Testing Mill Design and Management Experimental Dveing Textile Chemistry II Textile Physics II

(2) Honours Degree of B.Sc. in Textiles Fourth Year

Following graduation in the Ordinary Degree of B.Sc. (Textiles) candidates may obtain Honours in Textiles by presenting a thesis embodying the results of original research. In addition, they shall attend ancillary lectures and pass an appropriate examination.

Before the end of their course, students will be expected to obtain a reading knowledge of French and German, and their knowledge of these languages will be tested by means of an examination consisting of passages for translation into English.

The use of dictionaries will be allowed at this examination, in which candidates will be required to satisfy the examiners.

C.-Ordinary Degree of B.Com. with Textiles as a Principal Subject

	First Year
	Mathematics J.
9	Physics Intro. or
	Chemistry Intro.
	Economics Intro.
	Commercial Law
	Textile Industries
	(Preliminary)
	Materials Study I
	Woollen Yarn Production 1
	Worsted Yarn Production I

Second Year Industrial Relations Principles of Economics Textile Economics Commercial Law. Statistics Loom Study I Cloth Analysis I Cloth Structure I Colour Study I Materials Study II Textile Testing Worsted Yarn Production II

Third Year

Financial Organisation Public Finance Accountancy Loom Study II Cloth Analysis II Cloth Structure II Colour Study II Cloth Finishing I Woollen Yarn Production II Textile Chemistry II Textile Calculations

*Owing to time-table difficulties this option cannot at present be taken.

The Degrees of B.Sc. in Textiles, and the Degree of B.Com. with Textiles as Principal Subject, are accepted by the Textile Institute as fulfilling the educational requirements for the Associateship (A.T.I.).

D.-Diploma in Textile Industries

First Year Textile Industries (Preliminary) Materials Study I Woollen Yarn Production I Worsted Yarn Production I Cloth Structure I Loom Study I Textile Calculations Colour Study I Cloth Analysis I Textile Chemistry I Textile Mathematics I and Textile Physics I Second Year Materials Study II Woollen Yarn Production II Worsted Yarn Production II Cloth Structure II Loom Study II Colour Study II Cloth Finishing I Cloth Analysis II Textile Testing Textile Chemistry II Textile Physics II Third Year Woollen Yarn Production III Worsted Yarn Production III Cloth Structure III Complex Textiles Cloth Finishing II Mill Design and Management Experimental Dyeing Textile Mathematics II

Students are required to combine the above courses of study with at least one of the following groups of subjects :—

- (a) Mathematics Introductory Physics Introductory. Chemistry Introductory.
- (b) Economics Introductory. Textile Economics.
- (c) Two courses selected from the following :— French I German Sa Russian IA Spanish I
- (d) Principles of Pattern Design (by arrangement with the City of Leeds College of Art)

and to reach a satisfactory standard in the appropriate examinations^{*}. By selecting Group (a) or Group (b), students obtain Diplomas which fulfil the educational requirements of the Textile Institute for the Associate-ship (A.T.I.). Those students selecting Group (b) are strongly recommended to take Group (d) as well, and suitable provision has been made in the time tables.

During the third year, candidates for the Diploma in Textile Industries must present twenty-four selected work-sheets and a thesis based on some approved textile research. Two copies of the thesis, bound in the stand-

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[•]In Textile subjects not less than a Second Class in the June examinations will normally be required.

ard form prescribed by the University, should be submitted by the 1st June, one copy being retained for the University Library.

A Diploma with distinction may be awarded to a student whose work is adjudged to be of outstanding merit.

Vacation Work in Mills

Subject to the possibility of making suitable arrangements, advanced students may be accorded the privilege of spending part of the Long Vacation in the mills of the district, thus gaining experience under industrial conditions. This concession, kindly granted by many firms in Yorkshire, is highly appreciated by the University.

Lecture Courses, Experimental Work and Research Work

Textile Industries (Preliminary)

Lectures on Thursdays from 9 to 10 a.m. throughout the session.

SUBJECTS.—The various textile fibres, their distribution and growth; their chemical, physical and processing properties; the basic principles of manipulation.

Historical development of the Industry; its branches and their distribution; textile inventors and their machines.

Physical bases of yarn structures; twist; strains; mechanical principles involved.

Weaving; principles of interlacing; weights of cloths; elements of hosiery, feltmaking, embroidery, lacemaking and braiding.

TEXT BOOKS

An Introduction to the Study of Spinning by W. E. Morton (Longmans, Green & Co.).

Elementary Textile Design by W. Watson (Longmans, Green & Co.).

The Mechanism of Weaving by T. W. Fox (Macmillan & Co.).

Materials Study I

Lectures and Practice on Thursdays from II a.m. to I p.m. throughout the session.

SUBJECTS.—Wool, cotton, silk, flax, the synthetic fibres, etc.; qualities, properties and uses; samples illustrating the various manufacturing processes; compilation of Materials Books.

Materials Study II

Lectures on Thursdays from 2 to 3 p.m. throughout the session.

SUBJECTS.—History of sheep and goat development. British breeds; crossbreds and merinos. Sheep-shearing, wool classing and baling; wool sales and marketing methods. Wool sorting and meaning of quality numbers. Impurities in wool. Defective wools; the incidence of kemp and dark fibres. Skin wools. Objects of blending, blending methods and blending calculations. Tops and top qualities. Rags, laps, burrs and garnetted wastes. Rag sorting. Rarer wools and hairs. Non-wool fibres. Characteristics of yarns made from the foregoing fibres in relation to weaving, knitting, etc.

TEXT BOOKS

Textiles by A. F. Barker et al (Constable & Co.)

Woollen Yarn Production I

Lectures on Mondays from 2 to 3 p.m. throughout the session.

SUBJECTS.—General survey of all processes used in the manufacture of woollen yarns. Characteristics of fibres and their influence on yarn production. The impurities in wool and their removal by shaking, steeping, and scouring processes. Waste disposal. The principles of drying and their application to the drying of wool. Methods of drying. Wool carbonising types of vegetable matter and methods for their removal.

Woollen Yarn Production II

Lectures on Wednesdays from 9 to 10 a.m. throughout the session.

SUBJECTS.—Fibre recovery from wastes. Principles of blending, blending methods and machinery. Wool oiling. Detailed study of the carding process.

Woollen Yarn Production III

Lectures on Tuesdays from 2 to 3 p.m. throughout the session.

SUBJECTS.—Detailed study of woollen spinning on mule and ring frames. Twisting of ordinary and fancy yarns. Composition of plants suitable for manufacture of various types of woollen yarns. Modern developments. Detection and prevention of faults. Application of research to practical yarn production problems.

TEXT BOOKS

An Introduction to the Study of Spinning by W. E. Morton (Longmans, Green & Co.)

Wool Carding by J. Bradley (Emmott & Co.)

Principles of Woollen Spinning by H. Priestman (Longmans, Green & Co.)

Worsted Yarn Production I

(English and Continental Systems).

Lectures on Thursdays from 2 to 3 p.m. throughout the session.

SUBJECTS.—General survey of all processes used in the manufacture of worsted yarns. Characteristics of fibres and their influence on the method of yarn production. Detailed study of preparing, carding and backwashing principles and processes. Wool combing principles, the Noble comb, top finishing.

Worsted Yarn Production II

Lectures on Fridays from 9 to 10 a.m. throughout the session.

SUBJECTS.—Detailed study of Lister, Square Motion and Rectilinear combs. Tops. Open drawing principles and processes.

Worsted Yarn Production III

Lectures on Fridays from 2 to 3 p.m. throughout the session.

SUBJECTS.—Principles and processes of cone, continental and Anglo-continental drawing. Worsted spinning—flyer, ring, cap and mule—principles and processes. Yarn twisting, reeling and winding. Modern developments. Detection and prevention of faults. Application of research to practical yarn production problems.

TEXT BOOKS

An Introduction to the Study of Spinning by W. E. Morton (Longmans, Green & Co.)

Worsted Preparing and Spinning, Vols. I, II, and III by F. Bradbury (King & Co.)

Experimental Work

(Woollen and Worsted Yarn Production)

Woollen Section.—Experiments in scouring, blending, rag-pulling, carding, spinning and twisting.

Worsted Section.—Experiments in carding, gilling, combing, drawing, spinning and twisting.

Besides studying the building, setting, construction and manipulation of the various machines in both sections, students will have practical demonstrations of the output and adaptability of the machines for the production of different types of yarn.

Cloth Structure I

Lectures on Tuesdays from 2 to 3 p.m. throughout the session.

SUBJECTS.—Structures : plain, twill and sateen weaves; their derivatives; drafted styles; stripe and check patterns; diagonals; transposition twills; drafting and loom mounting.

Cloth Structure II

Lectures on Thursdays from 9 to 10 a.m. throughout the session.

SUBJECTS :—*Structures*: backed cloths, double cloths and cut double cloths; double plain cloths; treble cloths; drafting and loom mounting; imitation backed and double cloths.

Cloth Structure III

Lectures on Tuesdays from 10 to 11 a.m. throughout the session.

SUBJECTS.—Designing of compound fabrics for fancy woollens and worsteds; figured designs obtained by drafting; colour and weave effects applied to compound cloths; pattern range making.

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Complex Textiles

Lectures on Fridays from II a.m. to I p.m. throughout the session.

SUBJECTS.—Cloth structures including tapestry, gauze and plush styles.

TEXT BOOKS

Elementary Textile Design by W. Watson (Longmans, Green & Co.) Advanced Textile Design by W. Watson (Longmans, Green

& Co.)

Experimental Work

(Handloom Weaving)

FIRST YEAR: Standard cloths in colour and for dyeing.

SECOND YEAR: More advanced work, including preparatory processes. The weaving of rugs, gauzes and jacquard fabrics.

THIRD YEAR: Preparing and entering students' own warps in loom. Patterns from these warps should have original features with commercial application.

Loom Study I

Lectures on Mondays from 9 to 10 a.m. throughout the session.

SUBJECTS.—The primary motions in weaving; the treadle and dobby hand looms; the principles of shedding, picking, beating-up, letting-off, taking-up and boxing.

The power loom : the various types of tappet looms ; the simple dobby loom ; letting-off and taking-up mechanisms ; picking mechanisms.

Loom Study II

Lectures on Tuesdays from 9 to 10 a.m. throughout the session.

SUBJECTS.—The various types of dobby looms; shedding mechanisms; boxing mechanisms; special constructions and mountings. The various types of jacquards—single and double lift—centre and open shedding; harness calculations; harness and shaft mountings; split harness and pressure harness mountings; automatic weaving—bobbin and shuttle changing mechanisms.

Shed design and organisation.

TEXT BOOKS

The Art of Loom Tuning by J. W. Hutchinson. Tappet and Dobby Looms by T. Roberts (Emmott & Co.) Jacquard Mechanism and Harness Mounting by F. Bradbury (F. King & Sons)

Automatic Weaving by W. A. Hanton (Ernest Benn Ltd.).

Experimental Work

(Powerloom Weaving)

FIRST YEAR: Practical weaving and simple adjustments of tappet and dobby looms. Graduated work on processes preliminary to weaving.

SECOND YEAR: Instruction on jacquard looms and modern types of automatic loom.

THIRD YEAR: Preparing and entering warps in power looms. Students encouraged to develop and carry out original ideas in cloth construction.

Textile Calculations

Lectures on Tuesdays from II a.m. to I2 noon, and on Fridays from 2 to 3 p.m. throughout the session.

SUBJECTS.—Wool yields; conditioning and regains; material calculations from carded or prepared sliver to finished yarn; yarn counting and calculations; yarn diameters; twist calculations; the set systems and set calculations; warp and weft calculations; cloth calculations; the metric system of calculations; the weights of cloths; setting methods relating to cloth construction.

TEXT BOOKS

- Calculations in Yarns and Fabrics by F. Bradbury (F. King & Sons)
- Analysis of Woven Fabrics by A. F. Barker and E. Midgley (Ernest Benn, Ltd.)
- Textile Calculations by J. H. Whitwam (Sir Isaac Pitman & Sons)

Colour Study I

Lectures on Saturdays from II a.m. to I2 noon throughout the session.

SUBJECTS.—Colour theories and the attributes of colours; contrast and analogy; colour blending; application of colour to woven design; special colour and weave effects.

Colour Study II

Lectures on Fridays from 3 to 4 p.m. throughout the session.

SUBJECTS.—The economical introduction of colour into woven fabrics; the colour limitations of woven design; the introduction of colour into stripes, checks and figured fabrics, the colouring of special woven styles; the colouring of double cloths, gauzes and plushes.

TEXT BOOK

Colour in Woven Design by R. Beaumont (Pitman & Sons, Ltd.)

Cloth Finishing I

Lectures on Mondays from 9 to 10 a.m. throughout the session.

SUBJECTS.—The objects of finishing; scouring, crabbing, blowing, milling, carbonising, drying and tentering, brushing and steaming, raising, cutting, and pressing; shrinking, chlorinating, bleaching, and proofing; changes in physical properties of fabrics from the loom to the finished state; sequence of operations in finishing standard wool fabrics; finishing costs.

Cloth Finishing II

Lectures on Wednesdays from 9 to 10 a.m. throughout the session.

SUBJECTS.—Advanced studies in woollen and worsted finishing; the bleaching and finishing of cotton, linen, rayon, and union fabrics; mercerising; special finishes, *e.g.* anti-crease and sanforised; hosiery finishing; defects.

TEXT BOOKS

The Finishing of Wool Goods by J. & J. C. Schofield (J. & J. C. Schofield)

The Finishing of Woven Fabrics by E. Midgley (Arnold)

The Bleaching and Finishing of Cotton by E. R. Trotman and E. L. Thorp (Griffin)

The Chemistry and Practice of Finishing by P. Bean and W. McCleary (Hutton, Hartley & Co.)

Mercerising by J. T. Marsh (Chapman & Hall) An Introduction to Textile Bleaching by J. T. Marsh (Chapman & Hall).

Experimental Work (Cloth Finishing)

(I): Mondays from 10 a.m. to 12 noon-manipulation of the various machines employed in the finishing of woollen and worsted cloths. Students will be required to finish typical woollen and worsted cloths.

(II): Wednesdays from IO a.m. to I2 noon – the production of special finishes on woollen and worsted fabrics; the finishing of fabrics containing wool in admixture with other fibres, especially the newer synthetic materials; the finishing of certain types of cotton, rayon and union fabrics; laboratory experiments on processes involved in the finishing of cotton and rayon fabrics, e.g., bleaching, crease-resisting, stiffening, softening, water-proofing, delustring; the evaluation of textile finishes.

During each course the finishing of various special cloths will be demonstrated, and students will be provided with patterns of the material at the different stages of finishing.

Cloth Analysis I

Lectures on Wednesdays from 9 to 10 a.m. throughout the session.

SUBJECTS.—The analysis of simple weaves, twills. sateens, and corkscrews; the analysis of simple textural stripes and checks; the analysis of colour effects and colour and weave relationships; weights of materials; finished weights per yard.

Cloth Analysis II

Lectures on Mondays from 2 to 3 p.m. throughout the session.

SUBJECTS.—The analysis of the more complex single structures; the analysis of warp and weft backed cloths and imitation backed cloths; the analysis of double and triple cloths, fancy fabrics, &c.; calculations on production; departmental costings.

Nore.—Additional Cloth Analysis may be taken by special arrangement. TEXT BOOK

The Analysis of Woven Fabrics by A. F. Barker and E. Midgley (Ernest Benn, Ltd.)

Textile Testing

Lectures on Tuesdays from 3 to 4 p.m. throughout the session. Practical Textile Testing on Thursdays from 3 to 5 p.m.

SUBJECTS.—Microscopical examination of textile fibres; yarn tests for count, twist, strength and extensibility; tests for wear and serviceability of cloths; analysis of tops and yarns for quality of material; analysis of cloths for comparison with standard specifications. Tests for moisture content in wools, tops, and yarns; standard regains; effects of humidity on strength and extensibility of yarn and cloth; chemical determination of component materials in yarns and cloths. Defects in raw materials, yarns, and cloths and their causes; study of mounted defective specimens. The study and use of testing instruments and machinery.

TEXT BOOK

Textile Testing by J. Lomax (Longmans, Green & Co.)

Mill Design and Management

Section A. Lectures on Mondays from 3 to 4 p.m. throughout the session, and on Saturdays from 10 to 11 a.m. throughout the session.

SUBJECTS.—Efficient operation of steam-raising plant, steam engines and other prime movers. Transmission of power by belts and ropes. Electric driving. Factory lighting, heating, ventilation and humidification.

Section B. Lectures on Tuesdays from II a.m. to 12 noon throughout the session.

SUBJECTS.—Site selection, buildings, and internal transport. Lay-out of machinery. Principles of yarn and cloth costing. Systems of wages payment. Efficiency methods; aids to management. Legislative control of the textile industry.

TEXT BOOKS

The Chemical Technology of Steam-Raising Plant by H. N. Bassett (Edward Arnold)

Mechanical Power Transmission by W. Staniar (McGraw Hill Book Co., Inc.)

Heat Engines by A. C. Walshaw (Longmans, Green & Co.) Textile Factory Organisation and Management by D. R. H. Williams (Emmott & Co.).

Management of a Textile Business by C. C. Balderston and V. S. Karabasz (The Textile Foundation, Washington) Setting and Costing of Cloths by T. Oliver (A. Walker & Sons) Costing in the Wool Textile and other Industries by D. R. H. Williams (Ernest Benn, Ltd.)

Experimental Dyeing

Lectures on Thursdays from 10 to 11 a.m. throughout the session, and laboratory work on Thursdays from 11 a.m. to 1 p.m. during the first and second terms.

Textile Chemistry I

Lectures on Mondays from 12 noon to 1 p.m. throughout the session.

SUBJECTS.—This course serves as an introduction to Textile Chemistry II and is taken by all Diploma students, unless specially exempted.

Textile Chemistry II

Lectures on Mondays from 12 noon to 1 p.m. and on Saturdays from 9 to 10 a.m. throughout the session.

Subjects.—The chemical interpretation of the molecular structure and properties of animal fibres, and its application to the processes of scouring; carbonising; yarn production; humidification; conditioning; milling; chlorination; bleaching; crabbing and blowing; dyeing.

The chemistry of oils, fats and waxes; the principles of wool oiling, including a general study of lubrication; and the testing of wool oils and creams.

The chemistry of soap making; analysis of soaps; emulsions and emulsification; recovery of by-products from effluents; the hardness of water; water softening processes; composition and properties of the newer auxiliary products, including wetting agents and detergents.

Sizing, waterproofing and fireproofing. Chemical methods for estimating fibre damage and their use in controlling finishing and other processes.

The structure and properties of man-made fibres.

Experimental Work

(Textile Chemistry)

Analysis and Testing of Wool Oils and Soaps

A practical course of analysis of wool oils, soaps, etc., occupying a minimum of six hours per week, has been arranged to meet the requirements of students and firms particularly interested in the subject of wool oils and the oiling of wool.

Textile Mathematics I and Textile Physics I

Lectures on Tuesdays and Fridays from 9 to 10 a.m. throughout the session.

SUBJECTS.—This course serves as an introduction to Textile Physics II, and is taken by all Diploma students, unless specially exempted.

TEXT BOOK

Handbooks of Textile Technology—Part I: Mechanics by W. A. Hanton (Textile Institute).

Textile Mathematics II

Lectures on Mondays from 9 to 10 a.m throughout the session.

SUBJECT.—Application of mathematics to textile testing, machinery and processes.

Textile Physics II

Lectures on Saturdays from II a.m. to 12 noon throughout the session.

SUBJECTS.—The X-ray interpretation of the molecular structure and properties of fibres.

TEXT BOOK

Fundamentals of Fibre Structure by W. T. Astbury (Oxford University Press)

Principles of Pattern Design

FIRST YEAR: Classes on Fridays from 10 a.m. to 12 noon throughout the session (at the Leeds College of Art).

SECOND YEAR : Classes on Thursdays from 10 a.m. to 12 noon throughout the session (at the Leeds College of Art).

THIRD YEAR: Classes on Mondays from 10 a.m. to 1 p.m. throughout the session (at the Leeds College of Art).

SUBJECTS.—Pattern as an enrichment of a plain surface; a development from texture weave. Foundation of design in harmonious relations between forms, lines and colours. The approach via geometry, as providing the simplest relationship. The naturalisation of geometric form. Rhythm in line and form. The formalising of Nature. Traditional and modern treatment of the designer's subject matter; flowers, trees, birds, animals. Composition. Colour relationships of tone, hue, intensity, texture. Rhythm in colour. The historic developments of pattern design in textiles. The formative factors in such developments and in such crafts as have influenced textile design.

TEXT BOOKS

Textiles section of Studio Year Book An Encyclopædia of Textiles (Ernest Benn, Ltd.) Fischbach Decorative Textiles by G. L. Hunter (Lippincott) Ornament by H. Th. Bossert (Ernest Benn, Ltd.) Modern Decorative Art in England by P. Townend (Batsford) English Textiles by W. G. Hunter (Tiranti) History of Textile Fabrics by Glazier (Batsford)

Mathematics, Physics, Chemistry and Engineering

Students are referred to the prospectuses of the several Departments for details of the various courses.

Economics, Statistics, Commercial Law and Accountancy

For these subjects students are referred to the prospectus of the Department of Economics and Law.

French I, German Sa, Russian IA and Spanish I

These courses are intended for students who wish to acquire a greater proficiency in languages. Details are to be found in the departmental prospectuses.

Museum Study: Use of Reference Library

The Textile Department Museum contains an extensive collection of specimens covering the complete range of textile processes, as well as a collection of old and modern textile fabrics, which are of particular interest and value to students who specialise in textile design. Within the Museum is the Departmental Library, which houses text-books and reference books on textile subjects.

Research Work

Besides the opportunity which is afforded by the general equipment of the Department for research in Textile Technology, there are well-equipped laboratories for research in Textile Chemistry and Textile Physics. Valuable Scholarships and Fellowships are available to assist graduates in Science as well as in Textiles, to conduct research work for higher degrees.

Scheme of Co-operation between the University of Leeds and the Wool Industries Research Association

I. Duly qualified graduates in Science or Technology may, in accordance with the Ordinances and Regulations laid down in the University Calendar, proceed to the degrees of Doctor of Philosophy or Master of Science of the University of Leeds after the prosecution of research work at the Wool Industries Research Association under the Director of that Association.

2. Graduates of other Universities than Leeds, and Leeds graduates without satisfactory previous training in Textile Industries, wishing to come under this scheme will be required to attend approved courses in the Textile Industries Department of the University for not less than one year. This prescribed attendance in the University will normally be prior to their attendance at Torridon, but in exceptional circumstances and with the approval of the Senate the attendance may be concurrent with the period at Torridon.

3. All candidates for post-graduate degrees while carrying on their work at the Research Association

at Torridon will be under the immediate and direct control of the Director of the Research Association at Torridon, who must be approved by the University for this purpose, but periodical discussion of the work will take place between the Director and the Head of the Department of Textile Industries.

4. All students proceeding to degrees through research work at Torridon must be duly registered students of the University of Leeds, and, as such, shall be under the discipline of the University. They will be required to pay such tuition fees as may be determined by the University Council, and shall be entitled to all the privileges of the University Union, Library, &c., on payment of the appropriate fees.

5. For the purposes of this scheme, the Director of the Research Association at Torridon has been appointed an Honorary member of the staff of the Textile Industries Department of the University of Leeds, with the title of "Director of Torridon Research Students."

	9-10	10-11	11-12	12-1	2-3.	3-4	4-5
Mon.	Maths. J.	1	-	Chemistry Intro.	Woollen Spinning I		Spinning ctical
Tu.	Maths. J.	Physics Intro.	Labor	atory	La	borator	у
WED.	Maths. J.	Labor	atory	Chemistry Intro.	-	-	-
THU,	Textile Industries (Prelim.)	Physics Intro.	Material	s Study I	Worsted Spinning I		Spinning ctical
FRI.	Maths. J.	-	-	Chemistry Intro.	La	borator	у
SAT.	-	Physics Intro.	Labor	atory	-	=	-

First Year Time Table for the Ordinary Degree of B.Sc.

N.B.—The Physics and Chemistry courses require 4 and 6 hours' laboratory work respectively for which provision has been made in the above time table.

Mon.	9-10 Loom Study I	10-11 Maths F3'	11-12 Physics Fr	12-1 Maths. F4'	2-3 L a	3-4 borate	4-5 ory
Τυ.	Handloom Weaving	Physica Chem. F2	Textile Calcula- tions	Organic Chem. F3	Cloth Structure I	Labor	atory
WED.	Cloth Analysis I	Maths F 3'	Physics F 1	Maths. F4'			-
Тни.	Handloom Weaving	Physical Chem. F2	Power- loom Weaving	Organic Chem F3	La	borato	ory
FRI.	Handloom Weaving	Maths. F ₃ '	Physics F i	Maths. F4'	Textile Calcula- tions	Labor	atory
SAT.	Powerloom Weaving	Physical Chem. F2	Colour Study I	Organic Chem. F 3	-		_

Second Year Time Table for the Ordinary Degree of B.Sc.

Students are required to select two of the Science subjects shown in italics in the time table. N.B.,—The Physics and Chemistry Courses require 6 and 9 hours' laboratory work, respectively, for which provision has been made in the above time table.

Third Yea	r Time	Table	for the	ordinary	Degree	of	B.Sc.
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	9-10	10-11	11-12	12-1	2-3	3-4	4-5
Mon.	Cloth Finishing I	Cloth Finishing Practical		Textile Chemistry II	Cloth Analysis II	Mill Design & Manage- ment (A)	Power- loom Weaving
Tu.	Loom Study II	-	Mill Design & Manage- ment (B)	-	Woollen Spinning III	Textile Testing	Woollen Spinning Practical
WED.	Woollen Spinning II	ment (B) Woollen Spinning Practical		-	-	-	
THU.	Cloth Structure II	Dyeing Lecture		imenta] eing	Materials Study II	Textile Testing Practical	
Fri.	Worsted Spinning II	Worsted Spinning Practical	Complex	Textiles	Worsted Spinning III	Colour Study II	Worsted Spinning Practical
SAT.	Textile Chemistry II	Mill Design & Manage- ment (A)	Te xti le Physics II	-	=	-	-)

	9–10	10-11	11-12	12-1	2-3	3-4	4-5
Mon.	Maths. J	-	Physics Fr	Chem. Intro.	Woollen Spinning I	Woollen Prac	
Tv.	Maths. J	Economics (Intro.)	-	-		cs or Chen Laboratory	
WED.	Maths. J	-	Physics F1	Chem. Intro.	-	-	-
Τηυ.	Textiles (Prelim.)	Economics (Intro.)	Material	s Study I	Worsted Spinning I		Spinning ctical
FRI.	Maths. J	Comml. Law	Physics F1	Chem. Intro.		cs or Chen aboratory	nistry
SAT.	-	-	-	-		-	-

First Year Time Table for the Ordinary Degree of B.Com.

Second Year Time Table for the Ordinary Degree of B.Com.

	°9→10	10-11	11-12	12-I	2-3	3-4	4-5
Mon.	Loom Study I	Power Loom Weaving		-		-	_
Tu.	Statistics	Industrial Relations	Principles of Economics	Textile Economics	Cloth Structure I	Textile Testing	-
WED.	Cloth Analysis	Handloom Weaving		Comml. Law		-	—
Тнυ.	Statistics	Industrial Relations	Principles of Economics	Textile Economics	Materials Study II	Textile Testing Lab'r'ty.	-
Fri.	Worsted Spinning II.	Worsted Spinning Practical		-	-	-	—
SAT.	-	-	Colour Study I	-	-	-	-

	9-10	10-11	II-I2	12-1	2-3	3-4	4-5
Mon.	Cloth Finishing	Cloth Finishing Practical		Textile Chemistry II	Cloth Analysis II	Handloom Weaving	
Tu.	Loom Study II	Power Loom Weaving	Textile Calcula- tions	Financial Organisa- tion	_	Public Finance	-
WED.	Woollen Spinning II		Spinning ctical				_
Тн.	Cloth Structure II	-	-	Account- ancy		-	
Fri.	-	-	-	_	Textile Calcula- tions	Colour Study II	-
Sat.	Textile Chemistry II	-	-	-	-	-	-

Third Year Time Table for the Ordinary Degree of B.Com.

First Year Time Table for the Diploma in Textile Industries

	9-10	10-11	11-12	12-1	2-3	3-4	4-5
Mon.	Loom Study I	Powerloom	Weaving	Textile Chemistry I	Woollen Spinning	Woollen S Pract	
Τυ.	Text. Maths & Text. Physics I	Economics (Intro.)	Textile Calcula- tions	-	Cloth Structure I	Powerloom	Weaving
WED.	Cloth Analysis I	Handloom	Weaving			-	-
Тнυ.	Textile Industries (Prelim.)	Economics (Intro.)	Materials	Study I	Worsted Spinning I	Worsted Prac	
Fri.	Text. Maths. & Text. Physics I	Pattern	Design	-	Textile Calcula- tions	Powerloom	Weaving
SAT.	Handloom	Weaving	Colour Study I	-	-		-

ľ		9-10	10-11 11-12	12-1	2-3	3-4	4-5
	Mon.	Cloth Finishing I	Cloth Finishing Practical	Textile Chemistry II	Cloth Analysis II	Handloom	Weaving
	Tv.	Loom Study II	Powerloom Weaving	Textile Economics	Power- loom Weaving	Textile Testing	Hand- loom Weaving
	Wed.	Woollen Spinning II	Woollen Spinning	Practical	-	-	-
	THU.	Cloth Structure II	Pattern Design	Textile Economics	Materials Study II	Textile Prac	
	FRI.	Worsted Spinning II	Worsted Spinning	Practical	Hand- loom Weaving	Colour Study II	Hand- loom Weaving
	SAT.	Textile Chem. II	Powerloom Textile Weaving Physics II	-	-	-	

Second Year Time Table for the Diploma in Textile Industries

Third Year Time Table for the Diploma in Textile Industries

	9-10	10-11	11-12	12-1	2-3	3-4	4-5
Mon.	Textile Maths. II.	Р	attern Desig	gn	Thesis	Mill Design & Manage- ment (A)	Thesis
Τυ.	Thesis	Cloth Structure III	Mill Design & Manage- ment (B)	Thesis	Woollen Spinning III	Woollen S Pract	
WED.	Cloth Fin- ishing II		inishing ctical	-	-	-	-
Тнυ.	Thesis	Dyeing Lecture	Experin Dye		• - T	hesi	s
FRI.	Work S	Sheets	Complex	Textiles	Worsted Spinning III	Worsted Prac	
SAT.	Thesis	Mill Design & Manage- ment (A)	The	s í s	-	-	-

SCHOLARSHIPS

Stephenson Clarke Scholarship

Tenable in the Textile Industries Department and in the Department of Colour Chemistry and Dyeing.

1. The Scholarship was founded in 1926 by Colonel Stephenson Robert Clarke, C.B., LL.D., Master 1924-25 of the Clothworkers' Company, who are the Trustees.

2. The endowment of the Scholarship consists of $\pounds 1,000$. The annual value of the Scholarship consists of the free income of this endowment and amounts approximately to $\pounds 45$ per annum.

3. The Scholarship will be awarded annually. Subject as hereinafter mentioned (para. 5) the Scholarship will be awarded in the first year to a student in the Textile Industries Department and in the following year to a student in the Colour Chemistry and Dyeing Department and will continue to be thus alternately awarded.

The object of the scholarship is to enable the successful candidate to undertake a 3rd or 4th year course of study in one of these Departments, and candidates must be completing respectively their 2nd or 3rd year attendance in either the Textile Industries or the Colour Chemistry and Dyeing Department. A preference will be given to students completing a 3rd year and desiring to enter for a 4th year course of study.

4. The Scholarship is tenable for one academic year.

5. Failing the application of a qualified candidate for the Scholarship in the Department to which the Scholarship falls in a given year, the Scholarship may be awarded to another qualified student in the other Department, but without affecting the ordinary sequence.

6. Failing the application in any year of a qualified candidate in either Department, the amount of the Scholarship for that year shall be added to capital.

7. The appointment to a Scholarship shall be made by the Founder of the Scholarship during his lifetime out of nominations submitted by the Vice-Chancellor. Thereafter the appointment shall be made by the Court of the Clothworkers' Company in like manner.

8. Clauses 1, 2, and 3 of the General Regulations of the University of Leeds relating to Senior Scholarships shall, so far as may be applicable, apply to the Stephenson Clarke Scholarship.

9. Power is reserved to the Founder (Colonel Stephenson Robert Clarke) during his lifetime and afterwards to the Trustees (the Clothworkers' Company) in the latter case after consultation with the Senate of the University of Leeds, to alter or modify the above Regulations, including the amount of the Scholarship or Scholarships to be awarded.

10. Any dispute or difference arising in regard to the construction of any of the above rules and regulations or conditions or in regard to any award made thereunder shall be settled by the Founder during his lifetime and afterwards by the Trustees, any such decision to be final and conclusive.

Applications to be sent to the Registrar not later than 1st June of each year.

Clothworkers' Scholarships

These Scholarships were founded in 1875 by the Worshipful Company of Clothworkers of the City of London, who offer the sum of f_{60} annually to provide one or more scholarships for students in the Department of Textile Industries. The scholarships are open to students completing their first or second year of attendance in the Department and are tenable for one year.

The Scholarships are awarded on the results of the third term examinations.

Applications from candidates for these Scholarships must be sent to the Registrar not later than 1st June of each year.

Woolmen's Company Scholarship

1. This Scholarship was founded in 1927 by the Worshipful Company of Woolmen with the object of encouraging study in connexion with the Wool Trade.

2. The Scholarship is of the annual value of \pounds 30, and is normally tenable for three academic years in the Department of Textile Industries.

3. The Scholarship is open to students entering upon the first year of a course of study leading to a degree or a diploma of the University in the Department of Textile Industries.

Failing a suitable candidate entering upon the first year course of study, the Scholarship may be awarded to a student who has already completed the first or second year of his attendance in the Textile Industries Department and is desirous of completing his degree or diploma course of study in that Department.

Preference will be given to candidates whose means are otherwise insufficient to enable them to pursue their studies in the University.

4. When a vacancy occurs, the Scholarship will be advertised in the press. Applications should be sent in to the Registrar not later than 1st September. Applicants may be required to present themselves for a special examination, which will be held in September.

Clothworkers' Research Fellowships and Scholarships in Textile Industries

These Scholarships and Fellowships were instituted in 1928 from funds provided by the Worshipful company of Clothworkers.

The Scholarships are of the annual value of \pounds 100 which may be supplemented by a maintenance grant not exceeding \pounds 40. The Fellowships are of the minimum annual value of \pounds 160. The Scholarships are open to graduates of the University of Leeds, to holders of the Diploma in Textile Industries of the University of Leeds, and to suitably qualified graduates of other Universities.

The Fellowships will normally be awarded to holders of Scholarships who have shown special aptitude for research work during their tenure of a Scholarship, but any duly qualified applicant may be granted a Fellowship on the ground of exceptional distinction without having previously held a Scholarship.

Both Scholarships and Fellowships are tenable for one year and may be renewed for one or more years.

The number of each to be awarded in any year will depend upon the funds available and on the number of suitable applicants.

Fellows and Scholars will be required to devote the whole of their time to research in some subject or subjects connected with the Textile Industries, under the direction of the Professor of Textile Industries, and to present a report of their work to the Senate not later than 1st June in each year.

The appointments will be made at the close of the third term. Applications should be in the hands of the Registrar not later than 1st June of each year.

Alfred Lund Scholarship

1. This fund was instituted in 1924 by the late Alfred Lund, Esq., of Pudsey, for the purpose of assisting deserving students to complete their studies in the Departments of Colour Chemistry and Dyeing and Textile Industries, or to prosecute advanced study and research in some branch of knowledge germane to the dyeing and textile industries.

2. The number of Scholarships awarded each year will depend upon the number of suitable candidates and the amount of income available. The Scholarships are of the annual value of f_{25} , which may be supplemented by a grant for maintenance not exceeding f_{100} . They are awarded for one year and may be renewed.

3. Students who have attended courses of study for degrees or diplomas of the University in the Department of Colour Chemistry and Dyeing or the Department of Textile Industries, for not less than one session, are eligible for the Scholarships.

4. Holders of the Scholarships are required either to complete their courses for a degree or diploma in the Departments of Colour Chemistry and Dyeing or of Textile Industries, or, if they have completed such courses, to pursue advanced study and research in the University or in some other University or learned institution, under suitable guidance in a manner approved by the Senate.

5. The Scholarships are awarded by the Senate, on the recommendations of the Professors of Colour Chemistry and Dyeing and of Textile Industries, at the end of the summer term.

6. Scholars are required to furnish reports of the work done by them during the tenure of the Scholarship, such reports to be forwarded to the Registrar before 1st June of the year following the award of the Scholarship, in order that they may be laid before the Senate.

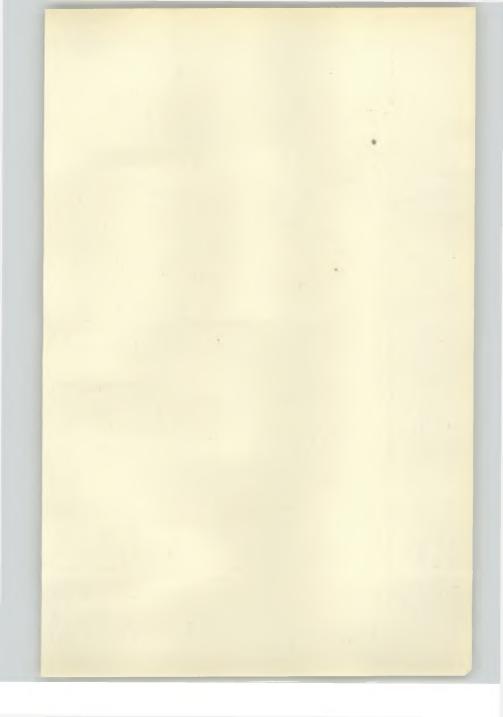
The Barker Prize Fund

This prize was instituted in 1936. On his retirement Professor A. F. Barker made over to the University the sum of f_{250} being the amount of the testimonial fund subscribed by members of the University and others in recognition of his period of tenure of the Chair of Textile Industries. In accordance with the wishes of the donor, the interest on the fund is devoted to the provision of two prizes which are awarded annually the first for the best thesis presented by a Diploma student in the Department of Textiles, and the second for the student placed first in the Final B.Sc. (Textiles) Examination. The prizes will be awarded under the following conditions :---

- 1. Two prizes will ordinarily be awarded in each year, one to the student presenting the best thesis for a diploma in the Department of Textiles and the other to the student placed first in the Final B.Sc. (Textiles) Examination.
- 2. Either or both of the prizes may be withheld if there are no candidates of sufficient merit in any year.
- 3. The prizes shall be of equal value and the whole of the annual income of the fund shall be utilised for the purpose, provided that the value of each prize shall not exceed $\pounds 5$.
- 4. Any income not expended in any year shall be added to the capital of the fund.

The fund may be added to from time to time from donations received by the University for the Department of Textiles. It is hoped by the donor that in this way it may be possible at a later date to convert the prize into a Travelling Studentship.

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DEPARTMENT OF COLOUR CHEMISTRY AND DYEING

The courses of study in this Department are primarily designed to provide a fundamental and comprehensive education in the appropriate pure and applied sciences in preparation for a career in any of the branches of industry in which the chemistry of tars, intermediate products and colouring matters, and of textile fibres and the processes to which they are submitted during manufacture, play an important part. The courses qualify students for appointments on the commercial, research and technical staffs of firms engaged in the bleaching, scouring, dyeing, printing and finishing of textiles and other materials, in the manufacture of rayons and synthetic plastics, and in the manufacture of intermediate products, dyes, pigments and lakes, as well as for appointments as textile research chemists, etc.

The courses of study of which particulars are given are those normally suitable for students who have just left Attention is drawn, however, to the provisions school. of the Ordinances of the University by which undergraduates who have already studied and passed examinations in Chemistry, Mathematics, Physics, etc., at an appropriate standard may be exempted from a certain amount of attendance and from certain examinations Students holding a science degree in this University. of any University (British or foreign), the Associateship or Fellowship of the Institute of Chemistry, or otherwise bringing forward evidence of sufficient previous scientific education may be admitted to the later stages of any of the courses and may be permitted to undertake at once more specialised work in the Department.

All lecture courses are open to suitable students without entrance upon other work in the Department. Combined lecture and practical courses in Dyeing also may be arranged for students who have received a preliminary scientific training.

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Courses in Technology

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Graduates in science of approved Universities, or other qualified persons, may be accepted as candidates for the degree of Ph.D. or M.Sc. and are required to pursue for not less than two years a full-time course of advanced study in Colour Chemistry and/or Dyeing and research.

SYLLABUS OF COURSES

I. Four Years Course qualifying for the Honours B.Sc. Degree in Colour Chemistry

First Year	Hours.
	per week
Mathematics for Applied Science Students (1)	4
Lectures on Physics (Introductory Course b)	3
Physics Laboratory	3
Lectures on Chemistry (Introductory Course)	4
Chemical Laboratory	18
German	

Second Year

Lectures on Physical and Organic Chemistry

$(F_{2} \text{ and } F_{3}) \dots \dots \dots \dots$	6
Inorganic and Organic Chemical Laboratory	18
Lectures on General Engineering (I)	3
Lectures on Dyeing (Introductory Course)]	8
Experimental Dyeing Laboratory	0
Textile Industries (Preliminary)	I
German	

Third Year

Experimental Dyeing Laboratory, Calico	
Printing, and Practical Dyehouse >	*25
Colour Chemistry Laboratory	-
Lectures on Inorganic Chemistry (F ₁)	3
*Physical Chemical Laboratory (1st Term)	12
Lectures on Chemical Technology of Textile	
Fibres (1st Term)	
Lectures on the Chemistry and Technology	4
of Dyeing (2nd Term))	
Lectures on Cloth Finishing (I)	I
Practical Cloth Finishing (2nd Term)	2
Lectures on the Chemistry of Intermediates	
and Dyes (Introductory Course, 1st and	
2nd Terms)	I
Leather Dyeing	

*During the 1st Term the hours spent in Physical Chemical Laboratory are deducted from the hours allotted to Colour Chemistry. Colour Chemistry and Dyeing

Fourth Year

Hours per week. 30

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Colour Chemistry Laboratory ... Lectures on Synthetic Colouring Matters (1st and 2nd Terms), Parts 1 and 2... Lectures on Natural Colouring Matters (1st and 2nd Terms)

It is desirable that all students in their fourth year should take the lectures on Organic Chemistry (H3) during the 1st and 2nd terms.

II. Four Years Course for Colour Chemists qualifying for the Diploma in Colour Chemistry

This course is identical with that qualifying for an Honours B.Sc. degree, and is suitable for students unable to satisfy the requirements for admission to a degree course.

III. Three Years Course qualifying for the Ordinary Degree of B.Sc. in Dyeing

First Year	Hours. per week.
Mathematics for Applied Science Students (J)	4
Lectures on Physics (Introductory Course b)	3
Physics Laboratory	3
Lectures on Chemistry (Introductory Course)	4
Chemical Laboratory	18
German	

Second Year

Lectures on Physical and Organic Chemistry	
(F ₂ and F ₂)	6
Inorganic and Organic Chemical Laboratory	18
Lectures on General Engineering (I)	3
Lectures on Dyeing (Introductory Course)	8
Experimental Dyeing Laboratory	ō
Textile Industries (Preliminary)	I
German	

Third Year

Experimental Dyeing Laboratory, Calico	
Printing and Practical Dyehouse	25
Lectures on Inorganic Chemistry (F1)	3
Lectures on Chemical Technology of Textile	
Fibres (1st Term)	
Lectures on the Chemistry and Technology of	4
Dyeing (2nd Term)	

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Courses in Technology

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	Hours per week.
Lectures on Cloth Finishing (I) and (II)	2
Practical Cloth Finishing (2nd Term)	2
Lectures on the Chemistry of Intermediates	
and Dyes (Introductory Course 1st and	
2nd Terms)	I
Leather Dyeing	

IV. Three Years Course qualifying for the Diploma in Dyeing

This Course is very similar to that for the Ordinary B.Sc. Degree and has been arranged for students unable to satisfy the requirements for admission to a degree course.

First Year	Hours
	per week.
Lectures on Chemistry (Introductory Course)	4
Chemical Laboratory	18
Lectures on Physics (Introductory Course b)	3
Physics Laboratory	3
German	

Second Year

Lectures on Inorganic and Organic Chemistry

(F, and F ₂)	6
	0
Inorganic and Organic Chemical Laboratory	14
Lectures on Dyeing (Introductory Course)	• 16
Experimental Dyeing Laboratory	10
Textile Industries (Preliminary)	I
German	

Third Year

Experimental Dyeing Laboratory	24
Lectures on Chemical Technology of Textile	
Fibres (1st Term)	10
Lectures on the Chemistry and Technology	4
of Dyeing (2nd Term))	
Lectures on General Engineering (I)	3
Lectures on Cloth Finishing (1) and (II)	2
Practical Cloth Finishing (2nd Term)	2
Lectures on the Chemistry of Intermediates	
and Dyes (Introductory Course, 1st and	
2nd Terms)	I
Leather Dyeing	

Colour Chemistry and Dyeing

Regulations for Diplomas in Dyeing and Colour Chemistry

Candidates for either of these Diplomas are required :

- I. During the Course-
 - (a) To give satisfactory attendance upon the subjects which form any part of the course of study.
 - (b) To present themselves for any departmental examinations that may be held in the subjects forming part of their course of study. The record of students at their departmental examinations will be taken into account in deciding the results of the Diploma examination.
 - (c) To make formal entry, on the prescribed form, not later than 1st March of the last session of the course, and to pay at the same time the prescribed examination fee.
- II. At the end of the Course—
 - (a) To reach a satisfactory standard in any Final examination which may be set.
 - (b) To translate into English a passage of French or German technical literature.
- III. A Diploma may be granted upon a degree course provided that the subjects studied for the degree include those prescribed for the Diploma, and that the other conditions are complied with.

A student producing evidence of adequate previous scientific or practical training, may, upon application to the Senate, be exempted from a portion of the normal course and may qualify for the Diploma upon a shortened period of study.

SYLLABUS OF LECTURES

I. The Chemical Technology of Textile Fibres, Water and Mordants

Mondays, Wednesdays, and Fridays, at 11.30 a.m., and Thursdays at 4 p.m., during the first term.

Courses in Technology

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The lectures will deal with the following subjects :--

Isolation, purification, bleaching and finishing the various vegetable and animal fibres : cotton, linen, kapok, ramie, jute, hemp, wool, mohair, silk, etc. Chemical and physical properties of the textile fibres and differences in behaviour with reagents. Chemical constitution and identification. Conditioning of fibres. Manufacture and properties of various cellulosic products, rayons, staple fibres, etc. Mercerisation of cotton. Immunisation of cotton. Carbonisation and chlorination of wool. Wool recovery : identification of shoddy fibre in wool. Methods of increasing and diminishing the dyeing affinity of wool and cotton. Methods of weighting silk and of estimating the degree of weighting. Water-proofing of textile materials. Fire-proofing of cotton materials. Faults in fabrics and their investigation. Stripping and stripping-agents. Water-softening and water-analysis. Treatment of factory effluents. Recovery of wool grease from woolwashing liquors. Chemistry and application of mordants and textile auxiliaries.

II. The Chemistry and Technology of Dyeing

Mondays, Wednesdays and Fridays, at 11.30 a.m., and Thursdays at 4 p.m., during the second term.

This course forms a continuation of I, and covers the following subjects :---

Theories of dyeing. Relationships between chemical constitution of dyes and fibres. Classification of dyes. Methods of application in dyeing and textile printing of the various classes of dyes: basic, acid, mordant, salt, insoluble, developed, sulphur, vat, and also the special dyes for cellulose acetate rayon. The dyeing of rayons. Chemical constitution of the various types of dyes. Analysis of dyes on the fibre. Testing coloured materials for fastness. Daylight lamps. Dyeing machinery and arrangement of the dyehouse.

Colour Chemistry and Dyeing

Choice of dyes for specific purposes. Dyeing of union materials and of mixed materials of wool, silk, cotton, rayons, &c. Machinery and processes of calico-printing.

III. Introductory Course of Dyeing

This Course is intended for second year students and will consist of about 16 lectures on Fridays at 2 p.m. The Experimental Dyehouse will be open to suit the times of the students.

A similar Course for Textile students will consist of about 16 lectures on Thursdays at 10 a.m.

The work undertaken will be similar to that under Section A (Experimental Dyeing Laboratory). See later page.

IV. The Chemistry of Intermediates and Dyes (Introductory Course)

Tuesdays, 4 p.m., 1st and 2nd terms.

Raw materials used in the dyestuff industry. Processes of sulphonation, alkali fusion, nitration, reduction, and alkylation. Classification of dyes according to their chemical structure : chromophores, chromogens, auxochromes, leuco-compounds, quinonoid theory, nitro, nitroso, azo, stilbene, ketonimine, triphenylmethane, xanthene, acridine, anthraquinonoid, indamine, thiazine, oxazine, azine, indigoid, thiazol, and sulphur dyes.

V. Chemistry of Synthetic Colouring Matters (Part I)

Mondays at 2 p.m., and Tuesdays at 11.30 a.m., during the first and second terms.

The lectures will comprise the following subjects :

Origin and historical development of the coal-tar industry. Distillation of coal-tar and separation of benzene, toluene, xylenes, naphthalene, acenaphthene, anthracene, phenol, cresols, pyridine, carbazole, &c. Influence of conditions of reaction on the constitution of the products. Valuation of commercial products.

Preparation of intermediate products : nitro compounds, sulphonic acids, amines and their derivatives, diamines, phenols, aminophenols, halogen compounds, aldehydes, ketones, carboxylic acids, quinones, &c. Relation between chemical constitution and colour: quinonoid and other theories. Quinonoid addition as the mechanism of dye formation. Classification of dyes according to their chemical structure : nitroso, nitro, ketonimine, triphenylmethane, xanthene, acridine, anthraquinonoid, indamine, indophenol, azine, oxazine, thiazine, sulphur, quinoline, and indigoid groups. The manufacture. properties, constitution and uses of important typical examples of these groups. General methods and plant employed. Recent progress.

VI. Chemistry of Synthetic Colouring Matters (Part II)

Thursdays at 11.30 a.m., and Fridays at 4 p.m., during the first and second terms.

This course will present a detailed account of the derivatives of naphthalene, diazo-compounds, and the azo, pyrazolone, stilbene and thiazole dyes. Application of Werner's theory to lake formation. Special attention will be devoted to the more important types of factory plant, the materials involved in their construction, and to works practice in general.

VII. Chemistry of Natural Colouring Matters

Thursdays at 2 p.m. during the first and second terms.

The lectures will deal with the origin, chemistry and technology of the natural dyestuffs : Madder, chay root, munjeet, morinda root, ventilago root, cochineal, kermes, lac dye, sanderswood, barwood, alkanet, butea frondosa, safflower, Indian yellow, gentian root, weld, dyer's broom, young fustic, old fustic, quercition bark, Persian berries, catechu, logwood, brazilwood, indigo, woad, Tyrian Purple, turmeric, cudbear, orchil, litmus, anthocyan pigments, carotinoid pigments, chlorophyll, tannins.

LABORATORY WORK

A. Experimental Dyeing Laboratory

Open for work every weekday during the session from 9 a.m. to 5 p.m., Saturdays 9 a.m. to 12.30 p.m. The laboratory is equipped with dyebaths suitable for comparative dyeing trials, drying stoves, daylight matching lamps, and other appliances.

The work undertaken will include the following subjects :-- Systematic dyeing trials with the different groups of dyes upon cotton, wool, silk, and rayons. Application of various mordants and assistants. Methods of dyeing union materials. Also the dyeing of linen, ramie, furs, feathers, &c. Principles of colour mixing and matching. Scouring and bleaching of cotton and wool. Mercerisation of cotton and delustring of Quantitative dyeing of colouring matters ravons. for strength and shade. Identification and analysis of colouring matters on the fibre. Testing coloured materials for fastness. Preparation and analysis of mordants. Analysis of water and removal of impurities. Technical analysis and valuation of dyewares, soap, oils, etc. Detection of different fibres and estimation in mixtures. Examination of new commercial colouring Investigations upon dyeing processes. matters. use of the colorimeter, tintometer, and spectroscope. Identification of impurities in grey and dyed cloths. Examination of "finishes." Identification of stains and faults in dved materials, and their removal.

A special exposure chamber in an elevated position provides facilities for making tests of the fastness of colours to light, and a Fadeometer permits the fastness to light to be determined more rapidly.

B. Practical Dyehouse

The Practical dyehouse is well equipped with the necessary machinery for dyeing wool, cotton and rayons in their various stages of manufacture. The machines are of modern type and include Callebaut and De Blicquy machines for pieces, tops, loose wool and cotton, and cotton cheeses, a Simplex machine for loose wool and rags, a Hussong machine for yarn and hosiery, a steam and air circulating machine for hosiery, an experimental jigger for cotton and union piece dyeing, winches for dyeing wool and rayon pieces, and vats for cotton and rayon yarns; also a Wash Wheel for testing the fastness of dyed materials to washing.

All students of dyeing receive training in the treatment of various classes of textile materials in machines.

C. Calico Printing

A practical course in calico printing is held during the third term, the work comprising small-scale experiments in the different styles, discharges, resists, printing with diazo-compounds, aniline black, indigo, and other vat dyes, &c.

D. Colour Chemistry Laboratories

The laboratories are spacious buildings provided with every facility for the conduct of chemical work upon intermediates and colouring matters. The work carried out comprises the following subjects :

Third Year Laboratory

Quantitative analyses of raw materials and intermediates. Technical methods of analysis. Preparation of intermediates and dyes by technical methods, etc.

Fourth Year Laboratory

Identification of dyes. Critical study of intermediates, their isolation and properties. Analyses of dyes and their intermediate products. Ultimate analyses of organic compounds. Investigation of technical problems, etc.

Textile Industries (Preliminary)

A course of lectures is given in the Textile Industries Department on Thursdays at 9 a.m. throughout the session.

Colour Chemistry and Dveing

The lectures include the following subjects :---

The various textile fibres, their distribution and growth, chemical, physical and processing properties, and basic principles of manipulation. Historical development of the Textile Industry, its branches and their distribution, textile inventors and their machines. Physical bases of yarn structures, and principles of spinning and weaving. Elements of hosiery, feltmaking, embroidery, lacemaking and braiding.

Cloth Finishing I

A course of lectures given in the Textile Industries Department on Mondays at 9 a.m. throughout the session. The following subjects are dealt with — Scouring, crabbing, blowing, milling, carbonising, drying and tentering, brushing and steaming, raising, cutting and pressing; shrinking, chlorinating, bleaching, and proofing; sequence of operations in finishing standard wool fabrics; finishing costs.

Instruction in the manipulation of the various machines used in cloth finishing is given on Mondays from 2 p.m. until 4 p.m. during the second term.

Students are also encouraged to attend Cloth Finishing II, a course of lectures given in the Textile Industries Department on Saturdays at 9 a.m. throughout the session, and dealing with the following subjects:— Advanced studies in woollen and worsted finishing; the bleaching and finishing of cotton, linen, rayon, and union fabrics; mercerising; special finishes, *e.g.*, anticrease and Sanforising; hosiery finishing; defects.

Leather Dyeing

Two lectures and two laboratory demonstrations are given in the Leather Industries Department on the manufacture and dyeing of leather. Chrome, oil and vegetable tannages, the characteristics of the leathers obtained, and practical dyeings with the various classes of dyes are included.

Courses in Technology

E. Clothworkers' Research Laboratory

Special facilities are provided for the conduct of original research in the chemistry of intermediates and synthetic and natural colouring matters, and upon dyeing processes. The laboratory is a spacious one and well equipped for carrying out scientific and technical investigations in these subjects. Post graduate and other advanced students are admitted to research work under the direction of the Professor and Lecturers. Graduates of other Universities (British or foreign), and other qualified chemists, may also obtain admission as research workers for any period desired.

F. Special Fees for Apparatus, Chemicals and Dyeing Materials

To cover cost of materials and loan of special or large apparatus, fourth year degree students are required to pay £3 3s., third year degree students and third year diploma students £2 2s., second year degree students and second year diploma students £1 1s. per session. Part time students from 10s. 6d. to £1 11s. 6d. per session, according to time worked. All ordinary apparatus, however, must be provided by the student.

Research students are required to pay a deposit fee of $\pounds 5$ at the beginning of each session. The deposit will be refunded at the end of each session after deduction of the cost of undue breakages.

Students can only start work after production of receipts for these amounts respectively.

MUSEUM

The museum contains comprehensive collections of intermediate products, natural and synthetic colouring matters, all types of textile materials, etc., at all stages of manufacture, and many valuable exhibits of historical interest.

VACATION WORK

The laboratories of the department will be open to qualified students for research and private study during

a part of the long vacation, but students are strongly recommended to employ the time in gaining practical experience in works wherever such a course is possible. The Professor will be glad to give advice before the end of the term as to suitable courses of vacation study, and to consider applications from students desiring the use of the laboratories or dyehouse.

APPOINTMENTS

Students who have satisfactorily completed a course may rely upon receiving all possible assistance in obtaining suitable positions when their term of study is completed. The Professor takes a personal interest in placing students, and is consulted by firms having vacancies.

CITY AND GUILDS EXAMINATIONS

The above courses prepare for the technological examinations of the City and Guilds of London Institute in Dyeing subjects and also in Intermediate Products for Dyes. Students of the Department are recommended to present themselves for these examinations in the appropriate year of their University course.

In connexion with these examinations, certificates, money prizes, and medals are awarded to the successful candidates. The examinations are held annually at the University in April or May. Entries for the next examination will be received by the Local Secretary, The University, Leeds, not later than 1st March of each vear.

INSTITUTE OF CHEMISTRY

Students who have graduated in Colour Chemistry with First or Second Class Honours, and who have attained the age of 21 years, are eligible to apply for admission to the Associateship of the Institute of Chemistry without further examination.

Forms of Application and Forms of Regulations for the admission of Students, Associates, and Fellows may be obtained from the Registrar, Institute of Chemistry, 30, Russell Square, London, W.C.I.

Courses in Technology

TEXTILE INSTITUTE

Students who have been awarded the degree of B.Sc. in Dyeing, or the Diploma in Dyeing, or the degree of B.Sc. Hons. Colour Chemistry (having also taken the Diploma course in Dyeing), and who can produce satisfactory evidence that for a period of not less than two years they have been engaged in responsible direction and control of textile work, can apply for election to the Associateship of the Textile Institute with exemption from the examinations of the Textile Institute, but they will not be granted the Associateship until they reach the age of twenty-five years.

Further particulars may be obtained from the Secretary, Textile Institute, 16, St. Mary's Parsonage, Manchester, 3.

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FELLOWSHIPS AND SCHOLARSHIPS

Charles Brotherton Scholarships in Colour Chemistry

Two Entrance Scholarships each of the value of f_{100} per annum, tenable at the University by students in attendance upon the Honours degree course in the Colour Chemistry and Dyeing Department, were made available in 1940 by Mr. Charles Brotherton of Leeds.

The Entrance Scholarships are tenable for three or four academic years according to whether the scholar has or has not attained a standard that permits him to be excused the first year work of the four years' course leading to the degree of B.Sc. with Honours in Colour Chemistry. Their continuance each year will be subject to a satisfactory report on the work of the scholar in the previous year.

Candidates, who must be of British nationality, must supply information with regard to their school career, including the results of public examinations they have taken, and must be qualified to enter upon a degree course.

In making the awards not only will intellectual and scholastic attainments and ability be taken into consideration, but the greatest importance will be attached to qualities of character, personality and promise of leadership.

Candidates must give references as to character from not less than two persons who shall not be relatives of the candidate and must supply a statement from the Head of the School in which they spent the last three years of school life. They must also furnish a written personal statement concerning their general interests and activities including sports and their intended career after completing their studies.

During the period of the war preference will be given to candidates who do not exceed the age of 18. The awards will be made after interview by the Scholarships Committee upon which there will be a representative of the Brotherton Trust. Selected candidates will be required to attend at the University for this purpose.

Any surplus funds in any particular year may be utilised by the Scholarships Committee at their discretion either as an Entrance Scholarship of the value of f_{100} per annum in a subsequent year, or as a Scholarship for an undergraduate already in residence at the University and studying for the Honours degree in Colour Chemistry. In the latter case, the Scholarship will be of varying amount, dependent upon the candidate's circumstances, and will normally be awarded for one year in the first instance, but may be renewed for a second year.

Applications should be sent to the Registrar before 1st September.

Stephenson Clarke Scholarship

Tenable in the Textile Industries Department and in the Department of Colour Chemistry and Dyeing.

I. The Scholarship was founded in 1926 by Colonel Stephenson Robert Clarke, C.B., LL.D., Master 1924-25 of the Clothworkers' Company, who are the Trustees.

2. The endowment of the Scholarship consists of $\pounds 1,000$. The annual value of the Scholarship consists of the free income of this endowment and amounts approximately to $\pounds 45$ per annum.

3. The Scholarship will be awarded annually. Subject as hereinafter mentioned (para. 5) the Scholarship will be awarded in the first year to a student in the Textile Industries Department and in the following year to a student in the Colour Chemistry and Dyeing Department and will continue to be thus alternately awarded. The object of the scholarship is to enable the successful candidate to undertake a 3rd or 4th year course of study in one of these Departments, and candidates must be completing respectively their 2nd or 3rd year attendance in either the Textile Industries or the Colour Chemistry and Dyeing Department. A preference will be given to students completing a 3rd year and desiring to enter for a 4th year course of study.

4. The Scholarship is tenable for one academic year.

5. Failing the application of a qualified candidate for the Scholarship in the Department to which the Scholarship falls in a given year, the Scholarship may be awarded to another qualified student in the other Department, but without affecting the ordinary sequence.

6. Failing the application in any year of a qualified candidate in either Department, the amount of the Scholarship for that year shall be added to capital.

7. The appointment to a Scholarship shall be made by the Founder of the Scholarship during his lifetime out of nominations submitted by the Vice-Chancellor. Thereafter the appointment shall be made by the Court of the Clothworkers' Company in like manner.

8. Clauses I, 2, and 3 of the General Regulations of the University of Leeds relating to Scholarships shall, so far as may be applicable, apply to the Stephenson Clarke Scholarship.

9. Power is reserved to the Founder (Colonel Stephenson Robert Clarke) during his lifetime and afterwards to the Trustees (the Clothworkers' Company) in the latter case after consultation with the Senate of the University of Leeds, to alter or modify the above Regulations, including the amount of the Scholarship or Scholarships to be awarded.

10. Any dispute or difference arising in regard to the construction of any of the above rules and regulations or conditions or in regard to any award made thereunder shall be settled by the Founder during his lifetime and

afterwards by the Trustees, any such decision to be final and conclusive.

Applications to be sent to the Registrar not later than 1st June of each year.

Matthews Scholarship

This Fund of approximately $\pounds_{1,500}$ was given to the University in 1946 by the Court of the Worshipful Company of Dyers and represented the capital and accumulated interest of a gift made to the Dyers' Company by Mr. Trevor Jocelyn Matthews, a former Prime Warden of the Company.

The Fund will be used, until exhausted, for the provision of a Matthews Scholarship to enable promising students of limited means to undertake the course leading to the Degree of B.Sc. with Honours in Colour Chemistry and Dyeing.

The award will normally be of the value of f_{100} a year but may vary between f_{50} and f_{120} per annum according to circumstances of the Scholar. The Scholarship will be tenable for three years subject to a satisfactory report on the work of the scholar in the previous year.

The Scholarship will be awarded by the Senate after interview; selected candidates will be required to attend at the University for this purpose.

Applications should be sent to the Registrar not later than 1st September.

Alfred Lund Scholarship

I. This fund was instituted in 1924 by the late Alfred Lund, Esq., of Pudsey, for the purpose of assisting deserving students to complete their studies in the Departments of Colour Chemistry and Dyeing and Textile Industries, or to prosecute advanced study and research in some branch of knowledge germane to the dyeing and textile industries.

2. The number of Scholarships awarded each year will depend upon the number of suitable candidates and the amount of income available. The Scholarships are of the annual value of $\pounds 25$, which may be supplemented by a grant for maintenance not exceeding $\pounds 100$. They are awarded for one year and may be renewed.

3. Students who have attended courses of study for degrees or diplomas of the University in the Department of Colour Chemistry and Dyeing or the Department of Textile Industries, for not less than one session, are eligible for the Scholarships.

4. Holders of the Scholarships are required either to complete their courses for a degree or diploma in the Departments of Colour Chemistry and Dyeing or of Textile Industries, or, if they have completed such courses, to pursue advanced study and research in the University or in some other University or learned institution, under suitable guidance in a manner approved by the Senate.

5. The Scholarships are awarded by the Senate, on the recommendations of the Professors of Colour Chemistry and Dyeing and of Textile Industries, at the end of the summer term.

6. Scholars are required to furnish reports of the work done by them during the term of the Scholarship, such reports to be forwarded to the Registrar before 1st June of the year following the award of the Scholarship, in order that they may be laid before the Senate.

Clothworkers' Research Scholarship in Colour Chemistry and Dyeing

This Scholarship, of the value of \pounds 120 a year, tenable in the Department of Colour Chemistry and Dyeing, will be awarded from time to time upon the results of the Final examination for the B.Sc. degree, preference being given to candidates who graduate with Honours in Colour Chemistry and Dyeing.

The Scholarship will be awarded for one year, but may, at the discretion of the Examiners, be extended to a second year. The Scholar will be required to devote his whole time to carrying out some special branch of research in Colour Chemistry or Dyeing.

Clothworkers' Research Fellowships and Scholarships in Colour Chemistry

These Scholarships and Fellowships are two in number and were instituted in 1928 from funds provided by the Worshipful Company of Clothworkers.

The Scholarships are of the maximum annual value of $\pounds I40$ and the Fellowships of the minimum annual value of $\pounds I60$.

The Scholarships are open to suitably qualified graduates of any University, but preference will be given to graduates of the University of Leeds who have graduated with Honours in Colour Chemistry or have obtained the Ordinary degree of Bachelor of Science in Dyeing.

The Fellowships will normally be awarded to holders of Scholarships who have shown special aptitude for research work during their tenure of a Scholarship; but any duly qualified applicant may be granted a Fellowship on the ground of exceptional distinction without having previously held a Scholarship.

Both Scholarships and Fellowships are tenable for one year and may be renewed for one or more years.

The number of each to be awarded in any year will depend upon the funds available and on the number of suitable applicants.

Fellows and Scholars will be required to devote the whole of their time to research in the Department of Colour Chemistry and Dyeing, under the direction of the Head of the Department, and to present a report of their work to the Senate, such report to be sent in to the Registrar not later than June 1st in each year.

The appointments will be made at the close of the third term. Applications should be in the hands of the Registrar not later than 1st June of each year.

DEPARTMENT OF LEATHER INDUSTRIES

COURSES OF INSTRUCTION

Leather Manufacture whilst still leaving great scope for skilled craftsmanship, becomes more and more a branch of applied chemistry, and its need of highly trained technologists steadily grows. It is to meet this need that the courses of study in the Department have been designed. In co-operation with other Departments of the University instruction is provided which gives the student a thorough training both in pure science and in the special technology of leather manufacture, as well as making ample provision for the practical study of manufacturing processes in the workshop and labora-The Department is primarily concerned with tories. students who intend to take up careers either as technical managers or as technological chemists, and it is for such students that the Degree and Diploma courses outlined below have been drawn up. All students spend the greater portion of their first year in the study of general chemistry, physics, etc., thus laying the necessary foundation for the specialised study of leather technology which occupies an increasing proportion of the student's time as the course advances. A student wishing to become a fully qualified technological chemist competent to undertake industrial research continues his study of chemistry during the entire period of his training, whilst a student whose aims are more purely practical does not take the most advanced scientific instruction, but devotes more of his time to the detailed study of practical manufacture.

The classes in chemistry, physics, engineering, and bacteriology are held in the special Departments of the University devoted to these subjects. Students who for special reasons wish to study additional subjects such as economics or a foreign language may do so in the

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appropriate Department, provided that the necessary permission is first obtained.

The Leather Industries Department provides a complete course of lectures and practical instruction in the special technology of leather manufacture. The aim in the first instance, is to familiarise students both by information in lectures and by practical handling of materials with the principles and details of the tanning process, and the reasons why particular modes of treatment produce particular effects. This knowledge once gained, the student is in a position to judge of the causes of defects, and the changes which it is necessary to make to prevent or remedy them, or to modify the leathers produced in such a way as may meet the requirements of the trade. Methods of chemical and microscopical analysis are taught and practised for determining the purity and value of the various materials employed, and for controlling the different stages of the tanning process. In the latter part of the course, students are allowed to attempt the practical production of leathers in which they are interested, and to study the smaller details of the processes. Particular attention is paid to leather dyeing and the manufacture of coloured leathers, and small quantities of almost all kinds of leather are produced of commercially saleable quality.

The Laboratories are open during the session from 9 a.m. to I p.m., and from 2 to 5 p.m. except on Wednesday and Saturday afternoons. No student is admitted to work until he has satisfied the Professor by examination or otherwise that he has a sufficient knowledge of general chemistry to enable him to profit by special work.

Experiments in actual leather manufacture are also carried on in such a way as to illustrate as far as possible the subject matter of the lectures, and to show the effect of variations in the processes. These are, when possible, supplemented by visits to works where the manufacture is carried on.

All the more important kinds of leather are made and finished in the experimental tannery and workshops

Leather Industries

from the raw materials, with the assistance of the students; and opportunities are given to those who are sufficiently advanced to work upon branches of manufacture in which they are specially interested, or to undertake scientific research in connexion with the trade.

EQUIPMENT

The Department is adequately equipped for practical work in leather manufacture, including dyeing, and offers in its laboratories ample facilities for the study of all methods of chemical analysis, etc. used in tannery control and technical research. The ground floor comprises a machine room equipped with all the most generally used machines, small model lime-yard and tan-yard, an annex fitted with drums and paddles for light leather tanning, etc., and a small control laboratory. The first floor comprises a large students' laboratory and two smaller laboratories, whilst on the second floor are drying rooms, museum and stores.

Directly adjoining the Department are the Procter Research Laboratories, erected in honour of the late Professor H. R. Procter, F.R.S., first head of the Department. These laboratories are, by the deed of foundation, devoted to research in the fundamental chemistry and physics of leather manufacture rather than to the study of problems of immediate technical interest. The Procter Laboratories are open to all qualified persons, irrespective of nationality, who wish to carry out such research.

Most of the ordinary chemicals and small quantities of skin and leather for experimental purposes will be furnished by the Department, but larger quantities required for special experiment or research may be charged to, or provided by, students at the discretion of the Professor. A certain amount of ordinary chemical apparatus must be purchased by the student, who will also be held accountable for breakage of **apparatus belonging to the University**.

SCHEMES OF STUDY

Courses are given below for :--

I. Ordinary Degree of B.Sc.

II. Degree of B.Sc. with Honours.

III. University Diploma in Leather Manufacture.

Special courses may also be arranged by the Head of the Department to meet the needs of students who cannot afford the time necessary for a degree or diploma course.

The higher degrees of Master of Science (M.Sc.), Doctor of Philosophy (Ph.D.), and Doctor of Science (D.Sc.), will be awarded to graduates who satisfy the conditions stated in the Calendar in respect of these degrees.

The following schemes of study are arranged so as to give students the fullest advantage of the instruction provided by the University, and must generally be adhered to. Time is allowed, however, for taking up additional subjects, and special courses may be arranged for students who can satisfy the Vice-Chancellor and the Professor that they already have adequate knowledge of some of the subjects included. Some preliminary acquaintance with actual leather manufacture is very desirable before taking the University courses, and inno case is University training a complete substitute for practical experience in actual manufacture, though it usefully supplements it, and greatly lessens the time which is necessary to its acquirement.

Students are not admitted to advanced **c**ourses unless they have sufficient elementary knowledge to follow them with advantage.

Before beginning courses for Degrees, students must have passed the examination for Matriculation of the Joint Board of the Northern Universities, or obtained exemption therefrom; this however is not required in the case of Diploma students.

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Scheme I. Course for Ordinary B.Sc.

First Year

Introductory courses in Physics, Chemistry and Leather Manufacture, together with laboratory work in Physics and Chemistry.

An additional introductory subject, selected in consultation with the Professor, must also be studied during the first year of the course.

Second and Third Years

Preparation for Final examination in Chemistry, and Chemistry of Leather Manufacture.

First Year	Per	week
General Course of Chemistry (Chem. Intro.)	3	hrs.
Chemical Laboratory	12	>>
Physics (Introductory course)	3	,,
Physics Laboratory	3	,,
Leather Manufacture (Introductory course) L. I	3	,,
Additional subject	3	23
Second Year	Per	week
Second Year Chemistry F2 (Physical)		week hrs.
the same in the bar sol should be made of a		11.0
Chemistry F2 (Physical)	3	hrs.
Chemistry F2 (Physical) Chemistry F3 (Organic)	3 3 9	hrs.
Chemistry F2 (Physical)	3 3 9	hrs. "
Chemistry F2 (Physical) Chemistry F3 (Organic) Chemical Laboratory (Inorganic and Organic) Materials used in Leather Manufacture (L. II)	3 3 9 2	hrs. "
Chemistry F2 (Physical)	3 3 9 2	hrs. ,, ,,

Courses in Technology

Third Year

6

		week.
Chemistry F1 (Inorganic)	- 3	hrs.
Principles and Methods of Leather Manufacture		
(L. VI)	3	,,
Microscopy and Bacteriology of Leather Manu-		
facture (L. V) $\ldots \ldots \ldots$		
Practical Leather Manufacture (L. IV) \ldots	27	"
Leather Laboratory		

Scheme II. Course for B.Sc. with Honours

First Year

The first year course for the Ordinary degree.

Second Year

The second year course for the Ordinary degree.

Third Year

The third year course for the Ordinary degree, except that three hours per week less of laboratory work is required.

Fourth Year

Leather VII and Research in the Chemistry of Leather Manufacture. 24 hours per week laboratory work is required.

For the Special Honours Degree, students will ordinarily be required during the 3rd and 4th years of the course to attend classes in Subsidiary Physics, Physical Chemistry (H2) and Physiology (V) without examination in these subjects for degree purposes.

A one year's course for Honours in Chemistry of Leather Manufacture can be arranged for students who have already graduated.

Students are strongly urged to obtain a reading knowledge of French and German before the end of their course.

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Scheme III. Course for Diploma in Leather Manufacture

This course, extending over three years, is suitable for those who intend to become technical managers in leather works, and is recommended to sons of tanners and others who require a practical knowledge of the science and technology of the industry, but are unable to take a degree course. Though not actually prescribed in the course, the study of a modern language, especially of German, is extremely important, and time is allowed for taking it as an extra subject.

Candidates for the Diploma are required :---

- I. During the Course :---
 - (a) To give satisfactory attendance upon the subjects which form part of the course of study.
 - (b) To present themselves for any Departmental examinations that may be held in the subjects forming part of their course of study. The record of students at their Departmental examinations will be taken into account in deciding the results of the Diploma examination.
 - (c) To make formal entry on the prescribed form, not later than 1st March of the last session of the course, and to pay at the same time the prescribed examination fee.
- II At the end of the Course :--
 - (a) To reach a satisfactory standard in any Final examination which may be set.
 - (b) To translate into English a passage of French or German technical literature. A foreign student who can show that he has received a good general education will be exempted from this language test.

A Diploma may be granted upon a degree course provided that the subjects studied for the degree include those prescribed for the Diploma and that the other conditions are complied with.

A student producing evidence of adequate previous scientific or practical training, may upon application to the Senate, be exempted from a portion of the normal course and may qualify for the Diploma upon a shortened period of study.

Introductory Course of Chemistry3 hrs.Chemical Laboratory18 ,,General Engineering (I)5 ,,Leather Manufacture, Introductory Course (L. I)3 ,,Second YearPer week.Chemistry F3 (Organic)3 hrs.Materials used in Leather Manufacture (L. II)2 ,,Analytical Chemistry of Leather Manufacture2 ,,Chemical Laboratory (Organic)6 ,,Leather Industries Laboratories and Workshops18 ,,
Chemical Laboratory <t< td=""></t<>
Leather Manufacture, Introductory Course (L. I) 3 ,,Second YearPer week.Chemistry F3 (Organic) 3 hrs.Materials used in Leather Manufacture (L. II)Analytical Chemistry of Leather Manufacture (L. III) 2 ,,Chemical Laboratory (Organic) 6 ,,
Second YearPer week.Chemistry F3 (Organic) 3 hrs.Materials used in Leather Manufacture (L. II)Analytical Chemistry of Leather Manufacture (L. III) 2 ,,Chemical Laboratory (Organic) 6 ,,
Chemistry F3 (Organic)3 hrs.Materials used in Leather Manufacture (L. II)2Analytical Chemistry of Leather Manufacture (L. III)Chemical Laboratory (Organic)6
Chemistry F3 (Organic)3 hrs.Materials used in Leather Manufacture (L. II)2Analytical Chemistry of Leather Manufacture (L. III)Chemical Laboratory (Organic)6
Materials used in Leather Manufacture (L. II)2Analytical Chemistry of Leather Manufacture(L. III)Chemical Laboratory (Organic)6
Analytical Chemistry of Leather Manufacture (L. III) 2 ,, Chemical Laboratory (Organic) 6 ,,
(L. III) 2 ,, Chemical Laboratory (Organic) 6 ,,
Chemical Laboratory (Organic) 6 "
Chemical Laboratory (Organic) 6 "
Leather Industries Laboratories and Workshops 18 "
Third Year Per week.
Principles and Methods of Leather Manufacture
(L. VI) 3 hrs.
Technical Microscopy and Bacteriology (L. V)
Leather Industries Laboratories and Workshops
(including Leather IV) 20 "

LECTURE COURSES

LI. Introductory Leather Manufacture

Lectures and demonstrations on Mondays, Wednesdays and Fridays, at 9 a.m., throughout the session.

An elementary general course on leather manufacture, dealing with the anatomy of hide, soaking, liming,

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deliming, bating, etc., and the chief tanning processes, both vegetable and chrome. The course includes the elementary study of tanning materials, oils and fats, etc.

LII. Materials used in Leather Manufacture

Lectures on Tuesdays and Thursdays at II a.m., throughout the session.

Anatomical structure of skin.

General chemistry of proteins, especially those occurring in hide.

Chemistry of technical water; water softening; influence of constituents on tannery processes.

Depilatories; deliming materials; natural and artificial bating materials.

Vegetable tanning materials; chemistry of tannins; synthetic tannins.

Mineral tanning materials. Special chemistry of chromium, iron, and aluminium compounds.

Soaps, oils, fats, and waxes.

Finishing materials, including starches, gums, mucilages, resins, albumens, glues, pigments, nitrocellulose and its solvents, etc.

LIII. Analytical Chemistry of Leather Manufacture

Lectures on Mondays, Wednesdays and Fridays at 12 noon, throughout the session.

The analytical investigation of waters; liming and deliming materials; lime liquors; tanning materials; extracts; tanyard liquors; gelatine; glue; soaps, oils, fats and waxes; sulphonated oils; mineral and vegetable tanned leathers; tannery effluents; etc., etc.

Methods o determination of pH.

These lectures will supplement the analytical textbooks in use in the Leather Industries Laboratories.

LIV. Leather Dyeing and Finishing

Tuesdays, 2-5 p.m. throughout the session.

A course of lectures dealing with the chemistry and modes of application of dyestuffs, and also practical work beginning with the dyeing of samples and proceeding to the colouring and finishing of whole skins.

Lv. Technical Microscopy, &c.

Lectures and practical work at times to be arranged.

The use of the microscope in the examination of skin and leather, and in the detection of adulterants, in connexion with work carried on in the laboratories. The bacteriology and mycology of leather manufacture, including some introduction to general technical bacteriology.

Students are encouraged to provide their own microscopes, but will be allowed to use those of the Department as far as they are available. For bacteriological work a I/I2th inch oil immersion objective and substage condenser is required; but for the technical microscopy a simpler microscope will suffice.

Lv1. Principles and Methods of Leather Manufacture

Lectures on Mondays, Wednesdays and Fridays, at' II a.m. throughout the session.

The preservation of raw hides and skins. Soaking, sweating, liming and other methods of depilation. Unhairing, fleshing and rounding. Deliming, bating, puering and drenching.

The grinding and leaching of tanning materials and the manufacture of extracts. The vegetable tanning process

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in general and the manufacture of sole, belting, harness and dressing leathers in particular. Currying. Manufacture of moroccos and other fancy leathers. General principles of mineral tannages. Chrome one-bath and two-bath process, and the manufacture of box calf, glove kid, chrome sheep, etc.

Chrome sole and chrome leathers for technical purposes.

Alum tannages and the manufacture of glove and clothing leathers.

Oil tannages. Chamois. Buff leather. Fat leathers. Crown and Helvetia leather.

Tannages by means of formaldehyde, quinone, and synthetic tannins.

Combination tannages and the manufacture of a variety of commercial leathers made by such combination processes.

Patent leather manufacture.

Leather dyeing and finishing.

Utilisation of bye-products and disposal of tannery waste.

Lv11. Physics and Chemistry of Leather Manufacture

(Honours and M.Sc. Course).

Lectures throughout the session on Tuesdays, Thursdays and Saturdays at 10 a.m.

Surface tension and surface energy; adsorption; theory of emulsification and properties of technical emulsifiers.

Structure and properties of jellies.

Ionic equilibria; special theory of titration curves; hydrolysis; theory and determination of hydrogen ion activity (pH); applications in leather manufacture.

Chemistry of chromium salts and chrome liquors.

Courses in Technology

General and physical chemistry of proteins, including Donnan equilibrium, theory of swelling, etc.

Chemistry of vegetable tannins.

Current theories of tanning.

Private Research

Persons prosecuting private industrial investigations under the supervision of the head of the department can be admitted as research students at the rate of $\pounds 6$ per month.

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SCHOLARSHIPS TENABLE IN THE LEATHER INDUSTRIES DEPARTMENT

William Walker Exhibitions

These exhibitions are intended to enable students to obtain at Leeds University scientific instruction of an advanced character in the Technology of Coal and its bye-products and in the Technology of Leather. Each exhibition is of the annual value of from f_{70} to f_{90} and (subject to the condition named below) is tenable for three years, with power of extension by the trustees for a fourth year in the case of an exhibitioner who has shown exceptional promise during his course of training at the University. The continuation of the exhibition each year after the first will depend on the work done by the exhibitioner in the previous year being reported to the Trustees as satisfactory. The Trustees may, if they think proper, divide the income of each exhibition between two candidates, or only award part of it in certain cases, as determined by circumstances.

Candidates for election to the exhibitions must be natives of, or living in the Poor Law Unions of Whitehaven and Bootle, except the Urban District of Millom, and must be between the ages of 16 and 22.

Applications for leave to enter for the examination and any inquiries for further information should be addressed to the Secretary, Mr. A. C. Clifford, Secondary School, Whitehaven.

Procter Memorial Fellowship

The Procter Memorial Fellowship was established by the International Society of Leather Trades' Chemists to commemorate the services of the late Emeritus Professor Henry Richardson Procter to the science of leather manufacture, the endowment fund being subscribed by members of the Society and of the leather and allied trades.

The value of the Fellowship is approximately £140 per annum.

The award of the Fellowship is made annually by the Senate of Leeds University in June on the recommendation of the Procter Fellowship Committee after due advertisement in the Journal of the Society. Normally, the person appointed to the Fellowship will be a graduate in leather chemistry or possess an equivalent qualification of an institution of University status.

The Fellow, who may be of any nationality, will be appointed for a period of one academic year, but the Committee has power to recommend that the holder be reappointed for a further period of not longer than one academic year instead of proceeding to make another appointment.

The University undertakes to provide free of charge all reasonable accommodation and apparatus for the prosecution of research which shall be carried out under the direction of the Professor of Leather Industries. If no election to the Fellowship be made in any year the income for that year shall be added to the capital fund.

The Fellow will be required to devote the whole of his time to research on a subject pertaining to the leather or allied industries.

The results of his work must be presented as a report to the Senate and to the Procter Fellowship Committee.

Applications should be in the hands of the Registrar of the University not later than 1st April in each year.

For further particulars of Scholarships tenable in the Leather Industries Department, see the Scholarships Prospectus.

DEPARTMENT OF AGRICULTURE

Head of the Department :	Professor N. M. COMBER, D.Sc., A.R.C.S., F.R.I.C.
	FEACHING STAFF
Agriculture	
Professor :	J. McGREGOR, B.Sc., N.D.A., N.D.D.
Clive Behrens	
Lecturer :	Vacant.
Senior Lecturer and Honorary Reader in Crop	
Husbandry :	H. I. MOORE, Ph.D., M.Sc., Dip. Agric. N.D.A.
Senior Lecturer :	T. G. BOAZ, M.A., Dip. Agric.
Lecturer and Farm Director :	J. K. LAMBERTON, B.Sc., N.D.A., N.D.D.
Agricultural Bacteriol	logy
Senior Lecturer .	LZ WOLF MSc

Senior Lecturer :	J.	Z.	WOLF, M.Sc.
Lecturer :	Α.	N.	BARKER, M.Sc., Ph.D.

Agricultural Botany

Senior Lecturer :	S. BURR, M.Sc.	
Lecturers :	A. POWELL-JONES, M.Sc.	
	Miss D. M. TURNER, B.Sc., Dip. Hort.	

Agricultural Chemistry

Professor:	N. M. COMBER, D.Sc., A.R.C.S., F.R.I.C.
Senior Lecturer :	J. S. WILLCOX, B.Sc., A.P.I.C.
Lecturer :	W. N. TOWNSEND, B.Sc.
Demonstrator :	E. DRUCE.
Research Assistant :	D. V. CRAWFORD.

Agricultural Economics

*Advisory Economist : W. H. LONG, M.A. *Senior Technical A. G. JEFFREY, B.Com. Assistant: Assistant Lecturer : V. M. WADSWORTH, B.Sc. *Technical Assistants E. DAWSON, B.Sc., N.D.A., N.D.D. A. E. COX, B.Sc. A. L. FIRTH, B.Sc. One Vacancy

Agriculture

Agricultural Engineering

Lecturer : G. MURRAY, B.Sc., N.D.A., N.D.D.

Agricultural Zoology

Senior Lecturer :	L.	R. JOHNSON, M.Sc.
Lecturer :	R.	CARRICK, B.Sc., Ph.D.

Veterinary Hygiene

Fart-time Lecturer : P. L. SHANKS, B.Sc., M.R.C.V.S.

Senior Laboratory Steward G. E. TEASDALE.

Senior	Clerk		 Miss	D.	Mitchell.
Senior	Clerk		 Miss	L.	H. SHARPER.
Clerk,	Grade	I	 Miss	О.	BARKER.
Clerk,	Grade	3	 Vaca	nt.	
Clerk			 Miss	J.	FOSTER.

*Employed under a Grant from the Ministry of Agriculture.

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DEPARTMENT OF AGRICULTURE

INTRODUCTION

The Courses given in the Department are designed to meet the educational needs of those who intend to become farmers, farm managers, teachers or research workers in Agriculture.

Whilst practical demonstrations on the farm are an essential part of the teaching, no facilities are provided by the University for acquiring that practical acquaintance with farm operations and the business of farming which is essential for all who intend to follow an agricultural career—with the exception perhaps of those who intend to become specialists in the agricultural sciences, and it is a condition of entry to the Courses for the ordinary degree of B.Sc., and for the University Diploma in Agriculture, that candidates shall have had a practical training for at least 12 consecutive months on an approved farm.

The Head of the Department will be glad to make appointments with prospective students and their parents in order to discuss with them the proposed course of study, and where necessary, to advise as to a suitable farm on which practical training may be obtained.

ADMISSION OF STUDENTS, etc.

For conditions of admission, University Terms, Fees. etc., see separate pamphlet.

COURSES OF STUDY

The following courses are provided :---

I. Course for the degree of B.Sc.

II. Course for the University Diploma in Agriculture.*

In addition to these courses certain post-graduate courses for graduates in Agriculture, Economics and the Agricultural Sciences are under consideration.

Before beginning their respective courses students are required to consult the Head of the Department with regard to their subjects, and also to discuss with him their previous experience of farm work.

Syllabuses of the courses of lectures included in the courses of study but not provided in the Department of Agriculture will be found in the prospectuses of the appropriate Departments.

I. Course for the Degree of B.Sc.

Candidates will be required to have spent at least one complete year of 12 consecutive months on an approved farm before entering upon their course of study. Exemption will only be granted in exceptional cases. Candidates must attend the following courses and pass the appropriate examinations :—

First Year.

Introductory Botany. Introductory Chemistry. together with two of the following :---General Economics. Introductory Geology. Mathematics for Applied Science students. Introductory Physics. Introductory Zoology. Second Year. Agriculture, FI, F3 and F4. Agricultural Botany FI. Agricultural Bacteriology FI.

Agricultural Chemistry F2 or F3.

Economics I. (if not taken in 1st year).

Agricultural Economics F1.

Veterinary Hygiene F1.

*This course covers most of the requirements for the examination for the National Diploma in Agriculture.

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Third Year.

Agriculture F2, F5 and F6. Agricultural Chemistry F3 or F2. Agricultural Economics F2. Agricultural Zoology F1.

II. Course for the University Diploma in Agriculture

This Course covers most of the requirements for the Examination for the National Diploma in Agriculture,* awarded jointly by the Royal Agricultural Society of England and the Highland and Agricultural Society of Scotland. Attendance during the Summer (Third) Term is required only in the first year of study, and farmers' sons are thus able to obtain a full course of instruction between harvest and seed time, and, except in the first year, to devote the spring, summer and harvest time to practical work at home.

Regulations

Applicants for the Diploma Course are required to satisfy the Head of the Department :---

- that they have worked for at least twelve consecutive months on an approved farm and have an adequate knowledge of practical farming;
- (2) that their general educational attainments are adequate.

Candidates for the Diploma are required :---

- (a) to give satisfactory attendance in the subjects which form part of the course of study:
- (b) to present themselves for the Departmental examinations in the subjects forming a part of their course of study; (The results of the Departmental examinations will be taken into account along with those of the Diploma examination.)
- (c) to make formal entry, on the prescribed form, not later than 15th January of the last session of the course and to pay at the same time the prescribed examination fee;

* The Regulations and Syllabus for this Examination may be obtained from The Secretary, N.D.A. Examination Board, 16, Bedford Square, London, W.C.

- (d) to satisfy the Examiners in the subjects subsidiary to Agriculture, by the Departmental examinations held during and at the end of the course;
- (e) to pass the Diploma examination in Agriculture held at the end of the course.

A student producing evidence of adequate previous scientific or practical training may, upon application to the Senate, be exempted from a portion of the normal course, and may qualify for the Diploma upon a shortened period of study.

Course of Study							
F	irst Year (three terms).		Hours per week.				
	Agriculture		Occasional Farm				
	8		Classes.				
	Agricultural Botany		4 (6 in Summer Term).				
	Agricultural Chemistry and		+ (
	Physics		11 (8 in Summer Term).				
	Agricultural Economics	÷.	3 (3rd Term).				
	Agricultural Surveying	11	I (1st and 2nd Terms).				
	Algineururar Surveying		3 hours field work (3rd				
			Term only).				
	Agricultural Zeelegu						
	Agricultural Zoology	4.4	4 (2nd Term only).				
	Geology	**	5 (1st and 2nd Terms				
	7 T7 / TT7' / /)		only).				
eco	and Year (two Winter terms).						
	Agriculture F1	11	6 (including 3 hours				
			Farm class).				
	Agricultural Botany		5				
	Agricultural Chemistry		. 5				
	Agricultural Economics		5 5 5				
	Agricultural Engineering		3 (and occasional Farm				
	0 0 0		classes).				
	Agricultural Zoology		4				
	Veterinary Hygiene F1		4				
7	hird Year (two Winter (erms).		7				
-	Agriculture (including Dairy						
	Husbandry) F2 and F5		II (including 3 hours				
	inusbandry) 1.2 and 1.5						
	A to H I D de dela		Farm class).				
	Agricultural Bacteriology	••	3				
	Agricultural Chemistry	••	7				
	Agricultural Economics	••	4				
	Horticulture	• •	1 (1st Term only).				
	Poultry Husbandry		2 (1st Term only).				

Farm Classes

All students taking a full course in Agriculture will be required to attend farm classes as arranged and to pay their travelling expenses in connection with them.

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Chemical, Bacteriological, Botanical, and Zoological Laboratories

Degree and Diploma Courses

Students must pay at the beginning of each session a deposit of 20/- to cover the cost of replacing broken apparatus, etc. This deposit will be paid with the Tuition Fee and will be repaid at the end of the session after deducting cost of breakages, etc.

Microscopes

Microscopes may be had on loan from the University at the following charges :---

Agriculture :

Elementary	15s. od. per session.	
Advanced	$\dots \notin I$ os. od. per session.	
Agriculture plus	Botany or Zoology:	
	£1 2s. 6d. per session.	
	£1 10s. od. per session.	
Agriculture plus	Botany and Zoology:	
Elementary	£I IOS. od.	
Advanced	$\dots f_2$ os. od.	

Research and Laboratory Work

The laboratories of the Department (Chemical, Bacteriological, Botanical and Zoological) are open to those students prosecuting research, or who require special practical training. The fees, &c. are as stated in the University Calendar.

Time Tables

Time tables will be posted on the Departmental Notice Boards. Students are expected to acquaint themselves with these and any alterations in them which may be posted up from time to time.

Prizes

Certain prizes are available each year. Full particulars can be seen in the University Calendar and on the Departmental Notice Board. Courses in Technology

SYLLABUSES

For Syllabuses of Courses in other Departments included in the courses of study for the degree of B.Sc., see prospectuses of the appropriate Departments.

Agriculture

FI and Second Year Diploma Course

Soils, Manures, Etc.

First and Second Terms—3 Lectures a week and Demonstration Classes as arranged.

Soils.—Their nature, functions, origin, and wasting. Texture and general characteristics. Soil temperature. Soil water and its conservation. Relations between the soil and the plant. Composition of soils; potential and available plant food.

Characteristics, classification, and distribution of soils. Chief types of Yorkshire soils.

Farm drainage. Irrigation. Sewage farms. Warping, claying, marling, chalking, liming, paring and burning, clay-burning.

The object, execution, and results of the various tillage operations. Mechanical cultivation.

Manures.—Characteristics of the various nitrogenous, phosphatic, and potassic manures in common use. Conditions affecting their successful application. Their specific effects on the various farm crops. Farm-yard manure; its production, variation, preservation, and application. Liquid manure. Composts. Green manuring.

Rotations.—The rotation of crops. Arrangements of cropping according to the system of farming adopted. Changes in rotations to meet present-day conditions.

Seeds, Grasses, and Pastures.—Common grasses and clovers, their suitability for different soils and local conditions. Laying down land to permanent pasture.

"Seeds" mixtures. Treatment of new grass land. Management of old-established grass. Deterioration of grass land; its causes and remedies. Hay-making.

Silage.—Different types of silage and their production. The system of ensilage. Suitable crops.

Experiments.—The lay-out of field experiments and the interpretation of the results obtained. Results of recent experiments with farm crops.

DEMONSTRATION CLASSES.

Every opportunity is taken of bringing the students into close contact with the practical operations on the farm. Regular visits are paid to farms where the approved methods of crop and stock management are exemplified and can be followed in detail. Arrangements are also made for the students to visit other places of educational interest, *e.g.*, Bacon factory, Sugar Beet factory, etc. One afternoon each week is reserved for such visits.

F2 and Third Year Diploma Course

DAIRY HUSBANDRY.

First and Second Terms. 2 Lectures a week and demonstration classes as arranged.

Systems of Dairying.—Milk-selling, butter-making, and cheese-making farms; comparison of different types and returns from the different systems. Selection of a dairy farm.

Dairy Cattle.—Points of a good dairy cow. Breeds; Dairy and Dual-purpose types. Suitability of breed for system of dairying practised.

General management.—(a) Breeding: Establishment of dairy herd. Milk recording and value of milk records. Stock bull. Rearing of calves and young stock.

(b) Feeding: Constituents of feeding stuffs. Homegrown and purchased foods. Feeding standards: Balancing of rations. Feeding practice.

(c) Housing.

Milk.—Composition. Factors influencing yield and quality. Production of clean milk : Grades of milk. Processing of milk : Milk distribution and town supplies. Taints and other faults in milk and their prevention.

Cream and Butter.—Methods of separation; the mechanical separator. Marketing of cream. Ripening of cream for butter-making; use and propagation of "starters." Manufacture of butter. Preservation of butter. Butter faults and their prevention.

Cheese.—Process of cheese-making. Manufacture of rennet and annatto. The acidimeter and acidity tests. Types of cheese; hard-pressed, soft, and blue-veined cheese. Ripening of cheese. Faults in market cheese.

General.—Creamery system. Manufacture of dairy produce on large scale. Legislation affecting dairying and dairy produce. Stocking of dairy farms.

F3

Implements, Machinery and Building Construction.

First and Second Terms—Two Lectures a week and occasional demonstration classes.

For syllabus see Agricultural Engineering Parts II and IV.

F4

LAND SURVEYING AND LEVELLING

First and Second Terms—I Lecture a week; Third Term.—Field class, I per week.

For Syllabus see Agricultural Engineering Part I.

F5 and Third Year Diploma Course

CROPS, ETC.

First and Second Terms—5 Lectures a week and farm classes as arranged.

Crops and Cropping.—Characteristics, habits, cultural requirements and management of the various arable land crops. Variation in yield, composition and quality according to local conditions and treatment. Factors

to be considered in the selection of varieties. Costs of production of the different crops. Agricultural statistics.

Farm Management.—Management of farm labour. The different systems of farming and farm management.

Taking and Stocking a Farm.—Considerations involved in the valuation and taking of farms. Times of entry. Yearly and other tenancies. Leases and agreements. Acts of Parliament affecting landlord and tenant. The tenant's capital and its distribution. Live and dead stock required. Valuation of tenant right and of live and dead stock.

LIVE STOCK.

Principles of Breeding.—Mendelian laws, Chromosome theory of inheritance. Linkage and Sex Linkage. Multiple Factor Hypothesis. The selection of animals for breeding. In-breeding, Line-breeding, and Crossbreeding.

An analysis of the improvement of live stock in relation to economic, climatic, and nutritional factors. Breeding of pedigree live stock. Shows and showyard standards. Origin, history, and description of British breeds of horses, cattle, sheep, and pigs.

Standards of merit : judging of live stock. The Live Stock Improvement Scheme.

Principles of Feeding.—Composition and general properties of common feeding stuffs.

Processes of digestion, assimilation, and utilisation of foods in the animal body. The comparative value of foods. Feeding standards and balanced rations for different classes of live stock. Selection, preparation, and use of feeding stuffs.

Management of Live Stock.—Horses. Breeding Mares. Foaling, weaning and rearing. Breaking and preparation of young horses for sale. Feeding and management of working horses. Cost of rearing working horses.

Beef Cattle.—Feeding and management of breeding cows under different systems of calf rearing. Rearing of store cattle.

Production of Baby Beef and fattening of mature cattle in yards during winter, and on grass during summer.

Cost of production of mature beef and of baby beef.

Sheep.—Systems of flock management with different breeds and in different districts. Fat lamb production in permanent and temporary flocks. Fattening of hoggs on roots and on grass. The properties and uses of different classes of wool.

The shepherd's calendar.

Cost of production of fat lamb and of mutton.

Pigs.—Selection of breeds for pork and for bacon production. Management of breeding sows under out-door and in-door systems. Weaning, rearing, and fattening of pork and bacon pigs.

Cost of production of pork and bacon pigs. Buying and selling of live stock.

DEMONSTRATION CLASSES.

The classes will be on the same lines as for the FI course.

F6

Third Term only.—A special course of lectures dealing with recent research work in Agriculture.

HI

A course of Advanced Lectures specially designed for Honours students.

Agricultural Bacteriology

Third Year Diploma Course

First and Second Terms-5 hours per week.

An introduction to general bacteriology. The morphology and physiology of bacteria. Bacteriological technique, including the preparation of media, staining methods and handling of cultures. The microbiology of soils, manure, silage and water. The bacteriology of milk and dairy products. Milk testing. Disease, infection and resistance

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F1 Course

First and Second Terms—5 hours per week. Third Term—2 hours per week.

(a) An introduction to General Bacteriology.—Bacterial morphology and physiology. Bacteriological variation. Bacteriological technique, including the preparation and use of media, staining methods, and the isolation of pure cultures. The morphological and cultural characters of bacteria. Bacteriological classification. Bacteriology of water and sewage.

(b) The Bacteriology of Milk.—Numbers and types of bacteria in milk. Abnormalities in milks. Milk processing and its effect on the microflora. Isolation of starter organisms. The bacteriology of dairy products.

(c) The Bacteriology of Soil.—The soil population and variability of soil counts. Physiological groups of bacteria and their influence on the composition of the soil. Soil conditions and their effects on the microflora. Partial sterilisation. The bacteriology of manure and silage.

Agricultural Botany

First Year Diploma Course

First and Second Terms—4 hours a week. Third Term.—6 hours a week.

Section 1.—The functions of plants in relation to their structure. Germination, growth, assimilation and elaboration of food materials, respiration, transpiration, storage of food, fertilisation and reproduction. The structure of stems, roots, flowers, and seeds. Forms and modifications of various parts of the plant, and the adaptation of plants to their surroundings.

Section 2.—The more important Fungoid diseases of agricultural importance, preventive and remedial measures.

Section 3.—The principles of classification and systematic Botany.

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Section 4.—The structure of a grass. The recognition of grasses by their vegetative, floral, and seed characters.

(Sections 3 and 4 are closely correlated with the field excursions; see below.)

Excursions.—Botanical excursions are made on one afternoon each alternate week during the Summer term.

Second Year Diploma Course

First and Second Terms.-5 hours a week.

The morphological and physiological characters of flowering plants with special reference to plants of agricultural importance. The constitution of the flora of meadows and pastures. The recognition of impurities in seed samples. Weeds in farm crops and methods for their eradication. The elements of plant breeding.

FI Course

I Lecture and 4 hours laboratory work a week.

The detailed structure of a Wheat plant as a type of the Gramineae. Differences in structure between Wheat, Barley, Oats, and Rye. Varieties of cereals and their outstanding characteristics.

The structure of a grass and the recognition of grasses by their vegetative and floral characters. The constitution of the flora of grassland, and the changes produced by manurial treatment. The Botanical characters of the various Farm crops. Varieties of Potatoes, Turnips, Mangels, &c., Clovers and "Seeds" mixtures. Weeds of arable and grass land and their eradication. The recognition of impurities in seed samples. Plant breeding.

A study of the more important Fungoid diseases of agricultural importance.

General Chemistry, Physics and Geology

First and Second Terms—5 lectures and 6 hours laboratory work a week.

Third Term.—4 Lectures and 4 hours laboratory work a week.

Agricultural Chemistry

Second Year Diploma Course

First and Second Terms.--2 Lectures and 3 hours laboratory work a week.

The principles of organic chemistry.

F1 and Third Year Diploma Course

First and Second Terms.—4 Lectures and 3 hours laboratory work a week.

SECTION (a)

Syllabus similar to F2 course but lectures adapted to the requirements of Diploma students.

SECTION (b)

Syllabus similar to F3 course, but lectures adapted to the requirements of Diploma Students.

F₂ Course

Two Lectures and 6 hours laboratory work a week.

The Plant in relation to the Soil and the Air.

The Soil:

(a) Introduction.—The literature of the subject. The distinction between soils and soil material.

(b) Soil Material.—The origin and composition of soil material. Colloidal properties—mechanical analysis of soil particles—soil water and air—soil temperature—base exchange—lime status—plant food and its availa-bility—soil analysis— plot and pot experiments.

(c) Soils.—The formation and classification of soils.

Manures and Fertilizers :

Farmyard manure. Production, composition, commerical value, characteristic and secondary effects of fertilizers, lime, etc. Various by-products and waste materials. The Fertilizers and Feeding Stuffs Act. The planning of manurial trial and the interpretation of their results.

F3 Course

Two lectures and 6 hours laboratory work a week.

Animal Nutrition.-The Literature of Animal Nutrition and Dairy Science. The Composition of the Animal Body and of the Feeding Stuffs. Digestion and Digestibility. Absorption. Circulation, Respiration and Excretion. The Metabolism of Proteins, Fats and Carbohydrates. The Minerals and Vitamins. The Methods used in ascertaining the Nutritive Values of Foods and the Nutritive Requirements of Animals-Feeding Trials-Comparative Slaughter Tests-Carbon, Nitrogen, Energy and Mineral Balance Experiments---Colorimetry, Gross, metabolisable and nett energy-Starch Equivalents-Nett Energy Values-Feeding Standards. The Calculation of Rations. The Feeding Stuffs: their Classification, Manufacture, Composition, Monetary and Manurial Value. The Fertilizers and Feeding Stuffs Act.

Dairy Products.—Full chemical and physical description of milk; the variations in its composition and the factors influencing this. Preservation, and adulteration of milk. Colostrum. Cream. Chemistry of cheesemaking and cheese ripening. Whey. Theory of butter manufacture. Composition and adulteration of butter. Butter milk.

Insecticides, Fungicides, Sheep Dips, etc.

Agricultural Economics F1 Course

Two Lectures a week.

(a) Pre-manorial times.—The manor and agriculture under the manorial system. The decay of the manor. The Tudor Enclosures and the Domestic System Improvements in Farming. The Second Enclosure Movement and the Industrial Revolution. The passing of the yeoman farmer and the appearance of the landless labourer. Farming in the 19th Century. The Napoleonic Wars. The depression that followed them; the Poor Laws, the Corn Laws, Tithe. "The golden

age of English farming." The depression of the 'eighties and 'nineties. 1900-1914. First World War period. 1921-1931. 1931-1939. The History of Small Holdings and Land Settlement.

(b) Farm Management.—The importance on profits of types of farming, size of business and efficiency factors. Factors that influence types of farming. Measurement of size of farm business. Efficiency Factors. Methods of studying farm management problems : cost accounts, financial accounts, farm surveys, enterprise costs. Intensity of production. Specialised v. Mixed farming. The balance of a farm.

F2 Course

(a) Marketing.—Principles of marketing agricultural products; functions of producers and middlemen. Study of the marketing of typical products. Prices and Index numbers. Organisation of marketing; the Agricultural Marketing Acts, 1931 and 1933. Marketing Schemes. Other legislation affecting marketing. The National Mark. Wartime control of marketing.

Co-operation. Principles. Types and development of co-operation in agriculture at home and abroad. Producers; Purchasing, Marketing and Credit Societies.

Credit requirements in agriculture ; long and short term credit. Sources of credit. Agricultural Credit Acts, 1923 and 1928. Subsequent legislation.

(b) Economic Theory applied to Agriculture.—Special conditions governing prices of agricultural products. Supply of, and demand for, agricultural products. The law of diminishing returns. Rent. Comparative Costs. Quotas, tariffs, subsidies.

Land Tenure. Farm Layout. Labour.

Comparative Agriculture.—Farming in Europe and the New World. Agriculture and Food Policy. Farming in Wartime.

Diploma Course

First Year.—2 lectures and one Tutorial class a week. (Third Term only).

Courses in Technology

Book-keeping.—General Principles of Book-keeping. Single and double entry systems. Financial accounts. Analytical Cash Book. Ledger and three column Cash Book. Journal, Purchase and Sales Book. Preparation of Profit and Loss Account, Capital Account and Balance Sheet. Partnership Accounts. Income Tax. Preparation of Income Tax Returns. Claims and allowances. (Continued in Second Year.)

Second Year.-5 lectures a week.

For Syllabus see F1 and *Book-keeping* above. Third Year.—4 lectures a week. For Syllabus see F2.

Agricultural Engineering and Surveying

PART I. LAND SURVEYING AND LEVELLING

Agriculture F4 and First Year Diploma Course

First and Second Terms.—One lecture a week. Third Term.—One field class a week.

Surveying.—Chain surveys. Principles involved. Chains. Arrangement of lines and method of proving the work. Sources of error and precautions to be adopted. Chaining past obstacles. The field book. Scales. Plotting the survey. Calculating areas from the field notes by give-and-take lines; by the computing scale : and by the planimeter. Instruments.

The maps of the Ordnance Survey, their value to the land agent and farmer.

Levelling.—Various types of Levelling instruments and staffs. Bench marks. Booking the readings and working out the reduced levels. Checking the level book. Proving the field work. Contours. Curvature and refraction.

During this course a farm or estate survey, involving the use of all the instruments mentioned above, is made and levels are also taken, the plan and sections are plotted in the drawing office as the work in the field proceeds.

PART II. BUILDING CONSTRUCTION

Agriculture F3 and Second Year Diploma Course

First and Second Terms.—One lecture a week

Homesteads for different classes of farms. Design and arrangement of farm buildings with a view to economy of construction and farm labour. Selection of site. Foundations. Materials and details of construction. Lighting. Ventilation. Drainage. Water supply. Alterations. Temporary buildings. Repairs. Dimensions of cow-stalls, stables, etc. Approximate costs.

PART III. ENGINEERING

Second Year Diploma Course

First and Second Terms.—One lecture a week.

Applied Mechanics.—The Principle of Work, Machines. Friction. Stress, Strain, and Elasticity. Factor of Safety. Stresses in Simple Structures.

Power Transmission.—Pulleys and belting. Strength of Belts. Toothed gearing. Shafting and bearings. Lubrication. Chains. Lifting appliances.

Boilers.—Cornish, Lancashire, Vertical and Tubular. Principles, construction, and management. Fittings.

Steam, Gas, Oil, and Petrol Engines.—Principles and construction. Testing. Determination of I.H.P. and B.H.P. Mechanical efficiency. Dynamometers. Consumption of fuel and water. Concrete foundations.

Hydraulics.—Flow of water through pipes and channels. Measurement of quantity of water flowing in a stream. Power available from falling water. Water wheels, turbines, pressure motors. Pumps.

Windmills.—Construction and power.

Electricity.—The uses of electricity on the farm. Units. Lighting. Fuses. Switches. Motors. Dynamos. Power.

Costs and Working Expenses.

PART IV. IMPLEMENTS, MACHINERY.

Agriculture F3 and Second Year Diploma Course

First and Second Terms.—One lecture a week and occasional demonstration classes.

Implements for the preparation of the soil—for planting and harvesting crops. Machinery for the preparation of food—for the dairy. General principles underlying their construction and mode of action prices.

Agricultural Geology

First Year Diploma Course

First and Second Terms—I lecture a week. Excursions and practical work to be arranged.

Structure and composition of earth's crust. Volcanic activity. Characteristics of the common rock forming minerals. Formation and classification of igneous, sedimentary and metamorphic rocks. Earth movements.

Climatology. Weathering of rocks. Soil formation. Denudation and action of rivers, sea and ice. Drift deposits.

Historical geology of Great Britain. Geological maps, their interpretation and use. Water supplies.

Agricultural Zoology

First Year Diploma Course

One Term only :--- 4 hours a week.

An elementary course on the anatomy and physiology of the mammal. Embryology of the fowl.

Second Year Diploma Course

First and Second Terms :-- 4 hours a week.

An introductory course on the structure, biology and classification of insects with special reference to orders of Agricultural importance. Recognition, biology and economic importance of molluscs, arachnids, myriapods, birds and mammals. Life history and control of insect

and allied pests of crops. Identification, life history and agricultural importance of internal and external parasites of domestic animals. The principles of pest control.

FI Course

Four hours a week.

The course covers the general systematics and biology of animals groups important to agriculture, with detailed life histories and control of important pests of crops and parasites of stock.

(a) Entomology.—Anatomy and physiology and development of insects. Classification and biology of important insect orders.

(b) *Plant Pests.*—Identification, life history and control of important plant pests—insects, arachnids, myriapods, molluscs and plant parasitic nematodes.

(c) Parasitology.—Recognition and bionomics of external parasites of domestic animals—insects, mites and ticks. Structure and classification of trematodes, cestodes and nematodes. Life histories and bionomics of important species of helminth parasites. An outline of the more important protozoan parasites of domestic animals.

(d) Birds and Mammals.—Recognition and agricultural status of common species.

(e) Principles of Control.—Principles of animal ecology. Relationship of pests to their environment; cultural and biological methods of control. The nature and use of insecticides. Legislative measures.

HI and H2 Course

Third and Fourth Years.—An extended course in entomology and helminthology; protozoa of the soil; pathogenic protozoa.

Veterinary Hygiene

F1 and Second Year Diploma Course

First and Second Terms.—4 Lectures a week and occasional Demonstration classes.

Courses in Technology

Anatomy and physiology of farm animals. The nature of disease. Inflammation and repair of tissue. The Scheduled Diseases and the laws governing their control. Recognition of the common ailments of farm livestock. Laboratory methods employed in diagnosing specific diseases and the methods adopted to prevent the spread of infection. Recent advances in chemotherapy.

Demonstration Classes.

Post mortem examination technique. Laboratory tests for the diagnosis of disease. Morbid specimens.

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SCHOLARSHIPS AND EXHIBITIONS TENABLE IN THE DEPARTMENT OF AGRICULTURE

In addition to the general scholarships for University Courses awarded by the University* and by Local Education Authorities which could normally be used for Courses in the Department of Agriculture the following special Agricultural Exhibitions and Scholarships are available, full particulars of which can be obtained from the Secretary, Department of Agriculture, The University, Leeds :--

County Agricultural Exhibitions.

The County Councils of the three Ridings of Yorkshire offer special Exhibitions tenable in the Department of Agriculture for the sons and daughters of farmers and others who can show that they are likely to profit from an Agricultural Course.

Ministry of Agriculture Scholarships for the Sons and Daughters of Agricultural Workmen and others.

These Scholarships are of three types :---

- (a) Junior :—For short courses up to one session's duration.
- (b) Extended Junior :—For the further training of selected candidates who have held Junior Scholarships.
- (c) Senior :--For Degree and Diploma courses in Agriculture at Universities and Agricultural Colleges.

*For details see separate Scholarships Prospectus.

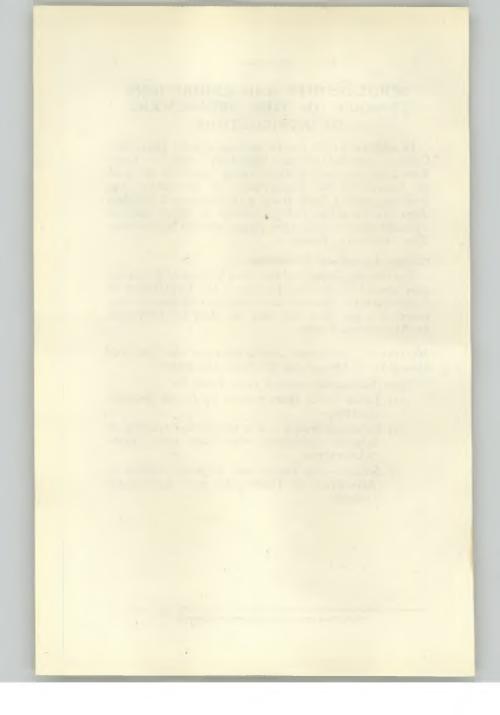






TABLE A.

COURSES FOR THE DEGREES OF M.B. AND Ch.B. UNIVERSITY OF LEEDS.

PRE-CLINICAL PERIOD. Students commence the pre-clinical period in October after satisfying the pre-registration requirements.

	LECTURES AND LABORATORY COURSES.	EXAMINATIONS.
PRE-CLINICALPERIOD		
Ist YEAR. Ist and 2nd Terms.	Organic and Physical Chemistry, Botany and Zoology. Mathematics.	First Examination, Parts I. and II. (March and June).
3rd Term.	Introductory Anatomy, Bio-chemistry.	
2nd YEAR. 1st, 2nd and 3rd Terms.	Anatomy and Physiology, and an optional non-medical subject.	13 13 1 TA
3rd YEAR. 1st Term.	Anatomy and Physiology, Psychology.	
2nd Term.	Anatomy, Physiology, Pharmacology.	Second Examination (March and September).

TABLE B.

		ermitte commence hospital work in July.	1
	LECTURES AND LABORATORY COURSES.	CLINICAL WORK,	Examinations,
IST CLINICAL YEAR 3rd Term. IST Term. 2nd Term.	 Pharmacology, Bacteriology and Immunology, Introductory Medicine and Surgery, Psychology. Pharmacology, General Pathology, Medicine. Pharmacology, General Pathology, Medicine, Surgery. 	Note. Try years of Hospital practice are requ. The appointments shown below must aken in an approved order. Me diseases may be taken in either the secor third clinical year and vaccination and jous diseases at such times as shall	
2nd CLINICAL YEAR. 3rd Term. Ist Term. 2nd Term. 3rd CLINICAL YEAR. 3rd Term.	 Pharmacology, Medicine, Surgery, Gynæcology, Mental Diseases. Pharmacology, Special Pathology, Medicine, Diseases of Children, Obstetrics. Pharmacology, Special Pathology, Medicine, Skin Diseases, Surgery, Orthopædic Surgery, Radiology. Clinical Pathology, Applied Anatomy, Forensic 	 not bre with other clinical work : ninary Medical, Surgical and Junior I. Clerkships. utient Medical Clerkship. tient Surgical and Casualty ssership. scological Dressership. stric Clerkship (Internal and Exter- k in the Children's Department. hopædic Dressership. k in the Skin Department. 	FINAL EXAMINATION. PART I.—(March and September). Pathology and Bacteriology. Pharmacology. (May be taken at the end of second clinical year.) PART II.—(December and June). Forensic Medicine and Public Health. (May be taken after the completion of twenty - seven months of clinical study.) PART III.—(March and Sept.). Medicine, Surgery, Obstetrics and Gynæcology, and Therapeutics and Pharmacy. (May be taken at the end of the third clinical year. Part III may be taken before Part II.)
1st Term. 2nd Term.	Medicine, Public Health, Mental Diseases (if not previously taken), Surgery, Medical Ethics. Medicine, Tubercle, Therapeutics, Radio- Therapy. Medicine, Applied Anatomy, Ophthalmology and Otology.	 halmic and Aural Dressership (held currently). patient Medical and Senior P.M. rkship and Out-patient Surgical essership. al Diseases. ination. tious Diseases. 	

DEGREES IN MEDICINE AND SURGERY

ORDINANCE VI

 The degrees in Medicine and Surgery shall be: Ordinance Bachelor of Medicine and Bachelor of Surgery (M.B., and Ch.B.)

Doctor of Medicine (M.D.) Master of Surgery (Ch.M.) Doctor of Philosophy (Ph.D.)

2. Candidates for the degrees of Bachelor of Medicine and of Surgery are required to present certificates showing that they will have attained the age of twenty-two years on the day of graduation, and that they have attended courses of instruction approved by the University extending over not less than five years and six months, two of such years at least having been passed in the University.

3. Candidates for the degrees of Bachelor of Medicine and of Surgery are required to satisfy the Examiners in the several subjects of the following examinations, entitled respectively:

The examination for Matriculation, or such other examination as may have been recognised by the Joint Matriculation Board* of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham in its stead.

The Pre-registration examination

The First examination.

The Second examination.

The Final examination.

Except in cases specially approved by the Senate, Regulations candidates for a degree in the Faculty of Medicine (M.B., Ch.B. or B.Ch.D.) are required to present evidence of possessing a knowledge of Mathematics at least equivalent to that of the "Pass" standard at a School Certificate Examination.

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^{*}Full information is contained in the pamphlet "Qualifications for entry upon a Degree Course," which may be obtained on application to the Secretary to the Board, 315, Oxford Road, Manchester, 13.

General Attendance

During the first five years, a year of medical study must include attendance upon at least *two* of the prescribed courses of lectures or laboratory work, or one such course and hospital practice, in each term, if that year is to count as part of the degree course. In the sixth year clinical work will suffice. The attendance must be given at the University or at a College, Medical School, or Hospital recognised by the University.

Examinations

Except as provided below, candidates must present themselves and pass in all the subjects of any Part of an examination at the same examination. But candidates who have failed (a) in Inorganic Chemistry or Physics or the additional subject at the Pre-registration examination or (b) in Botany or Zoology of Part II of the First examination or (c) in Anatomy or Physiology at the Second examination or (d) in any subject of Part I. II or III of the Final examination may be exempted from re-examination in such part of the examination as the respective Examination Committees may determine.

Pre-registration Examination

The subjects of the Pre-Registration Examination shall be Physics, Chemistry, and one approved additional subject.

- I. Physics : lectures and laboratory work, three terms.
- 2. Chemistry : lectures and laboratory work, three terms.
- 3. An approved additional subject*(1) three terms.
- 4. Mathematics for medical students*(2) at least two terms.

*(1) The following subjects have been approved for this purpose: Anthropology; Economics; English Literature; French; Geography; German; History; Latin; Mathematics; Music.

*(2) This course will also be taken by those 1st M.B., Ch.B. students whose Mathematics are weak.

Candidates for the Pre-Registration Examination are normally required to have attended these prescribed courses in the University or at an affiliated college of the University.

The examination will normally be held in June. Candidates who have failed at the examination in June may be granted permission by the Senate to present themselves in September for the whole or such part of a supplementary examination as the Examination Committee may determine.

Concessions to Higher School Certificate Holders.

Students who have passed in Physics or Chemistry at principal standard, or in an approved additional subject*(3) at principal or subsidiary standard, in the Higher School Certificate examination (or who have approved equivalent qualifications)*(4) may be exempted from the corresponding course and subject in the Pre-Registration examination; provided that all students in their Pre-Registration year are required to take a course and examination in at least two of the subjects prescribed for the Pre-Registration examination. For students who have passed in the Higher School Certificate examination in Pure, Applied, or Pure and Applied Mathematics at principal standard the course in Mathematics for medical students will be optional.

Courses of study in preparation for the Pre-Registration examination are not a part of the medical course. A student admitted to such courses will have no guarantee of admission to the medical course even if he is successful in the Pre-Registration examination. Admission to the medical course will be by selection from amongst

*(3) The following subjects have been approved for this purpose: Biology; Botany; English Language; English Literature; French; German; Greek; History; Italian; Latin; Mathematics; Music; Zoology.

*(4) Passes in subjects of the 1st M.B., B.S. or the Intermediate B.Sc. examination of the University of London are approved for this purpose. those who have qualified by means of the Higher School Certificate and those who have passed the Pre-Registration examination. The number of new students who can be accepted in any year is strictly limited.

First Examination

Ordinance 4. The First Examination shall consist of two Parts : Part I. Organic and Physical Chemistry. Part II. Zoology, Botany.

> 5. Candidates, before presenting themselves for the First examination, are required to furnish certificates of having attended courses of instruction in accordance with the Regulations of the University and to have passed the examination for Matriculation or to have obtained exemption therefrom.

> 6. The names of candidates who have satisfied the Examiners in either Part of the First examination shall be published in alphabetical order.

First Examination

Regulations

Candidates for the First examination are required to furnish certificates of having attended approved courses of instruction at the University or at an institution recognised for this purpose by the University; or of having attended, at some other institution, courses of instruction which shall be accepted by the University as equivalent.

The courses of instruction shall be as follows :---

During the first two terms :—

- I. Organic and Physical Chemistry : lectures and laboratory work : at least two terms.
- 2. Zoology: lectures and laboratory work: at least two terms.
- 3. Botany: lectures and laboratory work: at least two terms.
- 4. Medical Physics: 10 lectures.

The examination (Parts I and II) will normally be held in March.

All examinations will include laboratory work.

School of Medicine

Candidates who have failed at either Part of the examination in March may be granted permission by the Senate to present themselves for a supplementary examination in June. They must produce evidence of having pursued such further study as may have been required by the Examination Committee and they may be excused such part of the supplementary examination (Part II) as the Examination Committee may determine.

Candidates will not be allowed to proceed with the courses in Anatomy and Physiology of the second year until they have passed in Parts I and II of the First examination.

Second Examination

7. The Second examination shall consist of : Anatomy.

Physiology.

8. Candidates, before presenting themselves for the Second examination, are required to furnish certificates of having attended courses of instruction in accordance with the Regulations of the University and to have passed the First examination.

9. The names of candidates who have satisfied the Examiners in the Second examination shall be published in alphabetical order.

Second Examination

Candidates for the Second examination are required Regulations to have attended courses of instruction approved by the University in Anatomy and Physiology (six terms). The certificates must show (I) that dissection has been practised during five terms at least ; (2) that laboratory instruction, approved by the University, has been received in Physiology.

Subjects of examination.

Anatomy, including the gross and minute structure of the body, Embryology, Neurology, Living Anatomy and Radiological Anatomy, and Histology.

Physiology, including laboratory work in Bio-chemistry, Experimental and Human Physiology.

Distinctions may be awarded in individual subjects.

Candidates who fail to satisfy the Examiners in any subject of the examination must, before being readmitted to examination, produce evidence of having pursued such further study as may have been required by the Examination Committee.

N.B.—Medical students are permitted to take without extra fee an additional optional non-medical subject in the second year of the medical course. A Pass in the subject selected will be shown on the successful candidate's degree certificate. Full particulars can be obtained from the Academic Sub-Dean.

Final Examination

Ordinance

 Io. The Final Examination shall consist of three Parts: Part I. Pathology and Bacteriology.

Pharmacology.

Part II. Forensic Medicine. Public Health.

Part III. Medicine.

Surgery.

Obstetrics and Gynæcology.

Therapeutics and Pharmacy.

Regulations

Part I will normally be taken two years after the commencement of the clinical period.

Part II may not normally be taken until after the completion of two years and three months of clinical study.

Part III may not be taken before the end of the third clinical year nor before the completion of five years and six months of medical study.

Parts I, II and III may be taken in any order provided that Part III is not taken until Part I has been passed.

Ordinances

11. Candidates, before presenting themselves for any Part of the Final examination, must furnish certificates of having attended courses of instruction, in accordance with the Regulations of the University.

12. The names of candidates who have satisfied the Examiners in Parts I, II or III of the Final examination shall be published in alphabetical order.

13. The names of candidates who have satisfied the Examiners in all the subjects of the Final examination, and are recommended for degrees, shall be published as follows :—

School of Medicine

- 1. Those awarded First Class Honours.
- 2. Those awarded Second Class Honours.
- 3. Those who have satisfied the Examiners.
 - The names shall be in alphabetical order in each case.

Final Examination

Candidates must furnish certificates of having attended Regulations courses of instruction approved by the University and taken in the University or in a Medical School recognised for this purpose in the subjects in which they offer themselves for examination.

Candidates are required to furnish certificates as follows :—

A. In respect of lectures and laboratory work.

- 1. Pathology and Bacteriology, five terms.
- 2. Pharmacology and Pharmacy, six terms.

The certificates in Pathology and Bacteriology, Pharmacology and Pharmacy, must in all cases testify that the candidate has attended courses of laboratory instruction in these subjects, approved by the University.

3. Medicine, four terms.

Mental Diseases, one term.

Infectious Diseases, one term.

Children's Diseases, one term.

4. Surgery, four terms.

Ophthalmology, Otology and Laryngology, one term.

Orthopædic Surgery, one term.

5. Obstetrics and Gynæcology, two terms.

The certificate in Obstetrics and Gynæcology must in all cases testify that the candidate has attended courses of practical instruction, approved by the University, in the use of obstetrical and gynæcological instruments.

- 6. Clinical Pathology, one term.
- 7. Forensic Medicine, one term.
- 8. Public Health, one term (including visits to places of importance in the study of Public Health).

- 9. Therapeutics, one term.
- 10. Radiology and Radio-therapy, one term.
- 11. Applied Anatomy, one term.
- B. In respect of hospital work.
 - 1. In Medicine and Surgery, of having attended subsequent to the date of passing the second examination, the medical and surgical practice of a hospital or hospitals, approved by the University, during at least three years.
 - 2. In Pathology and Morbid Anatomy, of having attended during at least two terms demonstrations in the post-mortem room of a hospital, including practical instruction.
 - 3. In Obstetrics, (a) of having attended during not less than three months the indoor and outdoor practice of a lying-in hospital or the lying-in wards of a general hospital approved by the University, and (b) of having personally conducted not less than twenty cases of labour, subsequently to having acted as surgical dresser and medical clinical clerk.
 - The certificate must in all cases (a) testify that such attendance has been given under the direct supervision of a medical officer of the hospital, and (b) regarding the personal conduct of cases of labour, be signed by a member of the staff of a hospital or a maternity charity.
 - 4. In Gynæcology, of having, during at least three months, received in either a general or a special hospital, approved by the University, such clinical instruction in the diseases peculiar to women as shall be approved by the University.
 - 5. Of having received clinical instruction in the diseases of children.
 - 6. Of having received clinical instruction in Orthopædic Surgery.
 - 7. Of having received clinical instruction in diseases of the eye, ear, throat and skin and in venereal disease.
 - 8. Of having received instruction in the administration of anæsthetics.
 - 9. Of having acquired proficiency in vaccination.

10. Of having acted as a surgical dresser for six months, as a clinical medical clerk for six months, and as a clerk for three months in the post-mortem room of a hospital recognised by the University.

Subjects of Examination.

I. PATHOLOGY AND BACTERIOLOGY.

Candidates will be examined practically on Bacteriology, Pathological Anatomy, Histology and Chemistry.

- 2. PHARMACOLOGY.
- 3. MEDICINE : SYSTEMATIC AND CLINICAL, INCLUDING MENTAL DISEASES AND DISEASES OF CHILDREN AND SKIN DISEASES.

Candidates, in order to pass, must satisfy the Examiners in the clinical part of the examination.

- 4. SURGERY: SYSTEMATIC, CLINICAL AND PRACTICAL, INCLUD-ING ORTHOPÆDIC SURGERY, OPHTHALMOLOGY, OTOLOGY, RHINOLOGY AND LARYNGOLOGY.
 - Candidates will be examined on the use of surgical instruments and apparatus, and on museum preparations; they may also be required to perform operations on the dead body.
 - Candidates, in order to pass, must satisfy the Examiners in the clinical part of the examination.
- 4. Obstetrics and Gynæcology: Systematic, Clinical, and Practical.
 - Candidates will be required to shew their practical acquaintance with obstetrical and gynæcological manipulations and instruments by the use of the phantom or otherwise and will also be examined on museum preparations.
 - Candidates in order to pass, must satisfy the examiners in the clinical part of the examination.

5. FORENSIC MEDICINE AND TOXICOLOGY.

Candidates may be required to determine the character of stains and stained fabrics, microscopically and chemically, and to recognise poisonous articles of the materia medica.

6. PUBLIC HEALTH.

7. THERAPEUTICS AND PHARMACY.

In determining the award of Honours the results of the Second as well as of the Final examination will be considered.

Distinctions may be awarded in individual subjects in the Final examination.

Candidates who fail to satisfy the Examiners in any subject of the examination must, before being re-admitted to examination, produce evidence of having pursued such further study as may have been required by the Examination Committee.

School of Medicine

Degree of Doctor of Medicine

Ordinance

14. The degree of Doctor of Medicine may be conferred, on payment of the proper fee, upon Bachelors of Medicine and Bachelors of Surgery of the University, subject to the conditions contained in the following Articles.

15. Candidates are required to have completed, subsequently to taking the degrees of Bachelor of Medicine and Bachelor of Surgery, either (a) two years of approved hospital practice or approved special study, or (b) four years in the practice of their profession in one or other of its branches. It shall be permitted to a candidate to combine successive periods of work under (a) and (b)always provided that six months of approved hospital work or approved special study shall be regarded as equivalent to one year of professional practice.

16. Candidates having satisfied the requirements under Article 18, may proceed to the degree either (a) by examination only, or (b) by presenting a thesis or published work on a subject or subjects approved by the Board of the Faculty of Medicine and submitting themselves in addition to such examination as may be deemed necessary. The examination under (b) may be waived in terms of the Regulations laid down by the Senate.

I. Award of the degree by examination alone.

I. Candidates desiring to proceed to the degree by examination must submit themselves to an examination in one subject selected from the following list, viz. :--

> General Medicine. Psychological Medicine. State Medicine. Pædiatrics. Dermatology. Obstetrics and Gynæcology. Pharmacology and Therapeutics. Radiology and Radio-therapy. Forensic Medicine. Pathology. Bacteriology. Pathology and Bacteriology. Physiology. Anatomy.

Regulations

- - (b) One of the following :--
 - (i) An essay on some general or special subject (3 hours).
 - (ii) A written commentary on a case or cases (3 hours).
 - (c) (i) A clinical examination and/or a practical examination.
 - (ii) A viva voce examination.

3. Candidates must state on their application forms the subject in which they propose to present themselves for examination.

II. Award of the degree upon thesis or published work.

I. Candidates desiring to proceed to the degree by thesis or published work must submit the title of the thesis or published work for the approval of the Board of the Faculty of Medicine not later than three months prior to the proposed date of presentation, and, such approval having been obtained, must furnish three copies (printed or typewritten) together with any drawings or specimens which are deemed necessary for illustrating them. They must also state the subject in which they desire to be examined, such subject being selected from the list prescribed in Article I of these Regulations.

2. A candidate shall not be permitted to submit a thesis or published work for which a degree has already been conferred upon him, or which is under consideration for the award of a degree, in this or any other University, but he shall not be precluded from incorporating in his thesis or published work any part of the work already submitted by him with a view to a degree, provided that in his application for acceptance as a candidate for the M.D. degree he states his desire to do so, and, on presentation of his thesis or published work, indicates clearly the part which has been so incorporated.

3. In the case of work submitted under joint authorship, the applicant shall be required to indicate to the satisfaction of the Senate his own share in the joint production. 4. If the thesis or published work presented by the candidate is considered by the examiners to be of exceptional merit, the degree may be awarded to him without further examination.

5. If the thesis or published work presented by the candidate does not, in the opinion of the examiners, justify awarding the degree without further examination, the candidate must undergo an examination in the subject selected by him from the list prescribed in Section I Article I of these Regulations. The examiners may, at their discretion, exempt such candidate from the essay or written commentary.

6. A copy of the thesis submitted in support of the application will be retained in the University Library.

III. The names of candidates who have been approved for the degree of Doctor of Medicine shall be published in alphabetical order, and distinction may be awarded on the recommendation of the Examiners.

IV. All candidates for the degree of Doctor of Medicine must send in applications, accompanied by three copies of their thesis, which will be retained, to the Registrar not later than 1st February or 15th July in any year, on a special form to be obtained at the Dean's Office, School of Medicine.

Degree of Master of Surgery

Ordinance

17. The Degree of Master of Surgery is conferred in the following branches: Surgery (Branch I), Ophthalmology (Branch II), Laryngology, Otology and Rhinology (Branch III).

18. No candidate will be admitted to the examination for the degree of Master of Surgery unless he has previously received the degrees of Bachelor of Medicine and Bachelor of Surgery of the University and at least two years have elapsed since he completed the examinations for these degrees.

19. The names of candidates who have satisfied the examiners shall be published in alphabetical order, and distinction may be awarded at the discretion of the Examiners.

I. Candidates, before admission to the examination for Regulations the degree, are required to furnish certificates which shall be deemed satisfactory by the University, that they have completed, subsequently to taking the degrees of Bachelor of Medicine and Bachelor of Surgery, two years of approved hospital practice or approved special study. Candidates wishing to take the degree in Branches II or III must present evidence of having held a General Surgical appointment for not less than six months and an approved hospital appointment in the Branch selected for examination for not less than twelve months.

2. Candidates proposing to present themselves for this examination are required to give notice, in writing, to the Registrar before 1st February or 15th July.

DETAILS OF EXAMINATION.

BRANCH I. SURGERY.

- I. Two papers in Surgery.*
- 2. Essay in one of two subjects in Surgery fixed by the Examiners, or commentary on case or cases.
- 3. Paper in Surgical Anatomy.
- 4. Paper in Pathology and Bacteriology.
- 5. Clinical, oral and practical examination.

BRANCH II. OPHTHALMOLOGY.

- 1. Paper on the Principles of Surgery.
- 2. Paper in Ophthalmology.
- 3. Essay in one of two subjects in Ophthalmology fixed by the Examiners, or commentary on case or cases.
- Paper in the Anatomy, Physiology and Pathology of the Eye and other parts concerned in Ophthalmology (including Physiological Optics).
- 5. Clinical, Oral and Practical Examination.

BRANCH III. LARYNGOLCGY, OTOLOGY, AND RHINOLOGY.

- I. Paper on the Principles of Surgery.
- 2. Paper in Laryngology, Otology, and Rhinology.
- Essay in one of two subjects in Laryngology, Otology, and Rhinology fixed by the Examiners, or commentary on case or cases.

4. Paper in the Anatomy, Physiology[†] and Pathology of the ear, nose and throat, and of other parts concerned in Laryngology, Otology and Rhinology.

5. Clinical, practical and oral examination.

^{*} These may include a question on Physiology in its bearing on Surgery.

[†] This may include a question on the recording and reproduction of sound,

REGULATIONS FOR THE DIPLOMA IN PUBLIC HEALTH

I. A period of not less than two years shall elapse between the attainment by a candidate of a registrable medical qualification and commencing study for the Diploma.

2. The curriculum^{*} for the Diploma shall extend over a period of not less than an academic year of whole-time study, which must be subsequent to the attainment of a medical qualification.

3. The examination shall be in two parts, the Preliminary held in December in each year, and Final held in June and December in each year.

4. Every candidate before admission to the Preliminary examination shall produce evidence of satisfactory and regular attendance on a Preliminary course covering an academic term of not less than ten weeks of whole-time study—systematic and practical, in :—

- (a) The history of Public Health and Public Assistance; the evolution of central and local authorities in relation thereto; the evolution of the law in relation to Health, Public Assistance, and Social Security, with a general knowledge of legal powers and duties.
- (b) The existing functions of central and local authorities and voluntary organizations, and the nature and objects of the Public Health and Medical Services they administer including practical instruction during visits to places and institutions of importance to Public Health.
- (c) Social Security, and the agencies for the relief of poverty and the promotion of social welfare.
- (d) International health organizations.
- (e) The nature and sources of information bearing on the health of the people, and its numerical presentation. The preparation of memoranda and scientific articles containing statistical data.
- (f) The causal agents of infection, their sources and control, including exercises in the solution of epidemiological problems.
- (g) The influence on physical and mental health of environment, including house and occupation, economic circumstances and nutrition and personal hygiene.
- (h) Physical education.
- (i) The influence of heredity on health.
- (i) The principles of Health Education.

5. The Preliminary examination shall include written and oral examinations in the subjects specified in regulation 4.

6. A certificate in Public Health shall be granted to candidates who have passed the Preliminary examination and candidates shall be required to present such a certificate before they may be admitted to the Final course.

7. Every candidate, before admission to the Final examination shall produce:

- I. Evidence of satisfactory and regular attendance on a Final course covering a period of not less than two academic terms (five calendar months) of whole-time study, systematic and practical in :---
 - (a) Physiology, Bio-chemistry, Food and Nutrition, in relation to the Public Health.
 - (b) Bacteriology, Parasitology and Medical Entomology, as applied to Epidemiology.
 - (c) Mass Aspects of Disease. Administrative measures in relation to communicable and other diseases.
 - (d) Sanitation, Water Supplies, Housing, Town and Country Planning, and the application of scientific principles thereto.
 - (e) Statistical Data and Methods.
 - (f) Interpretation of Plans.
 - (g) Administration. Organization and management of Medical Departments and Institutions.
 - (h) The law relating to Public Health.
 - (i) Mental Health Services.
 - (i) Ocupational Health.
 - (k) Methods of educating the public as to the promotion and maintenance of health.
- II. Evidence of having either (a) resided and received instruction for four weeks in a Hospital for Infectious Diseases approved by the University or (b) attended satisfactorily and regularly and received instruction at such an approved Hospital for one Term; and that in either case such instruction was received during the late autumn, winter or spring.
- III. Evidence of having attended during a period of not less than five months at the Health Department of the Local Authority of an area approved by the University and of having personally observed and studied the daily work of

each section of the Department under the guidance of administrative, technical, and executive officers of the Authority.

- IV. (a) A Day-Book in which he has made regular entries relating to subjects in which practical instruction is given during the course, and brief observations on the objects of such instruction and the conclusions to be drawn therefrom.
 - (b) A dissertation on an approved subject.

8. Candidates may be exempted by the University from instruction under 7, II provided that they have served for not less than six months as Resident Medical Officer in an approved Hospital for Infectious Diseases and under 7, III provided either that they have held a whole-time appointment for not less than twelve months in the Health Department of the Local Authority of an area approved by the University; or that they are holding a part-time appointment in such a Department throughout any period during which they are receiving systematic instruction under regulation 7 and are regularly receiving guidance from appropriate officers of the Authority; and that the duties under the terms of appointment were or are such as to enable them to acquire a knowledge of Public Health administration at least equivalent to that which would be acquired under 7, III.

9. Each candidate must spend at least ten weeks on the prescribed full-time course in the University and must take the remainder of the course either in the University or in an institution approved for that purpose by the University.

ro. In each part candidates must pass all the specified subjects of examination at one time.

II. The final examination shall include :

Written examinations in the subjects specified in Regulation 7, I;

a clinical examination in Infectious Diseases;

an oral examination in Infectious Diseases, Epidemiology and General and Special Hospital Administration, a general oral examination.

Dissertations presented by candidates shall be read by Examiners and Day-Books shall be made available to them. In assessing marks, Examiners shall take into account (a) the Day-Books as duly attested records of work done and (b) the merit of Dissertations.

12. Every candidate who has passed both parts of the examination shall receive a Diploma in Public Health.

The diploma may be awarded with distinction to a candidate whose work is adjudged to be of outstanding merit.

At the discretion of the examiners, a candidate may be referred for a year and may be required to repeat the whole or part of the course before re-examination.

T

he fees for the courses and examinations sha	ll b	e :—
Preliminary course (one term)		£20
Final course (two terms)	•••	£35
	•••	£55
Examination (or Re-examination) fee :		
Preliminary	• •	£5
Final		£10

PRESCRIBED COURSE OF STUDIES FOR MEDICAL STUDENTS

Students who have fulfilled the entrance requirements of the Northern Universities' Joint Matriculation Board or who have passed a recognised alternative examination in general knowledge are registered with the General Medical Council on passing or on obtaining exemption from the pre-registration examination in inorganic chemistry and physics. Thereafter they require to spend five years and six months on a prescribed course of studies, three of which shall be clinical years.

The full medical curriculum may be divided into two periods, the pre-clinical and the clinical. The preclinical period, approximately two years and six months in length, is spent in the study of organic and physical chemistry, botany, zoology, anatomy, physiology. The final period of three years is devoted to pharmacology and pharmacy, pathology and bacteriology, and the various clinical subjects, including hospital practice.

The regulations of the School of Medicine of the University of Leeds require that in general the professional examinations be passed at the prescribed periods. Students must pass the examinations of one period before they are permitted to commence the studies of that which follows.

Candidates, however, who are exempted in chemistry but not in physics of the pre-registration examination, may, if they have attained a sufficient standard in botany or biology at the H.S.C. examination, be granted exemption from the First M.B. course and examination in botany, and be permitted to take a three-term course in physics during the first year of professional study, and to appear for an examination in this subject in the June immediately following the First M.B. examinations in organic and physical chemistry and zoology.

The curriculum is arranged for the purpose of giving a thorough and complete medical education and to this end regular and punctual attendance at lectures and classes is absolutely necessary. For the same reason all lectures and classes (as well as the clinical appointments) must unless by express permission of the Dean, be taken in the order indicated in the "Normal Course," and no part of the course is to be looked upon merely as a formality necessary for "signing up."

Students should not attend classes in vaccination and infectious diseases until they have attended some lectures in medicine and pathology.

The following is the arranged distribution of hours between the School and the Infirmary: School, 9-10, 12-2, 4-5; Infirmary, 10-12, and 2-4. Students are expected to leave their work at one institution so as to be punctual at the other if they have lectures or classes (or clinical appointments, as the case may be) to attend.

When the final examinations have been passed, the student registers with the General Medical Council and is then legally entitled to practise his profession. The necessary form can be obtained at the Dean's office.

GENERAL REGULATIONS FOR STUDENTS

I. Arrangements for the enrolment of first year students announced by the Registrar. All other students are required to enrol at the Dean's office on or before the opening day of each session. Students who from any unavoidable cause are prevented from personally attending at that time must communicate with the Academic Sub-Dean by letter.

2. All students in regular attendance who are not living with their parents, or with relatives or personal friends, will be required to reside either at some Hall of Residence or Hostel approved by the University, or in registered lodgings, or in lodgings which, if not registered when taken by the student, shall receive the approval of the University. Students taking lodgings which have not been registered are required to report immediately to the Supervisor of Lodgings for approval the address of such lodgings. Students who have taken registered lodgings are required to inform the Supervisor of Lodgings beforehand if they desire to move into other registered lodgings.

Should a student change his residence during the Session, he must inform the Academic Sub-Dean of the change of his address without delay.

3. Regular, punctual and orderly attendance at Lectures, Demonstrations and Class-examinations is required of every student, in order to obtain certificates of attendance. In the case of persistent neglect of work, repeated failure at professional examinations or unreasonable delay in presenting himself for such examinations, a student may be required to withdraw from the University.

Examination dates, lecture times and other information relating to the course are announced on the notice-boards in the School, which should be referred to by all students from time to time.

4. In cases of illness or other unavoidable cause of non-attendance at any Lecture, Demonstration or Class examination, a written explanation, accompanied, when necessary, by a medical certificate, must be sent to the Academic Sub-Dean with as little delay as possible; otherwise excuses for absence cannot be accepted. Hospital work is not an excuse for non-attendance upon lectures except in the case of students on duty in the Receiving Room, or in attendance upon cases of Midwifery. Consequently students must not take any resident hospital appointments which involve absence from lectures or classes in the School, unless they have previously informed and obtained the permission of the Academic Sub-Dean.

5. Smoking is not allowed in the Lecture Theatres, Class Rooms, or Laboratories, except with the express permission of the Professor or Lecturer in charge.

6. Students will be required to make good, to the satisfaction of the Council, any loss, wilful damage or injury they may occasion to the property of the University.

7. Students in the School of Medicine are subject to the discipline and general regulations of the University, as well as to the rules made by the Board of the Faculty of Medicine. Violation of these regulations and rules renders a student liable to immediate dismissal and to the forfeiture of all fees, certificates and privileges as a student of the University.

8. Prior to entering the School every student is required to sign the following declaration :

If admitted a Student in the Faculty of Medicine of the University of Leeds, I undertake to comply with all rules and regulations of the University, and to conduct myself on all occasions in an orderly manner. I fully understand that no allowance whatever will be made, and that I have no claim upon the Council of the University in respect of any fees paid by or due from me, in case such fees are forfeited by any irregularity or misconduct on my part.

Regulations for the Medical Library

The Medical Library is under the direction of the Medical Library Sub-Committee of the University Library Committee. This Sub-Committee is composed of representatives of the University Library Committee, of the Board of Medicine, and of the Medico-Chirurgical Society. In the ensuing regulations matters referred to the Library Committee are brought in the first instance before the Medical Library Sub-Committee.

The Library is open daily between the hours of 9 a.m. and 5 p.m., except on Saturday, when it is closed at 12.45 p.m. It is also open from 5 p.m. until 8 p.m. on the days of meeting of the Leeds and West Riding Medico-Chirurgical Society. It is closed during one week at Christmas, and on the public holidays.

Recommendations for the purchase of new books should be entered in the suggestions book.

General Regulations.

(1) Members of the Academic Staff of the University, members of the Leeds and West Riding Medico-Chirurgical Society, and students of the School of Medicine and School of Dentistry are entitled to the use of the Library. Full members of the Medico-Chirurgical Society are subject to the same regulations as members of the Staff (for temporary members, see Regulation 16). Non-medical students may be allowed to use the Library only on production of a written recommendation from the head of the appropriate department, and with the permission of the University Librarian.

Other persons may be allowed by the University Librarian to consult books on stating the subject of their studies and on producing a satisfactory recommendation. In special cases and on payment of half-a-guinea for twelve months they may also be allowed to borrow books at the discretion of the University Librarian.

(2) No book shall be removed from the Library unless the borrower shall have first filled in the form provided.

(3) No mark of any kind shall be made in the Library books or periodicals. Any loss of, or injury to, a book shall be reported to the University Librarian, who shall require the person responsible to pay a sum not exceeding that which will make good the loss or injury. Should it be impossible to make good the loss or injury, such fine shall be imposed as the Library Committee may determine.

(4) The University Librarian has the power to suspend the Library privileges of any person who breaks the rules of the Library. All such cases shall be reported to the Library Committee.

(5) Books placed in the reference sections of the Library, volumes on the recent accessions shelves, and unbound numbers of periodicals, other than the current number, may, subject to the permission of the University Librarian, be taken out of the Library, but only after 4 p.m. (12 noon on Saturday). They must be returned before 10 a.m. on the next day on which the Library is open. Failing return, a fine of twopence a day shall be imposed. The four most recent volumes of the *British Medical Journal* and the *Lancet* are regarded as books of reference.

(6) All books must be returned to the Library for the annual inspection, ordinarily held during the period of the written examinations in March. A fine of twopence per book shall be imposed, up to the limit of the price of the book, for every day that it is detained beyond the time for its return for the inspection. The same shall apply to books lost, when the loss shall not have been notified to the University Librarian before the days of inspection.

(7) No person shall borrow a book from the Library if he has in his possession any book which he has kept beyond the time allowed by the regulations, or if any fine or charge which he has incurred has not been paid.

(8) The University Librarian shall be at liberty to grant special facilities for the use of books during a limited period to any person entitled to the use of the Library.

(9) No smoking shall be permitted within the Library during the hours of opening.

(10) No bag, attaché case or parcel may be taken into the Library.

(11) Books shall not be sent through the post to individual borrowers save in exceptional circumstances.

(12) No member of the Academic Staff shall be entitled to have at one time more than twenty-five books borrowed from the Library, save with the special permission of the University Librarian.

(13) Any member of the Academic Staff shall be entitled to take out such books as he requires up to the prescribed number, and to retain them until such time as he may receive a notice that any of them are overdue, in which case such book or books shall be returned without delay to the Library. A book shall be regarded as overdue when it has been in the possession of the borrower for a fortnight and is required by some other person.

(14) Professors, Readers, and Heads of Departments may obtain Library keys for personal use only on application to the University Librarian.

(15) Postgraduate research students and students in the final year of an honours school shall have the same privileges and be subject to the same regulations in respect of borrowing from the Library as members of the Academic Staff, save that they may not borrow more than ten books from the Library at one time.

Regulation affecting temporary members of the Leeds and West Riding Medico-Chirurgical Society.

(16) Temporary members of the Medico-Chirurgical Society may not retain books for longer than four weeks.

Regulations affecting students.

(17) Every student of the School of Medicine and the School of Dentistry shall pay a deposit of half-a-guinea; this sum shall be refunded to the depositor on application on the completion of the course. Deposits unclaimed two years after graduation will be appropriated to the use of the Library. (18) Books borrowed for home use must be returned to the Library within two weeks of the date of issue, unless they are in urgent demand, when they may be recalled earlier. A book may, however, be renewed for a further fortnight until four weeks have elapsed since its first issue, provided that no application for the use of the book by another person has been received in the meantime. Three books only may be borrowed at a time. If a book is not returned on the day on which it is due, the borrower shall be fined twopence provided that the book is returned within seven days following the day on which it is due, and fourpence each week, or portion of a week, after that period. A list of defaulters will be exhibited in the Library.

(19) All books must be brought to the Senior Assistant Librarian for renewal, except when an application for renewal has been made and granted on the day before that on which the return of the book falls due. Applications for renewal may be made personally or by post.

TIME TABLES

(Subject to any necessary alteration).

Lectures and Practical			Hour	s.		
Classes.	М.	Tu.	W,	Th.	F.	S.
FIRST YEAR.						
Ist and 2nd TERMS. Organic Chemistry	2-3		{	9-10 2-5	2-5	
Physical Chemistry Botany		9-5	10-I		9-10	
Zoology				10-1	10-1	
Medical Physics	3-4			**	. 0	•••
First M.B., Ch.B., Part 3rd TERM. Anatomy—Intro. Embry- ology Practical Histology	10-1	10-11 2-5		10-11 2-5	10-11 2-5	
Physiology—Biochemistry	9-10		11-1		-	
SECOND YEAR.				1		
Anatomy—Junior Neurology Practical		2-5	9-10 	::	9-10 10-12 or 2-5	
Histology Radiological and		10-12	10-12			••
Living Anatomy Physiology—Lectures Practicals		4-5 9-10	12-1	9-10	::	••
(Exp.) A (Exp.) B			11	10-12 2-4	10-12 2-4	••
2nd TERM. AnatomyLectures ,,Practical		.:	9-10 10-12	10-12 OF 2-4	9-10 2-5	
—Histology —Radiology			3		10-12 4-5	91-12
	and a second				}	

TIME TABLES-continued

FOR STUDENTS DURING PRE-CLINICAL PERIOD.

Lectures and Practical			Hours	5.		
Classes.	М.	Tu.	w.	Th.	F.	S.
SECOND YEAR-contd.						
Physiology—Lectures ,, Practicals— Experimental :	I2-I	9–I0	I2-I	9-10		
A	10-12	10-12		10-12		
B	2-4	2-4		2-4		
Bio-Chemistry:						
A		2-4				4.6
В 3rd Тегм.		10-12				
Anatomy-Lectures	9-10		9-10		9-10	
,, —Practical	2-4		10-12	9-12	2-4	10-12
			and	or		
Histology			2-5	2-5		
,,Radiological and					4-5	
Living Anatomy						
Physiology-Lectures			12-1		II-I2	9-10
", Tutorials Practicals—	IO-II	0.0			10-11	
", Practicals— Bio-Chemistry:						
A		9-12		0-12		
		or		or		
B		2-5		2-5		
Experimental:		2-5				
A. (1st ± term) B. (2nd ,,)		2-5				
THIRD YEAR						
IST TERM.				Ì		
Anatomy—Special Senses —Practical	10-4 0	9-10	12-1 10-12	9-10		
" —Practical	(2nd half term)	1 10-4	10-12		10-1 and 2-5	
" —Practical	(ł	
Neurology				2-5		1.0
-Living Anatomy Physiology-Lectures	9-10		9-10		4-5	
,, Practicals—	9-10		9-10		9-10	
Experimental:						
A	10-4					
B		10-4				
Bio-Chemistry:		70.4				
A		10-4 (1st half term)				
В	IO-4 (Ist half term)					
(Applied)A + B				10-12		
Tutorials	4-5		4.4	12-I		
Psychology in relation to						
Medicine		4-5		1.5		

TIME TABLES-continued

Lectures and Practical	Hours.						
Classes.	M.	Tu.	w.	Th.	F.	S.	
THIRD YEAR-contd.							
2nd TERM.							
Anatomy-Lectures		9-10		9-10 10-12	10-12	••	
" —Practical	•••	2-5		or 2-4	OF 2-4	••	
"Seminar		10-I					
,, —Clinical Anatomy		4-5	1.1				
Embryology				1			
Practica:			10—1			• •	
Physiology-Lectures	9-10		9-10		9-10		
" Practicals—							
Experimental:					10-12		
A			••		2-4	••	
Bio-chemistry:			••		4-4	••	
A+B	10-12						
Tutorials	4-5			12-1			
Pharmacology-Lectures	+ 5		12-I		12-I		
Practical				10-12			
		1		OF 2-4			
Second M.B., Ch.B.	, Exami	nation, 1	March (a	nd Septe	mber).		
For Students during Clin	ICAL PE	RIOD, IN	ADDITIO	N TO INF	IRMARY	Vork.	
THIRD YEAR. 3rd Term.		1		1	I	I	
Pharmacology-Lectures	12-I						
Practical	2-4	07 2-4					
Bacteriology and							

FOR STUDENTS DURING PRE-CLINICAL PERIOD.

THIRD YEAR.		1	1	1		
3rd TERM.		1				
Pharmacology-Lectures	12I					
" Practical	2-4	07 2-4				
Bacteriology and						
Immunology		12-1	12-1	2-5	12-1	
Medicine-Introductory	9-10		9-10			
Surgery—Introductory		9-10			9-10	
Psychology in relation to						
Medicine				12-1		
FOURTH YEAR.		1				
IST TERM.						
Pharmacology	12-1					
General Pathology		12-I	12-1		12-I	
Medicine	9-10		9-10	10		
2nd TERM.	-		-			
Pharmacology		12-1				
General Pathology	12-1			12-I		
Medicine	0-10		9-10			
Surgery		0-10	1		0-I0	
3rd TERM.		5			-	
Pharmacology		12-1			14.00	
Medicine	9-10		0-10			
Surgery		9-10			9-10	
Gynæcology				9-10		9-10
Mental Diseases		4-5	\$2.30-5		4-5	
HEURIGER ANDUNCO		7 5			, , ,	
		* At	Wakefie	ld.		

TIME TABLES-continued

FOR STUDENTS DURING CLINICAL PERIOD, IN ADDITION TO INFIRMARY WORK

Lectures and Practical		Hours.							
Classes.	M.	Tu.	W.	Th.	F.	S.			
Special Pathology Medicine Obstetrics	. 12-1 9-10 . 4-5	12-I 9-10	9-10	12-1 4-5	9-10	··· ·· ··			
Special Pathology Medicine Medicine—Skin Surgery Orthopædics	. 12-I . 9-IO . 4-5	12-1 9-10	12-1 9-10	9-10 4-5	12-1 9-10 4-5	··· ··· ··· ···			

Final M.B., Ch.B., Part I. Examination, March (and September).

3rd TERM. Applied Anatomy† Clinical Pathology Forensic Medicine Public Health Surgery† Mental Diseases (if not	· · · · · · ·	12-1 4-5	4-5 9-10 9-10	4-5	12-1 12-1 4-5 9-10	9-10	9–10
previously taken)	- 22	-	4-5 * At	*2.305 Wakefie	ld.	4-5	
SIXTH YEAR. ist Term.							
Therapeutics		9-10		9-10		9-10	14.42
Radio-therapy	1.1					4-5	
Medicine-Tubercle		11.	4-5		1.1	- 00	1.1
Surgery—Thoracic					9-10		

Final M.B., Ch.B., Part II. Examination, December (and June).

2nd TERM.	1			1		1 1	
Applied Anatomy	1				I2-I		
Medicine	-	9-10		9-10			
Ophthalmology and							
			4-5		4-5		
Tutorials	1						
			12-I				
Surgical Pathology				12-1			
Gynæcological Pathology	7			1.00		12-I	1.1

Final M.B., Ch.B., Part III. Examination, March (and September).

+For candidates taking Final M.B., Ch.B., Part III in September.

FEES

General Regulations

The University reserves the right to revise the fees specified below at any time, whether in the case of new students or those who have already begun their courses.

The composition fees for lecture and laboratory courses may be paid either sessionally, in advance, or (with certain exceptions) terminally by instalments. Fees paid by instalments are at a slightly higher rate than when paid in advance. The terminal instalment scales of fees are not applicable to students ordinarily resident outside the British Isles; such students must pay fees sessionally in advance.

Any student attending a degree course, or any other course which is regarded as a full course, will be required to pay the composition fee appropriate to the Faculty in which he is a student.

A student ceasing, for any reason whatsoever, to attend at the University during the session has no claim to a return of fees.

A student who elects to pay composition fees by instalments and who withdraws from the University before the end of a session must pay the whole of the remaining instalments of the session's fee.

On presentation of a form signed by the Dean of the Faculty authorising attendance upon courses of study, and upon payment of the requisite fees, the Accountant will issue a class ticket entitling the student to attend such courses. This class ticket must be presented by the student, before commencing attendance, to the Professors or Lecturers whose classes or lectures he is authorised to attend.

Students are required to pay a Registration Fee when their application for admission to the University is accepted. For overseas students, the Registration Fee is $\pounds 5$; for students taking the Diploma in Nursing, $\pounds I$ Is.; and for other students, $\pounds 2$. Fees may be paid either in the Dean's Office, School of Medicine, or in the Students' Section, University Road. Cheques should be made payable to "The University of Leeds."

I. Composition Fees

(Including Union Fees but excluding Maternity Hostel Fee—see Section II; Apparatus, Section III; and Library, Section IV).

The following scale of fees is applicable to all students entering upon a course after October, 1940. Students who have paid a Medical Course Composition fee in a previous session will continue to pay fees at the scale set out in the Calendar and Medical School Prospectus for 1939-40.

MED	ICAL COU	RSE :				Fee when paid sessionally in advance. f	termin on the 1st Ist	day of 2nd	alments each term 3rd
			inning o	of ist S	ession	1 50	25	17	10
	**			2nd	.,	50	25	17	10
				3rd		50	25	17	IO
			**	4th		50	25	17	IO
			**	5th	87	50	25	17	10
			**	6th	3.0	15			
						£265			

NOTE :

(a) The above fee of £265 for the Medical Course, if paid in one sum at the beginning of the Course, will be reduced to £255.

(b) For students who read for external qualifications and do not proceed to the Leeds M.B., Ch.B. (Final) examination, the Composition fee of £265 will be increased to £275. The additional fee of £10 will be paid at the beginning of the 6th Session, *i.e.*, the normal instalment of £15 as shown above will be increased to £25.

CLINICAL COURSE :

For students excused the First and Second M.B., Ch.B. course and who only require the Clinical Course, the following fees are payable:

							fee w	vhen pa al insta		
						Fee when paid	on the 1st	day of	each tern	6
						sessionally	Ist	2nd	3rd	
						in advance	Term	Term	Term	
Co	urse cover	ing 3	years :			£	£	£	£	
	Payable	at beg	inning o	f ist	Session	54	27	18	II	
	,,	,,	27	2nd		54	27	18	II	
				3rd	,,	54	27	18	II	

II. Maternity Hostel Fee

All students, whether taking the course for the Leeds M.B., Ch.B., or an external degree or diploma, are required to go into residence at the University Maternity Hostel for a period of 13 weeks. Students occupying a single room will pay a fee of 435 15s., and students sharing a double room a fee of 432 10s.

The fee is payable in one sum not later than the first day of residence in the Hostel—normally about the end of the second Clinical year of the Medical Course.

III. Apparatus, &c.

At the beginning of the first year students working in the Chemistry Laboratories will pay (a) a rental of 15/- for use of a set of apparatus and (b) a deposit of \pounds to cover the cost of replacing broken apparatus, etc. The rental and deposit will be paid at the same time as the composition fee. The deposit will be refunded at the end of the session after deduction of cost of breakages. When a student's breakages exceed \pounds a further deposit will be payable.

At the beginning of the second year students will pay a deposit of f_{I} . This deposit, less (a) 10/- rent of locker, etc.; and (b) cost of breakages, will be refunded at the termination of the Physiology Course. Deposits, part of which may be returnable, are payable in the Departments of Anatomy and Physiology.

The approximate cost of instruments and books which the student must purchase during his course, is as follows :

ist year, £18; 2nd year, £21; 3rd year, £14; 4th year, £5; 5th year, £2; 6th year, £2.

IV. Library

A deposit of 10/6 must be made by all students at the time the first instalment of the Medical Course Composition Fee is paid. This deposit is intended to cover the cost, or a proportion of the cost of replacing any book borrowed from the library and not returned. Where the cost of replacement exceeds 10/6, the student will be called upon to pay the balance together with a further deposit of 10/6.

The Library deposit (less cost of replacements) will be refunded to the student on application at the end of the Medical Course. Deposits unclaimed two years after graduation will be appropriated to the use of the Library.

V. Fees for Recapitulatory Courses

If additional courses are rendered necessary through failure in examination or unsatisfactory attendance, fees at the following rates will be charged.

Botany		 		£12	0	0
Zoology		 		£12	0	0
Anatomy (Six month	s)	 		£10	10	0
,, (Three mor	nths)	 	÷.	£5	5	0
Physiology (Six mon	ths)	 • •		£18	10	0
,, (Three m	onths)	 • •		£9	5	0

Anatomy and Physiology (concurrently)-October			
to March or Jan. to June	£24		
April to September	£12	0	0
Pharmacy (One term's Revision Course)	£13	0	0
Pathology and Bacteriology (six months)	£3	0	0
Pharmacology (six months)	£3	0	0
Other subjects (three months)	£3	0	0

Additional Clinical Fee.

A fee of f_{15} shall be charged for each extension period of six months or part of six months.

VI Separate Fees (M.B., Ch.B., etc.)			
	£	s.	d.
Introductory Anatomy	3	0	0
General Course Anatomy	18		0
Histology	8	0	0
Use of dissecting Room, with tutorial instruction,			
during attendance on the Anatomical Course,	18	-	~
covering six terms	10	0	0
Use of Dissecting Room (External Students)- One month	2	0	0
ATT 1	2	0	0
Physiology—	5	0	0
Ist term	3	0	0
General Course	18	õ	o
Practicals—	10	0	0
Bio-Chemistry	10	0	0
Experimental Physiology	10	0	0
Human Physiology	8	0	0
Pharmacology—	-	-	-
Lectures	3	0	0
Practicals	5	0	0
Pharmacy	5	0	0
Therapeutics	3	0	0
General Pathology and Bacteriology	7	0	0
Special Pathology	7	0	0
Clinical Pathology	3	0	0
Medicine (including a second course and Clinical	5		
Medicine)	9	0	0
Surgery (including Clinical and Practical Surgery)	15	0	0
Obstetrics £7 0 0] If mild at any time		~	
Obstetrics $ \frac{1}{27} \circ \circ$ Gynæcology $\frac{1}{24} \circ \circ$ If paid at one time	9	0	0
Forensic Medicine	8	С	0
Ophthalmology and Otology	5	0	0
Mental Diseases	5	0	0
Public Health	5	0	0

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						£	s.	d.
Infectious Dise	ases			 ••	••	3	IO	0
Vaccination				 	• •	2	10	0
Intern Materni	ty			 	· · ·	3	10	0
Radiology and	Radie	o-Thera	ару	 	••	3	10	0
Orthopædics				 	•••	5	0	0
Diseases of Chi	ldren			 		3	10	ο

VII. (a) Post-Graduate and Miscellaneous Courses

Clinical Pathology						4	4	0
Medical Pathology				••		3	3	0
Surgical Pathology						3	3	0
Operative Surgery						4	14	6
Tropical Medicine				••		5	0	0
Intelligence Tests (fo	or D. P	sychol	. Med.)	*		1	I	0
Anatomy, Physiology	, and	Patholo	ogy (fo	r D. P	sychol			
Med.)*	••	• •		••	••	6	6	0
Clinical Neurology*				• •		3	3	0
For the Diploma in	Public	Healt	h—					
Preliminary course	e (one t	term)				20	0	0
Final course (two	terms)					35	0	0
The complete cour	rse (thr	ee terr	ns)			55	0	0
Agricultural and Tec.	hnical H	Bacteri	ology (per teri	n)	7	0	0
Infirmary Diploma in	Dietet	ics (Ur	iversit	y cours	e) †	24	0	0
Pharmacy Courses for	or—							

Chemist and Druggist Qualifying Examination.

Pharmaceutical Chemist Qualifying Examination.

Sessional fee, if paid in one sum in advance, ± 32 Ios. od. Fee, if paid in instalments :—

£20, payable at beginning of 1st Term.

£14, payable at beginning of 2nd Term.

In addition to the above fees an apparatus deposit of $\frac{1}{2}$ and (in the case of students taking the course for the Pharmaceutical Chemist Qualifying Examination) a library deposit of 10/6are payable at the beginning of the course. These deposits, less the cost of breakages and replacements, will be refunded at the end of the course.

*The courses and examinations for the D.P.M. are in abeyance at present. †Including Union Fee.

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(b) Hospital Practice and Clinical Lecture Fees

(applicable to Post-graduate and External Students).

The fees include clinical lectures in the subjects taken out, and students shall be eligible for hospital appointments.

		mont			onth			nonth		12 0		
	£	S.	d.	£	s.	d.	£	s.	d.	£	s.	d.
All subjects	8	0	0	16	0	0	24	0	0	32	0	0
Medicine	4	10	0	9	0	0	13	10	0	18	0	0
Surgery	4	10	0	9	0	0	13	10	0	18	0	0
Ophthalmology	3	0	0	б	0	0	9	0	0	12	0	0
Ear, Nose and												
Throat	3	0	0	6	0	0	9	0	0	I 2	0	0
Dermatology	2	10	0	5	0	0	7	10	0	10	0	0
Gynæcology	2	IO	0	5	0	0	7	IO	0	10	0	0
Diseases of Infants	5 2	10	0	5	0	0	7	10	0	IO	0	0
Casualty	3	0	0	6	0	0	9	0	0	I 2	0	0
Radio-therapeutic												
Dept	3	0	0	6	0	0	9	0	0	12	о	G
Obstetric Practice	(20	cas	ses),	£3	0	0						

Students of the Leeds Medical School who have taken the full clinical course and have registered as medical practitioners become *ipso facto* Perpetual Students of the Infirmary without further charge. This privilege will admit to the ordinary clinical instruction of the Infirmary, but will not cover attendance at any special post-graduate course for which fees may be charged.

Other qualified practitioners who wish to take further hospital practice can be admitted as "perpetual students" of the Infirmary on payment of a fee of \pounds_{15} 15s.

Practitioners and External Students wishing to attend the Infirmary practice during short periods, and not requiring Signatures or Certificate of any kind, or to hold any hospital appointment, may do so on payment of the following Fees

								£	s.	d.	
For	6	months			• •		 	9	0	0	
For	4	,,					 	6	0	0	
For	3			• •			 • •	4	10	0	
For	2		and	shorter	peri	ods	 	3	0	0	

				For f	first ation.		For si		
			£	s.	d.		£	s.	d.
Examination for Matricu	lation		2	0	0		$\int 2$	0	o* or
Registration of an Externa	al Mati	ricu-					22	2	6
lation Certificate			2	0	0	• •			
Pre-Registration			3	0	0		3	0	0
First M.B.			6	0	0		6	0	0]
Second M.B.			6	0	0		6	0	0 >1
Final M.B.			6	0	0		6	0	0)
Degree of Ch.M.			10	0	0		10	0	0
Degree of M.D			IO	0	0		IO	0	0
Diploma in Public Healt	h								
Preliminary			5	0	0		5	0	0
Final			10	0	0		10	0	0
Diploma in Psychological	Medi	cine	6	6	0	• •	3	3	0
							(for	eacl	1 part)
Diploma in Nursing			5	5	0	• 0	_	12	6
							(101	eacr	i part)

VIII. Fees for Examinations

A student exempt from the 1st M.B. and/or 2nd M.B. examination, having taken the equivalent of such examination elsewhere, must pay the normal examination fee in respect of these examinations before proceeding with his medical course.

The latest dates for payment of examination fees are :--

In March on February 1st, 1947.

In June on March 1st, 1947.

In September on July 15th, 1947.

In December on November 1st, 1946.

IX. Graduation, Convocation and Parliamentary Registration Fee

Every person first admitted to a degree (other than an Honorary Degree) of this University on or after June 1st, 1926, shall be required to pay, prior to graduation, a fee of $\pounds7$ which shall entitle the graduate to be registered as a member of Convocation and to have his or her name

^{*}A student who fails in the July examination in any year will be admitted to the September examination of the same year only on the payment of this fee.

Fees in connection with Matriculation are payable to the Secretary, Joint Matriculation Board, 315, Oxford Road, Manchester, 13.

[†]In cases of re-examination in one subject only, half the fee for first examination will be charged.

inscribed on the Parliamentary Register on attaining qualifying age. On conferment of a further degree, a Graduation Fee of $\pounds 6$ will be payable.

Approximate Total Cost of Medical Course for the M.B., Ch.B. degree

		£.	s.	d.
Examination for Matriculation and Registration	Fee	4	0	
Composition Fee (paid by instalments)	• •	265	0	0
Maternity Hostel Fee		35	15	0
Examination Fees		18	0	0
Books, Instruments, etc.		75	15	0
Graduation and Convocation Fee		7	0	0
	-			

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HOSPITAL TIME TABLE FOR STUDENTS M. T. W. Th. F. S. LEEDS GENERAL INFIRMARY. WARDS VISITED BY---PHYSICIANS---Dr. Burrow IO. 0
Dr. Towers			10. 0			IO, 0
PHYSICIAN WITH CHARGE OF						
CHILDREN'S DEPT. :						
Dr. Craig	3.0	10		2. 0		
SURGEONS-						
Mr. Moir	IO. 0					
Mr. Symons		IO. 0				
M1. Chamberlain				IO. 0		
Mr. Armitage					IO. 0	
ORTHOPÆDIC SURGEONS-						
Mr. Broomhead		2.0			IO. 0	
Mr. Pain					10. 0	
OPHTHALMIC SURGEONS-						
Mr. Foster		II. O		10		
Mr. Black		10. 0		IO. 0		
EAR, NOSE AND THROAT SURGEONS-	-					
	1			10.30		
Mr. Seed Mr. Boyle		10. 0				
OUT-PATIENTS						
MEDICAL CASES-						
Dr. Hartfall		1.30			I.30	
Dr. Garland				I.30		
CHILDREN'S DEPT						
Dr. Craig	10. 0		IO. 0		10, 0	
SKIN CASES-	10. 0					
		9.30		I-30		
		9.30		1.30		
SURGICAL CASES	· · ·	9.30		1.30		
35 73 3		1.30				
Mr. Oldfield		1.30			1.30	
		1				
			I.30			
	· · ·					
ORTHOPÆDIC CASES-		10. 0	3.0	10. 0		
Mr. Broomhead			3.0			
Mr. Pain		10.0	3.0	IO, 0		
OPHTHALMIC CASES-		1				
Mr. Foster		1.30	 T 20	1.30		
Mr. Black	. I.30	••	1.30			
EAR, NOSE AND THROAT CASES-					1.00	
Mr. Seed					1.30	
Mr. Boyle		1.30	••	1.30		••
VENEREAL CASES-						
Dr. Lees S Men		2.0	••			
Women		••		5.30	2. 0	
Operations, In-Patients	IO. 0	IO. 0	IO. 0	IO. 0	IO. 0	10.0
	2, 0	2.0		2.0	2. 0	
" Out-Patients .				9.30	9.30	
Operations, Ophthalmic				10. 0		
, Aural	1	9.0	9.0	1.0	9.0	9.0
" Aural Out-Patients .						
", Orthopædic .			9.0		I.30	9.0
*Post-Mortem Examinations		IO. 0	10. 0	IO. 0	10. 0	10. 0
a obt-mortenn paternare form is .			1			
*Professor Stewart	and the	Assistant	t Physici	ans.		

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HOSPITAL TIME TABLE FOR STUDENTS-continued.

HOSPITAL FOR WOMEN.	м.	т.	w.	Th.	F.	s.
WARDS VISITED BY GYNÆCOLOGICAL SURGEONS- Mr. Claye Mr. Jeaffreson Mr. Agar OUT-PATIENTS- Mr. Claye Mr. Claye Mr. Jeaffreson Mr. Jeaffreson Mr. Agar Mr. Agar	2. 0 2. 0 1.30 9. 0	2. 0 1.30 9. 0	2. 0 1.30 9. 0	10.30 1.30 9. 0	2. 0	 9. 0
LEEDS MATERNITY HOSP WARD VISITS— Mr. Claye Mr. Jeaffreson Mr. Currie Mr. Agar	ITAL.	2.15		2.15 2.15 2.15 2.15		
OUT-PATIENTS— Mr. Claye Mr. Jeaffreson Mr. Currie Mr. Agar	10. O	10. 0 		10. 0	10.30	
CITY FEVER HOSPITAL. WARD VISITS— Dr. Benn	2. 0				2. 0	

APPENDIX

EMERGENCY REGULATIONS

Admission of Students.

Applications for admission should be sent as early as possible and before 30th April, to the Academic Sub-Dean at the School.

Preference in the admission of students will be given to suitably qualified men and women who have served in the Armed Forces or have been engaged in important civilian work to which they were directed under the National Service Acts.

Admission of other men and women to the medical course will be subject to such regulations of the Ministry of Labour and National Service as may be in force at the time. Such regulations may involve application for deferment being made to the Joint Recruiting Board by intending men students whilst still at school.

Continued deferment of men students, is conditional upon their making satisfactory progress in their studies, and the University is required, at six-monthly intervals, to furnish the Ministry of Labour with a certificate that each student is fulfilling this condition.

In general a certificate of satisfactory progress will not be given if a student has been referred twice in the same examination, whether of the University or of some Licensing Body. Failure to appear at an examination without adequate reason will be treated as equivalent to a failure.

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UNIVERSITY OF LEEDS DENTAL SCHOOL AND HOSPITAL

THE UNIVERSITY OF LEEDS

FACULTY OF MEDICINE

DENTAL SCHOOL AND HOSPITAL

Warden - PROFESSOR T. TALMAGE READ 1946-7

The Academic year in the University consists of the following terms in 1946-7:---

First Term: October 1st to December 11th, 1946.

Second Term: January 8th to March 21st, 1947.

Third Term: April 23rd to July 4th, 1947.

Fees must be paid at the time of joining the School. Cheques should be made payable to "THE UNIVERSITY OF LEEDS." The composition fee or the instalment is payable at the commencement of the Session.

The Warden may be seen by appointment.

Letters to be addressed The Warden, Dental School and Hospital, Blundell Street, Leeds, 1.

School of Dentistry

DENTAL SCHOOL AND HOSPITAL STAFF

Professor of Clinical Dental Surgery and Warden of the Dental School and Hospital : T. TALMAGE READ, F.R.F.P.S., Glasgow, L.R.C.P., L.R.C.S., Edinburgh, L.D.S., Glasgow. Senior Lecturer in Clinical Dental Surgery : M. R. HOLLINGS, B.Ch.D., Leeds. Lecturers in Clinical Two vacancies. Dental Surgery : Lecturer in Dental I. P. COCKER, L.D.S., Eng. Surgery : Lecturer in Dental Anatomy and I. G. SYKES, B.Ch.D., Leeds. Physiology : Honorary Demonstrator in Dental D. C. RAMSDEN, L.D.S., Leeds, F.R.M.S. Histology : Lecturer in Dental Pathology and Bacteriology : † Vacant. Lecturers in G. L. WILKINSON, M.R.C.S., L.R.C.P., Orthodontics : L.D.S., Eng., Barrister-at-Law. H. SHAW, L.D.S., Leeds. Honorary Demonstrator in Orthodontics : T. JASON WOOD, B.Ch.D., Leeds, L.D.S., Eng. Lecturer in Dental H. D. STEPHENS, L.D.S., Eng. Mechanics : Lecturers in Prosthetic C. WOODHEAD, L.D.S., Leeds. Dentistry : One vacancy.

[†]The Lectures in this subject are being given by the Professor of Clinical Dental Surgery.

School of Dentistry

Honorary Demonstrator in Dental Prosthetics : Vacant.

Lecturer in the Properties of Dental

4

Materials : J. HUME, B.Sc., Edinburgh, A.R.I.C.

Lecturer in Radiology :

A. STEWART JOHNSTONE, M.D., F.R.C.S., Edinburgh, D.M.R.E., Cambridge.

Clinical Dental Lecturers :

- W. SINTON THORBURN, M.Sc., Leeds, L.D.S., Edin.
- G. D. ILES, L.D.S., Eng.
- G. L. WILKINSON, L.R.C.P., M.R.C.S., L.D.S., Eng., Barrister-at-Law.
- J. K. CRAWFORD, L.D.S., Eng.
- J. P. COCKER, L.D.S., Eng.
- J. G. SYKES, B.Ch.D., Leeds.
- J. M. MACRAE, L.D.S., Leeds. S. H. BRENAN, L.D.S., Manchester.
- H. D. STEPHENS, L.D.S., Eng.
- R. N. ROSS, B.Ch.D., L.D.S., Leeds.

H. G. L. JOHNSON, L.D.S., Eng. One vacancy.

Honorary Clinical Tutors :

A. 5.3

D. C. RAMSDEN, L.D.S., Leeds, F.R.M.S. S. R. WOODCOCK, L.D.S., Leeds, H.D.D., Edin. D. J. CORK, L.D.S., Leeds. One vacancy.

Miss GWENDOLEN HARRISON, M.B., Ch.B., Leeds. One vacancy.

Senior House Surgeon :

Anaesthetists :

F. L. SOUTHAM, L.D.S., Leeds.

House Surgeons :

Four vacancies.

Assistant House Surgeons :

Two vacancies.

Secretary : A. BATT, A.H.O.A.

SCHOOL OF DENTISTRY

COURSES OF STUDY

Students who have satisfied the matriculation requirements (see below) are advised to take the Degree (B.Ch.D.) course. Opportunity will be given, if so desired, for degree candidates to take also the L.D.S. qualification in their normal period of professional study.

For those who have not matriculated but have obtained the requisite *credits* in the School Certificate or College of Preceptors examinations, the course of study leads to the Diploma in Dental Surgery (L.D.S.).

Candidates whose intention it is to take both a medical and a dental qualification should consult the Warden of the Dental School before admission regarding the possible combination of the courses of study.

The normal courses for the B.Ch.D. and the L.D.S. are identical, except that an additional period of Clinical Dental Study is required for the Degree.

Every student should make himself familiar with the examination regulations and should take care that he attends all the necessary courses of lectures, demonstrations and hospital practice in order to obtain the requisite certificates of attendance for entry to the examinations.

Students taking the examinations of other Licensing bodies must make themselves acquainted with the subjects, period of attendance, etc., necessary for such examinations, as they do not, in all cases, coincide with the University curricula.

Entrance Requirements

Before admission to the University, the dental student must have passed preliminary examinations in general education as follows :—

For the B.Ch.D.:

A candidate for this degree must satisfy the requirements of the Joint Matriculation Board. Enquiries should be addressed to "The Secretary, Joint Matriculation Board, 315, Oxford Road, Manchester, 13.

Except in cases specially approved by the Senate, candidates for the B.Ch.D. are required to present evidence of possessing a knowledge of Mathematics at least equivalent to that of a "Pass" standard at the School Certificate Examination.

For the L.D.S.:

The normal standard of the Preliminary Examination to be passed before admission to the course of study for the Diploma in Dental Surgery is that of a University Matriculation or Entrance Examination. In the case of candidates who have not completely satisfied the full Matriculation requirements, evidence must be produced that they have passed at "credit" standard, at not more than two sittings, in four subjects as undermentioned taken from Groups I, II and III of the School Certificate or other recognised examination :—

- I. English.
- 2. A language other than English.
- 3. A science subject.
- 4. A fourth subject selected from Groups I, II or III.

Except in cases specially approved by the Senate, all candidates for the L.D.S. are required to present evidence of possessing a knowledge of Mathematics, at least equivalent to that of the "pass" standard at a School Certificate Examination.

Registration.

Students will be registered by the University Authorities within fifteen days of their commencing professional study (*i.e.* after passing or obtaining exemption from the Pre-Registration Examination in Physics and Chemistry), and their names will be forwarded to the General Medical Council for inclusion in the official Register. In the case of students who have served an apprenticeship of at least two years in dental mechanics before admission to the University, registration may be antedated for a period not exceeding six months.

Age of Admission.

A candidate before Registration (*i.e.* having passed or obtained exemption from the Pre-Registration Examination) is required to furnish evidence that he has attained, or will within three months attain, the age of eighteen years. Students taking the normal courses (including the Pre-Registration course) may therefore enter the University at about the age of 17.*

Concessions to Higher School Certificate Holders.

Students who have passed in Chemistry and Physics (Principal Subjects) in the Higher School Certificate Examination are granted exemption from the courses and examinations in Physics and Chemistry (Pre-Registration), and the period of their University studies is reduced by at least six months.

Exemptions.

As a temporary measure, a pass in any of the subjects of the Pre-Registration examination of the Royal College of Surgeons (England)—Physics, Chemistry, Biology carries exemption from the corresponding subjects of the First L.D.S. examination.

^{*}Government regulations at present in force give priority of admission to ex-service candidates, and limit the entry of school-leaving candidates to those specially approved for the remaining vacancies by the University Joint Recruiting Board, to whom application should be made, on the appropriate form, before July 31st.

DEGREES, COURSES OF STUDY, AND EXAMINATIONS IN DENTAL SURGERY

ORDINANCE VII

Ordinance

 The Degrees in Dental Surgery shall be : Bachelor of Dental Surgery (B.Ch.D.). Master of Dental Surgery (M.Ch.D.).

Degree of Bachelor of Dental Surgery

2. All candidates for the degree of Bachelor of Dental Surgery are required to present certificates showing that they will have attained the age of twenty-one years on the day of graduation, and that they have attended courses of instruction approved by the University extending over not less than five years, two of such years at least having been passed in the University subsequently to the date of passing the First examination, and to have completed such period of pupilage or hospital attendance, or both, as may be prescribed by the Regulations of the University.

3. Candidates for the degree of Bachelor of Dental Surgery are required to satisfy the Examiners in the several subjects of the following examinations, entitled respectively:

The examination for Matriculation, or such other examination as may have been recognised by the Joint Matriculation Board* of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham in its stead.

The First examination.

The Second examination.

The Third examination.

The Final examination.

4. Each examination shall include practical work in the subjects offered.

* See page 6

5. All candidates shall be required, before presenting themselves for examination, to furnish certificates testifying that they have attended the prescribed courses of instruction in accordance with the Regulations of the University in each of the subjects which they offer, and that they have fulfilled the other requirements of the Ordinance and Regulations in respect of such examination.

Except in cases specially approved by the Senate, Regulation candidates for a degree in the Faculty of Medicine (M.B., Ch.B. or B.Ch.D.) are required to present evidence of possessing a knowledge of Mathematics at least equivalent to that of the "Pass" standard at a School Certificate Examination.

The conditions of the examination for Matriculation and of exemption therefrom are set forth in a Syllabus which is issued free, and is obtainable from the Secretary, Joint Matriculation Board, 315, Oxford Road, Manchester.

First Examination

6. The First Examination shall consist of two Parts :-- Ordinance Part I. (Pre-registration) :---

Physics.

Chemistry.

Part II. Zoology and Botany.

7. Candidates shall be allowed to pass in each Part separately.

8. Candidates shall be required, before presenting themselves for Part I of this examination, to have passed the examination for Matriculation.

9. Candidates shall be required, before presenting themselves for Part II of this examination, to have passed the examination for Matriculation, and to have attended courses of instruction in accordance with the Regulations of the University.

Regulations

The courses of instruction at the University for the First Examination Parts I and II shall be as follows :-

Lectures and laboratory work for one session in :--

Physics. Chemistry. Zoology and Botany.

Candidates for the First Examination are normally required, except as provided below, to have attended these courses in the University or at an affiliated college of the University.

The examination will normally be held in June. Candidates who have failed at the examination in June may be granted permission by the Senate to present themselves in September for the whole or such part of a supplementary examination as the Examination Committee may determine.

Concession to Higher School Certificate Holders.

Students who have passed in Physics or Chemistry at principal standard in the Higher School Certificate examination are exempted from the corresponding course and subject in the First Examination.

Second Examination

Ordinance

10. The subjects of the Second Examination shall be :

Part I The Properties of Dental Materials.

Part II Anatomy.

Physiology.

Part III Dental Anatomy and Physiology. Dental Pharmacy and Pharmacology.

Part IV Dental Mechanics.

11. Candidates may pass in each Part separately.

12. Candidates shall be required, before presenting themselves for the Second examination, to have attended courses of instruction in accordance with the Regulations of the University.

10

Candidates for the Second examination are required to Regulations have attended complete courses of instruction approved by the University in :

The Properties of Dental Materials : lectures and laboratory work : two terms.

- Anatomy: lectures and practical work: three terms.
- Physiology: lectures and practical work: three terms.
- Dental Anatomy and Physiology: lectures: two terms.
- Dental Histology: practical work: one term.
- Dental Pharmacy : lectures and demonstrations : one term.
- Pharmacology: lectures and demonstrations: one term.
- Dental Mechanics : lectures : two terms.

Candidates for Part IV of the Second Examination shall be required to have spent two years in the Department of Dental Mechanics of a recognised Dental or General Hospital, or one year in such Department in the event of their having completed not less than two years in pupilage to a registered dentist.

The Second examination shall be held twice in each calendar year.

Candidates who fail to satisfy the Examiners in any subject of the examination must, before being re-admitted to examination, produce evidence of having pursued such further study as may have been required by the Examiners.

Third Examination

13. The subjects of the Third Examination shall be :- Ordinance

Part I General Pathology and Bacteriology.

Part II Medicine.

Surgery.

14. Candidates may pass in each Part separately.

15. Candidates shall be required, before presenting themselves for the Third Examination, to have attended courses of instruction in accordance with the Regulations of the University.

Regulations

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Candidates for the Third Examination are required to have attended complete courses of instruction approved by the University in :---

General Pathology and Bacteriology: three terms. Medicine : lectures : one term.

Medicine: tutorial and clinical: one term.

Surgery : lectures : one term.

Surgery: tutorial and clinical: one term.

Candidates for the Third Examination, Part II, shall also be required to present certificates of medical and surgical practice recognised by the University as follows :-- Junior Post-mortem Clerkship, three months; Surgical Out-patient Dressership, three months: Aural Out-patient Dressership, three months.

The Third Examination shall be held twice in each calendar year.

Candidates who fail to satisfy the Examiners in any subject of the examination must, before being re-admitted to examination, produce evidence of having pursued such further study as may have been required by the Examiners.

Final Examination

Ordinance 16. The subjects of the Final Examination shall be :--Dental Surgery.

> Clinical Dental Surgery (including Operative Dental Surgery, Oral Surgery, Orthodontia, Radiology and Prosthesis).

Special Pathology and Bacteriology.

17. Candidates shall be required before presenting themselves for the Final Examination, to have passed the First, Second and Third Examinations, and to have attended courses of instruction in accordance with the Regulations of the University.

18. The names of candidates who have satisfied the Examiners in all the subjects of the Final examination. and are recommended for degrees, shall be published as follows :--

I. Those awarded First Class Honours.

2. Those awarded Second Class Honours.

3. Those who have satisfied the Examiners.

The names shall be in alphabetical order in each case.

Candidates for the Final examination shall be required Regulation to have attended courses of study, approved by the University as follows:

Special Pathology and Bacteriology: one term. Dental Surgery: lectures: two terms.

Operative Dental Surgery : lectures : one term.

Orthodontia: lectures: one term,

Radiology: lectures: one term.

Anæsthetics : one term.

Dental Hospital Practice: two and a half years.

The Final examination shall be held twice in each calendar year.

Candidates who fail to satisfy the Examiners in any subject of the examination must, before being re-admitted to examination, produce evidence of having pursued such further study as may have been required by the Examiners.

Degree of Master of Dental Surgery

I. The degree of Master of Dental Surgery may be Ordinance conferred on payment of the proper fee, upon Bachelors of Dental Surgery of the University and upon Graduates in Dental Surgery of other approved Universities, subject to the conditions contained in the following Articles.

2. Bachelors of Dental Surgery of the University of not less than one year's standing may proceed to the

degree of Master of Dental Surgery upon production of evidence of having been engaged for at least one year in approved Dental Hospital practice or approved special study, or of having been engaged for at least two years in practice as a Dental Surgeon.

3. Graduates in Dental Surgery of other approved Universities of not less than two years standing may proceed to the degree of Master of Dental Surgery upon completion of an approved course of higher study or research in the University extending over a period of two years.

4. Candidates having satisfied the requirements under either Article 2 or Article 3 may proceed to the degree either (a) by examination only or (b) by presenting a thesis or published work on a subject or subjects approved by the Board of the Faculty of Medicine and submitting themselves in addition to such examinations as may be deemed necessary.

I. AWARD OF THE DEGREE BY EXAMINATION ALONE.

Regulations

I. Candidates desiring to proceed to the degree by examination must submit themselves to an examination in the Principles and Practice of Dental Surgery and in a Special subject selected from the following list:—

- Embryology, Histology and Anatomy in relation to Dentistry.
- Physiology and Biochemistry in relation to Dentistry.

Pathology and Bacteriology in relation to Dentistry. Pharmacology, Pharmacy and Therapeutics in relation to Dentistry.

Properties of Dental Materials.

Dental Prosthetics

Dental Radiology.

Orthodontics.

Oral Surgery.

Preventive Dentistry.

2. The examination in the Principles and Practice of Dental Surgery shall consist of :---

(a) Two written papers.

(b) A written commentary upon a selected case or cases.

(c) A clinical or practical examination, or both.

(d) A viva voce examination.

3. The examination in a special subject shall consist of :---

- (a) Two written papers.
- (b) A clinical or practical examination, or both.

(c) A viva voce examination.

II. Award of the Degree upon thesis or published work.

I. Candidates desiring to proceed to the degree by thesis or published work must submit the title of the thesis or published work for the approval of the Board of the Faculty of Medicine, and, such approval having been obtained, must furnish three copies (printed or typewritten) together with any drawings or specimens which are deemed necessary for illustrating them.

2. The thesis to be presented shall embody the results of personal observation or original research either in some branch of Dental Surgery or in some science directly related thereto. Original work already published by the candidate shall be admissible in lieu of, or in addition to, a thesis specially written for the degree.

3. Candidates may be examined on the subject of the thesis or may be required to submit themselves to such examination as may be deemed necessary.

4. If the thesis or published work submitted is considered by the examiners to be of exceptional merit, the degree may be awarded without further examination.

5. A candidate shall not be permitted to submit a thesis or published work for which a degree has already been conferred upon him, or which is under consideration for the award of a degree, in this or any other University, but he shall not be precluded from incorporating in his thesis or published work any part of the work already submitted by him with a view to a degree provided that in his application for acceptance as a candidate for the degree he states his desire to do so, and, on presentation of his thesis or published work, indicates clearly the part which has been so incorporated.

6. In the case of work submitted under joint authorship, the applicant shall be required to indicate to the satisfaction of the Senate his own share in the joint production.

7. A copy of the thesis submitted in support of the application will be retained in the University Library.

III. The names of candidates who have been approved for the degree of Master of Dental Surgery shall be published in alphabetical order, and distinction may be awarded on the recommendation of the examiners.

Entry must be made on the appropriate form and submitted to the Registrar of the University not later than 1st January or 1st July in any year.

DIPLOMA IN DENTAL SURGERY (L.D.S.)

REGULATIONS

Candidates for the Diploma in Dental Surgery (L.D.S.) of the University of Leeds are required to present certificates showing that they have attained the age of twenty-one years, and that they have attended courses of instruction, approved by the University, extending over not less than four years, two at least of which must have been spent in the University after passing the First examination.

Candidates are required to satisfy the Examiners in the several subjects of the following examinations :—

A Preliminary examination in general education. First examination.

Second examination.

Third examination.

Final examination.

Preliminary Examination

The normal standard of the Preliminary Examination to be passed before admission to the course of study for the Diploma in Dental Surgery is that of a University Matriculation or Entrance Examination. In the case of candidates who have not completely satisfied the full Matriculation requirements, evidence must be produced that they have passed at "credit" standard, at not more than two sittings, in four subjects as undermentioned taken from Groups I, II and III of the School Certificate or other recognised examination :—

I. English.

2. A language other than English.

3. A science subject.

4. A fourth subject selected from Groups I, II or III.

Except in cases specially approved by the Senate, all candidates for the Diploma in Dental Surgery are required to present evidence of possessing a knowledge of Mathematics at least equivalent to that of the "pass" standard at a School Certificate Examination.

First Examination

The First Examination shall consist of two Parts:-Part I (Pre-registration):-

Physics. Chemistry.

Part II Zoology and Botany.

Candidates may pass in each Part separately.

The names of candidates who have satisfied the Examiners in either Part of the First examination shall be published in alphabetical order.

Candidates shall be required, before presenting themselves for Part I of this examination, to have passed the Preliminary examination in general education.

The courses of instruction at the University for the First Examination Parts I and II shall be as follows:—

Chemistry.

Zoology and Botany.

Candidates for the First Examination are normally required, except as provided below, to have attended these courses in the University or at an affiliated college of the University.

The examination will normally be held in June. Candidates who have failed at the examination in June may be granted permission by the Senate to present themselves in September for the whole or such part of a supplementary examination as the Examination Committee may determine.

Concession to Higher School Certificate Holders.

Students who have passed in Physics or Chemistry at principal standard in the Higher School Certificate examination are exempted from the corresponding course and subject in the First Examination.

Exemption.

As a temporary measure, a pass in any of the subjects of the Pre-Medical examination of the Royal College of Surgeons (England)—Physics, Chemistry, Biology carries exemption from the corresponding subjects of the First L.D.S. examination.

Second Examination

The Second Examination shall consist of four Parts :---

Part I The Properties of Dental Materials.

Part II Anatomy.

Physiology.

Part III Dental Anatomy and Physiology.

Dental Pharmacy and Pharmacology.

Part IV Dental Mechanics.

Candidates may pass in each Part separately.

Candidates, before presenting themselves for the Second examination, are required to have attended courses of instruction recognised by the University, as follows:—

The Properties of Dental Materials : lectures and laboratory work : two terms.

Anatomy: lectures and practical work: three terms.

Physiology: lectures and practical work: three terms.

Dental Anatomy and Physiology: lectures: two terms.

Dental Histology: practical work: one term.

Dental Pharmacy: lectures and demonstrations: one term.

Pharmacology: lectures and demonstrations: one term.

Dental Mechanics: lectures: two terms.

Candidates for Part IV of the Second examination shall be required to have spent two years in the Department of Dental Mechanics of a recognised Dental or General Hospital, or one year in such Department in the event of their having completed not less than two years in pupilage to a registered dentist. The examinations will be held twice in each calendar year.

Candidates who fail to satisfy the Examiners in any subject of the examination must, before being re-admitted to examination, produce evidence of having pursued such further study as may have been required by the Examiners.

Third Examination

Part II Medicine.

art 11 medicine.

Surgery.

Candidates may pass in each Part separately.

General Pathology and Bacteriology : three terms. Medicine : lectures : one term.

Medicine : tutorial and clinical : one term.

Surgery : lectures : one term.

Surgery: tutorial and clinical: one term.

Candidates for the Third examination, Part II, shall also be required to present certificates of Medical and Surgical practice recognised by the University, as follows:—

Junior Postmortem Clerkship: three months.

Surgical Out-patient Dressership: three months.

Aural Out-patient Dressership: three months.

The Third examination will be held twice in each calendar year.

Candidates to who fail satisfy the Examiners in any subject of the examination must, before being re-admitted

to examination, produce evidence of having pursued such further study as may have been required by the Examiners.

Final Examination

The Final Examination shall consist of :--

Dental Surgery

Clinical Dental Surgery (including Operative Dental Surgery, Oral Surgery, Orthodontia, Radiology and Prosthesis).

Special Pathology and Bacteriology.

Candidates must have passed the First, Second and Third examinations before being examined in the Final examination, and must have attended courses of instruction recognised by the University as follows :---

Special Pathology and Bacteriology: one term. Dental Surgery: lectures: two terms.

Operative Dental Surgery : lectures : one term.

Orthodontia: lectures: one term.

Radiology: lectures: one term.

Anaesthetics : one term.

Dental Hospital practice : two years.

The Final examination shall be held twice in each calendar year.

Candidates who fail to satisfy the Examiners in any subject of the examination must, before being re-admitted to examination, produce evidence of having pursued such further study as may have been required by the Examiners.

NORMAL DENTAL COURSE B.Ch.D. and L.D.S.

FIRST TERM.	SECOND TERM.	THIRD TERM.
First Year. Physics. Chemistry. Botany and Zoology.	Physics. Chemistry. Botany and Zoology.	Physics. Chemistry. Botany and Zoology. First Examination : Part I.: Physics and Chemistry. Part II.: Botany and Zoology. (June and September).
Second Year. Anatomy. Physiology. The Properties of Dental Materials. Dental Laboratory.	Anatomy. Physiology. The Properties of Dental Materials. Dental Laboratory. Second Examination: Part I:- The Properties of Dental Materials. (March and September).	Anatomy. Physiology. Dental Laboratory. Second Examination : Part II. : Anatomy and Physiology. (June and September).
Third Year. Dental Mechanics Lectures. Dental Anatomy and Physiology. Pharmacology. Dental Laboratory.	Dental Mechanics Lectures. Dental Anatomy and Physiology. Dental Histology. Dental Histology. Dental Harmacy. Dental Laboratory. Second Examination : Part III Dental Anatomy and Physiology. Dental Pharmacy and Pharmacology. (March and September).	Surgery Lectures. Dental Laboratory. Second Examination : Part IV.: Dental Mechanics. (September and March).
Fourth Year. Pathology and Bacteriology. P.M. Clerkship. Surgery Tutorial. General Hospital Practice. Dental Hospital Practice.	Pathology and Bacteriology. Medicine Lectures. Clinical Medicine	Pathology and Bacteriology. Clinical Medicine (Tutorial). Radiology Lectures. Anæsthetics. General Hospital Practice. Dental Hospital Practice. Third Examination : Part I.:- General Pathology and Bacteriology. (September and March). Part II.:- Medicine and Surgery. (September and March)

N.B.—Attendance at Dental Laboratory and Dental Hospital Practice is required during vacations.

FIRST TERM.	SECOND TERM.	THIRD TERM.
Fifth Year. Special Pathology and Bacteriology. Dental Surgery Lectures. Dental Hospital Practice.	Special Pathology and Bacteriology. Dental Surgery Lectures. Orthodontia Lectures. Dental Hospital Practice.	Dental Hospital Practice, Final L.D.S. Examina- tion: Clinical Dental Surgery. Dental Surgery. Special Pathology and Bacterology. (September and March).
Sixth Year. Dental Hospital Practice.	Dental Hospital Practice. Final B.Ch.D. Examina- tion : Clinical Dental Surgery Dental Surgery, Special Pathology and Bacteriology. (March and September).	

POST GRADUATE COURSES

Dental practitioners desirous of taking post graduate courses of instruction should apply for particulars to the Warden.

SCHOLARSHIPS

Particulars of University Entrance Scholarships are contained in the Scholarship Prospectus (price 3d.) which may be obtained from the Registrar of the University.

Information regarding Bursaries or Loans awarded by the Dental Board may be obtained from the Registrar, Dental Board of the United Kingdom, 44, Hallam Street, London, W.I.

Particulars of grants available for Ex-Service men and women may be obtained from the Appointments Department, Ministry of Labour and National Service, 3, St. James's Square, London, S.W.I.

PRIZES AND CERTIFICATES OF MERIT

Examinations for Prizes and Certificates of Merit are held annually as follows :---

Charles Rippon Medal

Mr. Charles Rippon, Ph.D., L.D.S., on his retirement from the Lectureship in Dental Mechanics, presented to the University the sum of \pounds roo to provide a Silver Medal, to be awarded annually to the most distinguished student of the year in the School of Dentistry.

 Candidates for the Medal must be students who are in the final year* of a normal full curriculum for a

^{*}In determining the final year due consideration will be given to the case of students who may have combined B.Sc. and M.B., Ch.B., courses with the dental curriculum.

qualification in Dental Surgery (B.Ch.D. or L.D.S.) and who have pursued the full qualifying course at Leeds University after registration.

- 2. The award will be made in October by the Board of the Faculty of Medicine on the nomination of the Clinical Dental Committee. Only candidates who have attained a high standard of proficiency shall be eligible. In determining the award of the medal, account will be taken of the marks obtained in the Senior Operating Prize Examination as well as the reports of the tutors in the various clinical departments of the School.
- 3. No Student will be allowed to compete for the medal more than once.
- 4. If two candidates show equal distinction two medals may be awarded, should there be sufficient funds for the purpose.

The Percy Leigh Medal

Mr. Percy T. Leigh, L.D.S., R.C.S., (Eng.), L.D.S. (Glasgow) presented to the University, with a view to the encouragement of the Science and Art of Dental Mechanics, the sum of \pounds 105 to provide a Gold Medal* to be awarded annually to the most skilled senior pupil of the year in the Dental Mechanics Laboratory of the Dental School.

The conditions of award are as follows :---

- A Gold Medal is available for award each year to the most skilled senior pupil in the Dental Mechanics Laboratory of the University of Leeds School of Dentistry, who has taken the full pupilage in the University.
- 2. The award will be made by the Board of the Faculty of Medicine on the nomination of the Clinical Dental Committee.
- 3. The Medal will be awarded on (a) the result of an examination in Dental Mechanics to be held annually; (b) a consideration of the candidate's general record. A high standard of skill must be shown.

*For the duration of the war and while the cost of gold is maintained at a very high figure, the Medal will be of silver or silver gilt.

- 4. No student will be permitted to compete for the Medal more than once.
- 5. If two candidates are equally deserving of the award, two Gold Medals may be awarded.

Percy Leigh Prize in Clinical Dental Surgery

Mr. Percy T. Leigh, L.D.S., R.C.S. (Eng.), L.D.S. (Glas.), to mark his year of office (1935-36) as the Lord Mayor of Leeds, presented to the University the sum of f_{100} to provide annually a Prize of the value of three guineas in the subject of Clinical Dental Surgery.

The award will be made by the Board of the Faculty of Medicine on the recommendation of the Clinical Dental Committee.

The Prize will be awarded on the result of an examination in Clinical Diagnosis, including Clinical Pathology and Bacteriology and the interpretation of radiographs. A high standard of proficiency must be attained by the successful candidate.

Candidates must be students of the University of Leeds who are in the final year of a normal curriculum for a qualification in Dental Surgery (B.Ch.D. or L.D.S.), and no candidate may compete more than once for the Prize.

Operative Dental Surgery : Third Year Students

Prize value two guineas. The examination will be partly written, practical and oral—the practical part involving the treatment of teeth by filling and extraction.

Operative Dental Surgery : Final Year Students Prize value five guineas.

Orthodontics: Final Year Students

Prize value five guineas. Candidates will be required to submit for examination models of cases (not less than two in number) which they have completed in the Orthodontic clinic, together with written descriptions of the treatment followed, and to take a written examination.

Extractions

Prize value two guineas. Open to final year students for proficiency in the extraction of teeth.

Dental Mechanics : First Year Students Prize value two guineas.

Dental Mechanics: Second Year Students Prize value five guineas.

Students may compete only for Prizes and Certificates in their respective years, and may not enter twice for the same examination.

LEEDS UNIVERSITY UNION DENTAL STUDENTS' SOCIETY

All dental students are urged to join this Society. Meetings are held during the session, at which members of the medical and dental professions read scientific papers of interest to the dental student. The society also caters for the social side of the school life, and holds annually a dance and a dinner.

FEES

General Regulations

The composition fees for lecture and laboratory courses may be paid either sessionally, in advance, or (with certain exceptions) terminally by instalments. Fees paid by instalments are at a slightly higher rate than when paid in advance. The terminal instalment scales of fees are not applicable to students ordinarily resident outside the British Isles; such students must pay fees sessionally in advance.

A student ceasing, for any reason whatsoever, to attend at the University during the session has no claim to a return of fees.

A student who elects to pay composition fees by instalments and who withdraws from the University before the end of a session must pay the whole of the remaining instalments of the session's fee. On presentation of a form signed by the Dean of the Faculty authorising attendance upon courses of study, and upon payment of the requisite fees, the Accountant will supply a class ticket entitling the student to attend such courses. This class ticket must be presented by the student, before commencing attendance, to the Professors or Lecturers whose classes or lectures he is authorised to attend.

Students are required to pay a Registration Fee of f_{2}^{*} when their application for admission to the University is accepted.

Fees may be paid either in the Secretary's Office, Dental School, or in the Students' Section, University Road. Cheques should be made payable to "The University of Leeds."

I. Composition Fees

The following scale of fees will be applicable to all students entering upon a course in October, 1940. Students who have paid a Dental Course Composition fee in a previous session will continue to pay fees at the scale set out in the Calendar and Dental School Prospectus for 1939-40.

Complete course (including Pre-Registration course, Pupilage, Dental and General Hospital practice and Union Fees) :--

I. For the Degree of B.Ch.D. -

	When p sessiona in advar	illy		he 1st	day of	erminal instalments ay of each term. d term, 3rd term.				
	£		£		£	J-	£			
1st Session	 60		30		20		12			
2nd Session	 60		30		20		12			
3rd Session	 60		30		20		12			
4th Session	 60		30		20		12			
5th Session	 25		+		#		\$			
6th Session	 20				1		1			
Total	 †£285									

* The Registration Fee payable by overseas students is £5.

† Reduced by £15 if paid in one sum at commencement of first year.

‡ Instalment scale not applicable.

2. For the Diplom	na in	Den	tal Su	rgery			
		£		£	£		£
ist Session	• •	60		30	 20		12
2nd Session		60	• •	30	 20	• •	12
3rd Session		60		30	 20		12
4th Session		60		30	 20		12
5th Session		25	• •	*	 *		×
Total	••‡£	265					

II. Pupilage Fees

	t	S.	u.	
For six months additional pupilage in dental mechanics	20	0	0	
For three months additional pupilage	10	0	0	

III. Dental Practice Fees

For six months additional			 	20	0	0
For three months additional			 	IO	0	0
For Post-Graduate work (per	half	day)	 	I	0	0

IV. Recapitulation Fees

Anatomy					 5	0	0
Physiology		1.4			 5	0	0
Anatomy and P	hysiology	(concu	rrently	7)	 8	0	0
Dental Anatomy	and Phy	siology	(3 m	onths)	 3	0	0

V. Examination Fees, etc.

Matriculation	2	0	0
Registration of an External Matriculation Certificate	2	0	0
Pre-Registration Examination (External Candidates)	3	0	0
B.Ch.D. First Examination		0	-
and \langle Second ,,	5	0	0
		0	0
Conferment of Diploma	. 6	0	0
,, ,, Degree	17	0	0

* Reduced by £14 if paid in one sum at commencement of first year

† Including £1 Parliamentary Registration and Convocation Fee.

* Instalment scale not applicable.

The fees are the same for re-examination as for original examination, except that in cases where one subject only is taken the fee is \pounds_3 .

VI. Locker Fee and Breakages Deposit

A deposit of $\pounds 2$ is payable on commencement of the Dental course. Half of this amount will be retained as locker rent, the balance being returnable at the end of the course less the cost of replacing keys, apparatus, etc., lost or broken by the student. If at any time during the course the total cost of replacements exceeds $\pounds I$, a further deposit of $\pounds I$ will be payable.

VII. Rental for Dental Engine

A rental of $\pounds 2$ is payable by students commencing Dental Hospital Practice, for the loan of a dental foot engine or electric unit.

VIII. Cost of Dental Education, shewing incidence of charges

On the following pages are set forth expenses of Dental Education shewing approximately how the various charges fall due if the fees are paid by instalments and examinations taken at the earliest possible date.

It is assumed that the student will enter on the course in October.

The amounts shown for instruments and books are at pre-war standards, and provision should be made for increased expenditure on these items.

Composition fees cover a normal Dental course as set out in the *Calendar* or *Prospectus*. Supplementary fees are payable where the course taken exceeds the normal period of instruction.

(a) Degree in Dentistry (B.Ch.D.)

The total cost will be reduced by \mathcal{L}_{15} if those fees marked * are paid in one sum instead of by instalments.

Before entry) Matriculation Examination Registration Fee (on acceptance)	£ 2 2	s. 0 0	d. o o	6	5.	d.
		-		4	0	0
First Year						
Composition Fee-First Instalment	*60	0	0			
Locker and breakages deposit	2	0	0			
Microscope and Books	27	0	0			
Chemical Apparatus	7	0	0			
First Examination Fee	6	0	0	-	. 3	
-				102	0	0
Second Year.						
Composition Fee-Second Instalment	*60	0	0			
Books	5	õ	o			
Anatomy Charges	5	ō	0			
Laboratory Tools	12					
Second Examination Fee	5	0	0			
-	-		_	87	0	0
Third Year.						
Composition Fee—Third Instalment	*60	0	0			
-				бо	0	0
Fourth Year.						
Composition Fee—Fourth Instalment	*60	0	0			
Operating Instruments	40	0	0			
Books	3	0	0			
Unit and Engine Rent	2					
Third and Final Examination Fee	5	0	0			
-				110	0	0
Fifth Year.						
Composition Fee—Fifth Instalment	* 9 E	0	0			
	~)	-		25	0	0
				-5	~	
Sixth Year.						
Composition Fee—Sixth Instalment	*20	0	0			
Graduation, Parliamentary Registra-						
tion and Convocation	7	0	0			
-				27	0	0
Approximate Total Cost			t	415	0	0
			-			-

(b) Diploma in Dentistry (L.D.S.)

The total cost will be reduced by \pounds_{14} if the fees marked \dagger are paid in one sum instead of by instalments.

B	efore entry).	£	s.	d.	£	s.	d.
	Matriculation or some other recognised Preliminary Examination, say	2	0	0			
	Registration Fee (on acceptance)	2					
	First Year.	_		-	4	0	0
	Composition Fee—First Instalment	+60	~	~			
	Locker and breakages deposit	2		0			
	Microscope and Books	27					
	Microscope and Books Chemical Apparatus First Examination Fee	7	0	0			
	First Examination Fee	6	0	0	102		
	Second Year.			_	102	0	0
	Composition Fee-Second Instalment	† 60	0	0			
	Books	5		0			
	Anatomy Charges	5	0				
	Laboratory Tools Second Examination Fee	12		0			
	Second Examination Fee	5	0	0	87	0	0
	Third Year.				- /		
	Composition Fee-Third Instalment	†60	0	0			
	-				60	0	0
	Fourth Year.						
	Composition Fee-Fourth Instalment		0	0			
	Operating Instruments						
	Books	3					
	Third and Final Examination Fee			0			
		5			110	0	0
	Fifth Year.						
	Composition Fee-Fifth Instalment	125	0	0			
	Conferment of Diploma	6	0	0			
	-			—	31	0	0
	Approximate Total Cost			t	394	0	0
							-

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