PRESTON
HARRIS INSTITUTE.

FOUNDED 1828.

PROSPECTUS

SESSION 1937-38.

HARRIS INSTITUTE, PRESTON

TELEPHONE NUMBERS:
TECHNICAL COLLEGE 4016. AVENHAM INSTITUTE 3093.

THE INSTITUTE COMPRISES
THE TECHNICAL COLLEGE (CORPORATION STREET),
AND THE AVENHAM INSTITUTE.

PROSPECTUS
of
CLASSES

SESSION 1937-38.

A—

1. TECHNICAL DAY CLASSES	-	**Re-open Sept. 14**
2. JUNIOR DAY SCHOOLS *(Technical and Commercial)*	-	**„ „ 7**
3. EVENING CLASSES - -		**„ „ 20**

B—

1. DAY ART CLASSES - -		**Re-open Sept. 14**
2. EVENING ART CLASSES	-	**„ „ 20**

SPECIAL NOTICE—Evening Students will be enrolled at the Technical College, Corporation Street, from 7 to 9 p.m. on Wednesday and Thursday evenings, September 15th and 16th, and may also enrol during the week commencing Monday, September 13th, between 9 a.m. and 5 p.m. (Saturday, 9 to 12).

Students who do not enrol on these dates will be charged an extra fee of 2/6. This will be strictly enforced.

PRICE TWOPENCE. BY POST THREEPENCE.

1937-38.

HARRIS INSTITUTE, PRESTON.

Trustees:

Mr. W. F. ASCROFT, D.L., J.P.
Mr. Alderman H. ASTLEY-BELL, J.P.
Mr. J. W. E. DICKSON, M.A.
Mr. H. PARKER, J.P.
Mr. J. H. TOULMIN, J.P.

Council:

President:

Mr. Alderman H. ASTLEY-BELL, J.P.

Vice-President:

Mr. J. H. TOULMIN, J.P.

Mr. J. AMBLER.
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Mr. A. W. WILSON, F.L.A.S.

Representing the Corporation of Preston:

Mr. Councillor W. BECKETT.
Mr. Councillor W. BURGESS.
Mr. Alderman R. DURHAM.
Mr. Councillor O. A. GOODIER, J.P.
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Mr. Alderman H. E. RHODES.
Mr. Councillor J. H. TONGE.
Mr. Councillor J. J. WARD.
Mr. Councillor M. WILLIAMSON.

University Representatives:

Professor A. H. GIBSON (Manchester).
Professor E. W. MARCHANT (Liverpool).

Principal:

Mr. T. M. NAYLOR.

TECHNICAL COLLEGE



COMMERCIAL DEPARTMENT AND DAY JUNIOR COMMERCIAL SCHOOL.

Head : W. Webster, F.C.I.S.

Assistants :

Miss R. S. Cross.
Miss A. Ellison
H. Newton, B.A. (Com.).

Lecturers for Evening Classes :

T. Ashworth.
F. Bradshaw.
T. Bradshaw.
H. A. Brown.
Miss F. M. Crawley.
T. Cunliffe.
J. Donaldson, A.S.A.A.
H. Entwistle, A.C.I.S.
W. Hanson.
J. Hilton.
T. Houghton.
D. M. Leach.
N. Hindley, A.C.A.
Miss M. Nelson.
E. Singleton.
F. R. Snalam.
J. White.
W. R. White.
F. Whitehead.
S. W. Williams, B.Com.
J. McHugh, B.A.
T. A. Moss.
J. Mullineaux.

LANGUAGES DEPARTMENT.

Lecturer in Charge : H. H. Allen, B.A.

Assistants :

J. Kettle, B.A.
C. E. Robin, M.A.
W. A. C. Clarke, B.A.
H. C. Pye.
T. C. Hayes.

ENGINEERING DEPARTMENT.

Head : J. S. Wrigley, M.Sc., A.M.I.M.E.

Lecturer in Electrical Engineering (with special responsibility) :
A. Woods.

Senior Lecturer in Mechanical Engineering :
F. W. Walker, A.M.C.T.

Lecturers :

G. E. Hall, B.Sc. (Manc.) A.M.I.M.E.
J. E. Taylor, M.Sc. (Tech.), A.M.I.M.E.

Lecturers for Evening Classes :

F. Callow.
J. Eatock.
S. Garnett.
J. H. Hulse.
H. Lavery.
O. Jones.
H. E. Jones, B.Sc.
H. Hindley.
F. H. Clayton.
J. F. Parsonage, B.Sc.
J. Brennand.
T. McGreevy, B.Sc. (Tech.).
G. Pimley, A.I.E.E.
J. Bagot, B.Sc.
R. H. Wignall.
J. Slater, B.Sc.
D. F. F. Brewester, A.M.I.C.E.
T. C. Nicholson.
S. H. Jones.
T. Wilkinson.
C. V. Case.
J. Royle.
J. Billcliff.
A. Jackson, A.M.I.C.E.

Engineer : O. Jones.
Mechanic : G. W. Robinson.

JUNIOR TECHNICAL SCHOOL.

Head : THE PRINCIPAL.

The Staff consists of teachers from the Engineering, Building and Commercial Departments.

TEXTILE DEPARTMENT.

Head : D. ATKINSON, F.T.I.

Instructor : W. JACKSON.

Lecturers for Evening Classes :

J. W. BLACKHURST.
R. CHATBURN.
W. DAGGER.
J. G. C. DAWSON, B.Com.
H. DAWSON B.Sc., (TECH.).
J. H. HARRISON, A.T.I.
N. HIGHFIELD.
C. M. HEY, B.Sc. (TECH.).
C. A. HATTON, M.Sc. (TECH), A.I.C.
S. JACKSON.
J. MITCHELL, A.T.I.
J. PRESTON, A.T.I.
F. TAYLOR.
T. S. TAYLOR.
G. O. STEPHENS, Ph.D.

TYPOGRAPHY.

Lecturers :

J. TAYLOR. E. JONES.

ADMINISTRATION.

Chief Clerk : J. A. GORTON.

Clerks : E. D. HARDMAN ;
ELIZ. A. RICHARDSON ; DOROTHY LOCKWOOD ; JESSIE DONALDSON.

Library Assistant : NELLIE CLARKSON.

Refectory Superintendent : Mrs. F. MCGOWAN.

Custodians : E. H. TRINDER (Technical College).
W. D. BREEZE (Avenham Institute).

Assistant Custodians : F. W. GARDINER ; J. GARDNER ; W. W. KITCHIN.

CALENDAR.

1937.		
September	6th.	Council.
	7th.	Junior Technical and Junior Commercial Schools begin.
	14th.	Day Classes begin.
	14th.	Open Night.
	15th.	Registration of Evening Students.
	16th.	Registration of Evening Students.
	17th.	Registration of Evening Students (Scholarship holders).
	20th.	Evening Classes begin.
	21st.	Agricultural School begins.
November	8th.	Engineering and Building Committee.
	8th.	Textile Committee.
	15th.	Art, Science and Commerce Committee.
December	6th.	Council and Annual Meeting
	10th.	Prize Distribution.
	23rd.	Christmas Vacation begins (Day and Evening Classes).
1938.		
January	10th.	Evening Classes begin.
	10th.	Day Classes begin.
March	7th.	Council.
April	14th.	Easter Vacation begins (Day and Evening Classes).
	21st.	Evening Classes begin.
	26th.	Day Classes begin.
May	7th.	Junior Technical and Junior Commercial Schools Entrance Examination.
June	2nd.	Whitsuntide Vacation begins.
	14th.	Day Classes begin.
	20th.	Council.
	30th.	Junior Technical and Junior Commercial Schools' Sports.
July	1st.	Senior Day Classes and Art Evening Classes close.
	8th.	Junior Technical and Junior Commercial Schools close.

SOCIAL AND ATHLETIC ACTIVITIES.

Various Social and Athletic Activities are held during the session, and notices are posted in the corridor giving the dates and times of the forthcoming events.

In connection with the Art Department, there is a Sketch Club, Students' Union and Dramatic Club, for details see page 54.

The Harris Institute Rugby Football Club, practice games and fixtures Saturday afternoons. Intending players should give their names at once to the Secretary. There is also a Hockey Club, and players are invited to join this.

The Institute possesses a Gymnasium which is fully equipped. For further information see pages 19, 41 and 54.

A Debating Society has been formed by the Agricultural students, and a list of meetings is posted on the notice board.

A social evening is allotted to each department when short plays and informal dances are held.

Students are invited to contribute to the Magazine, particulars of which will be posted up at the appropriate times.

Full particulars of these events are published on the notice board in the main corridor.

REFECTORY.

The Council has instituted a fully equipped Dining Room. Lunches, teas and light refreshments may be obtained from 10-45 a.m. to 7-15 p.m.

The Refectory is for the convenience of the students and staff, and all students may use the Refectory between the times stated.

The Refectory Superintendent, Mrs. McGowan, will arrange special teas, suppers, etc., as required.

REGULATIONS.

APPLICABLE TO ALL STUDENTS ATTENDING CLASSES AT THE HARRIS INSTITUTE.

Students are expected to attend punctually at the Classes for which they enrol.

All students are expected to take an examination at the end of the course in those subjects for which they enrolled at the opening of the Session.

Smoking within the School buildings is strictly prohibited ; and Students must not loiter about the corridors.

The Lecturers are authorised to report periodically through the Principal, on attendance, homework and conduct of each Student.

The Council shall have power in dealing with Students who are unsatisfactory in these or other respects, to remove their names from the Register without return of fee.

SCHOLARSHIPS AND PRIZES.

A limited number of Scholarships and Prizes will be awarded at the discretion of the Council.

Prizes are also awarded by the Preston Building Trades Employers' Association, the Preston and District Engineers and Ironfounders Employers' Association, the North Lancashire Master Cotton Spinners and Manufacturers' Association, the Preston Master Printers' Federation, the Institute of British Foundrymen, and the Typographical Association, Preston.

Full particulars of Scholarships and Prizes may be obtained on application.

SUMMARY OF DAY, PART-TIME DAY AND EVENING COURSES.

DEPARTMENT.	DAY AND PART-TIME DAY.	EVENING.
AGRICULTURAL	Courses of Instruction are given in Agriculture, Dairy Work, Poultry Keeping and Horticulture. These Courses are organised by the Lancashire Education Committee. (COURSE NO. 9).	
ART.	General principles of Art, History and Methods of Production, Drawing, Design, Colour Study, Figure Composition, Illustration, Painting, Sculpture, Commercial Art, Etching, etc. Industrial Art and Crafts. Architecture, Courses in Perspective, Architectural History and Drawing. Textile Design. Advanced Design and Decoration.	Designed chiefly to furnish suitable study and to further the interests of apprentices in trades and crafts where Art plays a more or less prominent part.
	Students prepared for examinations under the Board of Education; City and Guilds of London Institute; Union of Lancashire and Cheshire Institutes; and the National Society of Art Masters, etc. (See pages 48 to 54).	Students prepared for examinations under the Board of Education; City and Guilds of London Institute; Union of Lancashire and Cheshire Institutes; and the National Society of Art Masters, etc. (See pages 48 to 54).

Department.	Day and Part-Time day.	Evening.
BUILDING	National Certificates of the Institute of Builders. Building Courses (Union of Lancashire and Cheshire Institutes) (Course No. 7) Intermediate A.R.I.B.A.	National Certificates of the Institute of Builders. Building Courses (Union of Lancashire and Cheshire Institutes) Builders' Quantities Carpentry and Joinery Plumbing Gas Fitting Domestic and Sanitary Engineering — For City and Guilds Certificates. Carpentry and Joinery Plumbing Bricklaying — Union of Lancashire and Cheshire Institute Trade Courses. (Courses Nos. 13, 30, 31, 32 and 33).
COMMERCE	Royal Society of Arts Certificates (Course No. 5)	Union of Lancashire and Cheshire Institutes' Grouped Courses; Royal Society of Arts Certificates and Professional Examinations of all the leading Professional Associations and Institutions, covering their syllabuses in Arithmetic, Book-keeping, Commerce, English and Commercial Correspondence, Shorthand, Typewriting, French, Spanish, Latin, German and Geography. (Courses Nos. 20 and 21). Advanced Union of Lancashire and Cheshire Institute Courses, including Accounting and Auditing, Mercantile Law, Economics and Banking. (Course No. 22). For Languages see under Language Dept.
PRINTING		The classes in Typography prepare students for the City and Guilds of London Institute Examinations. (Course No. 19).

SCIENCE	Chemistry, Botany, Physics and Zoology as required for :— Preliminary Scientific Examination, Part 1 Pharmacy and Dispensers' Examination. L.D.S. of the Universities of Manchester, Liverpool, Edinburgh and London The Conjoint Examination M.R.C.S.; L.R.C.P. (Lond.). Pre-Registration Examination of the University of Edinburgh Inter B.Sc. Universities of Manchester, Liverpool and London. The Associateship of the Institute of Chemistry (A.I.C.) Biology and Chemistry for Nurserymen and Gardeners. (COURSES NOS. 1, 2, 3 and 4).	Science Degree of London University. Associateship of the Institute of Chemistry (A.I.C.). National Certificate in Chemistry. Higher National Certificate in Chemistry. Preliminary Scientific Examination of the Pharmaceutical Society. Laboratory Arts Course. (COURSES NOS. 16, 17 and 18).
ENGINEERING	Engineering Degree of London University. National Certificates in Mechanical Engineering. National Certificates in Electrical Engineering. A.M.Inst.C.E. Classes A.M.I.M.E. Classes (COURSE NO. 6)	Engineering Degree of London University. National Certificates in Mechanical Engineering. National Certificates in Electrical Engineering. A.M.Inst. C.E. Classes. A.M.I.M.E. Classes. Engineering Workshop Course. Automobile Engineering. Motor Mechanics Course and Inst. Auto. Engineers Repair Certificate Course. Sheet and Plate Metal Trades Course. Gas Supply Course. Electric Welding. Electrical Installation. Radio Service. (COURSES NOS. 11, 12, 23, 24, 25, 26, 27, 28, 29 and 34).

Department.	Day and Part-Time Day.	Evening.
LANGUAGES AND MATRICULATION	Northern Universities and University of London College of Preceptors and other Professional entrance examinations (Course No. 1)	Courses in French, German, Spanish and Latin.
TEXTILE	National Certificates in Cotton Spinning or Weaving in Union of Lancashire and Cheshire Institutes and City and Guilds grouped courses. Associateship of the Textile Institute. (Course No. 8).	National Certificates in Cotton Spinning or Weaving in Union of Lancashire and Cheshire Institutes and City and Guilds Grouped courses. Associateship of the Textile Institute. Special Classes for Overlookers, Weavers, Spinners, in Hosiery, and in Rayon and Rayon Weaving. Courses Nos. 14 and 15.
JUNIOR COMMERCIAL ...	The Course extends over a period of two years, and prepares boys and girls for clerical posts. The following subjects are taken—Arithmetic, Art, Algebra, Accounts, Book-keeping, Commerce, Commercial Correspondence, Physical Training, English, French, Games, Geography, History, Office Routine, Mathematics, Shorthand and Typewriting (See pages 42 to 45)	
JUNIOR TECHNICAL ...	The Course extends over a period of two years, and prepares boys entering Engineering, Building and other trades. The following subjects are taken—Mathematics, Engineering and Building, Drawing, Geometry, Art, Science (including Applied Mechanics, Electricity, Magnetism, Heat, Chemistry), Metalwork, Woodwork, Geography, History, English, Physical Training and Organised Games (See pages 42 to 45)	

DAY CLASSES

TECHNICAL DAY CLASSES.

COURSES:

1. PROFESSIONAL ENTRANCE COURSE (Matriculation, etc.).
2. INTERMEDIATE B.Sc
3. PRELIMINARY SCIENTIFIC—
   - (*a*) Pharmacy.
   - (*b*) Dental.
   - (*c*) Dispensers.
4. ELEMENTARY BIOLOGY.
5. COMMERCIAL SUBJECTS.
6. ENGINEERING (Mechanical and Electrical).
7. BUILDING.
8. TEXTILE (Cotton Spinning and Weaving).
9. AGRICULTURAL,
10. GYMNASIUM CLASSES.

Classes begin on Tuesday, September 14th, 1937.

Autumn Term :—14th September, 1937—22nd December, 1937.
Spring Term :—10th January, 1938—13th April, 1938.
Summer Term :—26th April, 1938—1st July, 1938.

VACATIONS:

The Technical Day Classes will be closed :—

For the Christmas Vacation, from 23rd December, 1937, to 9th January, 1938.

For the Easter Vacation from 14th April to 25th April, 1938.

For the Whitsuntide Vacation from 2nd June to 13th June, 1938. In each case the dates are inclusive.

ENROLMENT:

Students can enrol at the Technical College on Wednesday and Thursday evenings, September 15th and 16th, from 7 to 9 p.m., or at the Avenham Institute or Technical College on any day after September 13th.

TECHNICAL DAY CLASSES.

Course 1.—PROFESSIONAL ENTRANCE COURSE (Matriculation, etc.).

(Northern Universities, University of London and Professional Societies).

Time Table, see page 55.

Classes 1 to 9.

Intending Students should procure, from the Authorities concerned, a copy of the Regulations relating to the particular examination for which they propose to enter. As Northern Matriculation is no longer available, students who would normally have required it will be prepared on the lines of the syllabus for School Certificate B (External).

Fees: £3 10s. 0d. per subject, or
£15 15s. 0d. for the full course.
Sports 5/-.

Course 2.—INTERMEDIATE B.Sc. (Science and Engineering).

(Northern Universities and University of London.)

NOTE.—The Institute is affiliated to the Universities of Manchester and Liverpool, and recognised as a privileged Institution under their Ordinances, to the extent that the attendance in the courses in Biology, Physics, Mathematics and Chemistry at the Institute is accepted as satisfying the attendance for the Intermediate B.Sc. Courses.

Time Table, see page 55.

Classes 10 to 18.

Fees: £3 15s. 0d. per subject.
Sports 5/-.

Advanced Students who have passed Inter B.Sc. or other examination of equivalent standard can be afforded facilities to work for the B.Sc. (Lond.) or the A.I.C. The Institute is fully equipped for advanced work of this character, and is approved by London University for Engineering Degree Course Work and by the Institute of Chemistry for the training of candidates for the Associateship.

Course 3.—PRELIMINARY SCIENTIFIC.

(*a*) PHARMACY. PHARMACEUTICAL SOCIETY'S EXAMINATION, PART I.

The Institute is recognised by the Pharmaceutical Society for instruction in the subjects of Part I. Examination, viz. :—Chemistry, Physics and Biology.

SPECIAL NOTE.—The Pharmaceutical Society of Great Britian require that candidates must register with them as Pharmaceutical Students before beginning any portion of their curriculum of studies.

All Students must produce evidence of such registration.

Attendance at an approved course in Physics, Chemistry and Biology is neccessary. Students must show satisfactory work both in written exercises and in practical work before the certificate of entry to the examination can be signed.

(*b*) FIRST EXAMINATION FOR MEDICAL DEGREES; candidates require Chemistry, Physics and Biology.
Time Table, see page 56 and under.
Classes 19 to 25.
Fees: £10 10s. od. for the course, or
£3 15s. od. per subject.
Sports 5/-.

(*c*) DENTAL L.D.S., PART I. (Conjoint. London, Manchester, Liverpool and Edinburgh); candidates require Chemistry and Physics in their first examination but are advised to take the Biology of the Course in preparation for their later work.
Time Table, see page 56 and under.
Classes 19 to 23.
Fees: £3 15s. od. per subject. Sports 5/-.

(*d*) DISPENSERS' EXAMINATION; candidates require Chemistry.
Time Table, see page 56 and under.
Classes 19 to 21.
Fee: £3 15s. od. Sports 5/-.

TIMES OF CLASSES.

	9.30—10.30	10.30—11.30	11.30—12.30	2—3	3—4.30
Monday ...	Organic Chemistry Lecture	Biology Lecture	Physics Tutorial	Physics Sound and Optics Lecture	Practical
Tuesday ...	Biology	Biology Practical		Chemistry Tutorial	Chemistry Practical
Wednesday ...	Chemistry Lecture	Chemistry Practical		Physics Heat & General Lecture	Physics Practical
Thursday ...	Chemistry Lecture	Chemistry Practical		Biology Practical	
Friday ...	Biology Lecture	Biology Tutorial	Chemistry Lecture	Physics Magnetism and Electricity Lecture	Practical

Course 4.—ELEMENTARY BIOLOGY, SCIENCE and SURVEYING.

A course for Gardeners and Nurserymen: for those wishing to study the scientific basis of this type of work.

It consists of classes in elementary biology and science and a short practical course in surveying.

It is intended that this shall be the first year of a three year course suitable for those preparing for the senior certificate of the Royal Horticultural Society.

Time Table, see page 56.

Fee, £1 1s. 0d.

Classes 26—27.

Course 5.—COMMERCIAL SUBJECTS.

Time Table, see page 56.

Classes 28 to 33.

Fees: £1 per subject per term, or £2 10s. per term for the course. Sports 2/6.

Course 6.—ENGINEERING (Part Time Day).

(National Certificate Courses in Mechanical and Electrical Engineering).

NOTE.—In the first two years, Mechanical and Electrical Students will take the same course, and all Students must attend on one evening per week in order to complete the course and qualify for the National Certificate Examinations.

For general regulations and conditions of admission, see under Evening Classes, pages 24 to 28

Time Table, see pages 56, 57.

Classes 34 to 57.

Fee: £2 2s. 0d. per session.

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering (Mechanical and Electrical).

Students wishing to proceed to a degree must first pass the Matriculation examination, and should consult the Head of the Engineering Department.

Course 7.—BUILDING (Part Time Day).

(National Certificate Course.

Time Table, see page 58.
Classes 67—75.
Fee £1 1s. 0d. per Session.

INTERMEDIATE R.I.B.A.

Time Table, see page 58.
Classes 76—79.
Fee : £2 2s. 0d. per session.

Course 8.—TEXTILE (Part Time Day).

A part-time course in Cotton Spinning, Weaving and Designing, suitable for Students who desire a good general knowledge of the principles and processes involved in the making and selling of cotton and rayon fabrics.

The classes shown in the Time Table are held in the mornings of each day, but arrangements, where necessary, may be made for tuition in the ancillary subjects in afternoon or evening classes.

Time Table, see page 58.

Classes 58—66.

Fees : £1 1s. 0d. per morning for the session.
£4 4s. 0d. for the full course.
Sports 5/-.

Course 9.—AGRICULTURAL.

Courses of Instruction are given in :—

(1) Agriculture.
(2) Dairy Work
(3) Poultry Keeping
and (4) Horticulture.

These courses are organised by the Lancashire Education Committee ; full particulars may be obtained from the Agricultural Education Department, County Offices, Preston, or at the Harris Institute, Preston.

Course 10.—GYMNASIUM.

A course of instruction will be given on Saturday mornings if a sufficient number of Students enrol.

Fee : 10/- per session.

For Gymnasium classes held during the evening session see page 41 or 75.

NOTE.—The fees stated for the various courses do not apply to Students residing in County Boroughs other than Preston.

Such Students should enquire at the Office before enrolling to ascertain the fees of their courses. The Lancashire County Council Capitation Scale will be applied.

Evening Classes

EVENING CLASSES.

SENIOR AND ADVANCED TECHNICAL AND COMMERCIAL COURSES.

These Courses proceed by progressive stages thus :—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

TECHNICAL COURSES.

11.—MECHANICAL ENGINEERING (National Certificate).
12.—ELECTRICAL ENGINEERING (National Certificate).
13.—BUILDING (National Certificate).
14.—COTTON SPINNING (National Certificate).
15.—COTTON WEAVING (National Certificate).
16.—PURE AND APPLIED CHEMISTRY (National Certificate).
17.—SCIENCE DEGREE and A.I.C. COURSES.
18.—PHARMACY.
19.—TYPOGRAPHY.

COMMERCIAL COURSES.

20.—GENERAL COMMERCIAL.
21A.—SENIOR CLERICAL COURSE.
21B.—BOARD OF EDUCATION ENDORSED CERTIFICATE IN COMMERCE.
22 and 22A.—ADVANCED COMMERCIAL.

TRADE COURSES.

The following Courses are held :—

23.—ENGINEERING WORKSHOP PRACTICE.
24.—MOTOR MECHANICS and I.A.E. REPAIR CERTIFICATE.
25.—MOTOR BODY BUILDING.
26.—ELECTRIC WELDING.
27.—SHEET AND PLATE METALWORK.
28.—ELECTRICAL INSTALLATION WORK.
29.—RADIO SERVICE WORK.
30.—CARPENTRY AND JOINERY.
31.—PLUMBING
32.—BRICKLAYERS.
33.—GAS FITTING.
34.—GAS SUPPLY.
35.—COTTON SPINNING.
36.—COTTON MANUFACTURE (WEAVING).
37.—LABORATORY ARTS.

MISCELLANEOUS, SCIENCE, LANGUAGES, Etc.

Physics, Chemistry, Mathematics, Latin, English, French, German, Spanish, Economics Geography. Gymnasium Classes (see page 75).

ENROLMENT:

Students will be enrolled at the Technical College on Wednesday and Thursday evenings, September 15th and 16th, from 7 to 9 p.m. and may enrol during the week commencing September 13th, between 9 a.m. and 5 p.m. (Saturday, 9—12).

Classes begin on Monday, September 20th, 1937.

VACATIONS:

The College will be closed for the Christmas vacation from December 23rd, 1937, to January 9th, 1938, and for the Easter vacation from April 14th to April 20th, 1938.

The dates in each case are inclusive.

EVENING CLASSES.

GENERAL REGULATIONS.

CONDITIONS OF ADMISSION.

Before admission to a **Senior Course** a Student must have passed the 2nd year of the Preparatory Technical or Commercial Course (conducted by a Local Education Authority) in the Junior Evening Institutes or have reached an equivalent educational standard.

Before admission to a **Trade Course** a Student must have passed the 1st year of the Preparatory Technical Course (held in the Junior Evening Institutes), or have reached an equivalent educational standard.

Exceptions to the above conditions may be made only where Students are over 16 years of age, in which cases such Students must satisfy the Principal of the Institute that they are able to benefit by the classes to which they seek admission.

Students under 16 years of age who fail to satisfy the conditions of admission should attend the **Evening Junior Courses** (Technical or Commercial), conducted by the **Preston Education Committee in Junior Evening Institutes.** These Junior Courses link up the work of the Elementary School with the Evening Classes of the Harris Institute.

Full particulars may be obtained from THE DIRECTOR OF EDUCATION, Education Offices, Lancaster Road, Preston.

Scholars leaving the Elementary Day Schools should join a Junior Evening Institute immediately, in order to qualify for admission to the Harris Institute as soon as possible.

The Refectory is open to all Students from 10-45 a.m. to 7-15 p.m. Special lunches, teas or suppers may be had by arrangement with the Refectory Superintendent.

PROMOTION TO HIGHER YEARS.

To qualify for certificates and to pass on to the higher years of a course it is necessary that Students should :—

(*a*) Reach a certain standard of attainments, tested by examinations, held at the end of the Session, and

(*b*) Have made satisfactory progress during the Session, based on records of attendance, homework, classwork, etc.

FEES FOR SESSION.

All fees are payable in advance, and are not returnable.

	s.	d.
1st Year Course S1	12	6
2nd Year Course S2	15	0
3rd Year Course S3	17	6
4th Year Course A1	20	0
5th Year Course A2	20	0
Non-Course Students	17s. 6d. per subject.	

* If Typewriting is included in a Commercial Course, an additional fee of 5s. will be charged.

Students who do not enrol on the dates given will be charged an additional fee of 2s. 6d. This rule will be strictly enforced. The Council reserve the right to discontinue any Class in the event of a small number joining.

Students who desire to take the Examinations of the Union of Lancashire and Cheshire Institutes, or the City and Guilds of London Institute may be called upon to pay the whole or a portion of the Examination Fees.

NOTE.—The above fees do not apply to Students residing in County Boroughs other than Preston.

Such Students should enquire at the Office before enrolling to ascertain the fees of their courses. The Lancashire County Council Capitation Scale will be applied.

Applications for the remission of fees in cases of unemployment or other causes should be made to the Principal before enrolment.

NATIONAL CERTIFICATE COURSES.

National Certificate Courses are arranged in the following :—

Mechanical Engineering,
Electrical Engineering,
Pure and Applied Chemistry.
Building.
Textile.

NOTE.—For endorsed Certificates in Commerce, see page .

Certificates are awarded at the end of

(*a*) A Three Years' Course (Senior).
(*b*) A further Two Years' Course (Advanced).

The Certificates in each case are awarded by the Board of Education in conjunction with one of the following Professional Institutions :—

(*a*) Mechanical Engineering : Institution of Mechanical Engineers.
(*b*) Electrical Engineering : Institution of Electrical Engineers.
(*c*) Pure and Applied Chemistry : Institute of Chemistry.
(*d*) Building : Institute of Builders.
(*e*) Textile : Textile Institute.

CONDITIONS OF AWARD OF CERTIFICATE.

In order to obtain a certificate a candidate must make not less than 70 per cent. of the possible attendances in each year of the course, and must obtain—

(1) Not less than 40 per cent. of the possible marks in EACH subject in the examination held at the end of each year.
(2) Not less than 40 per cent. of the possible marks obtainable in EACH year for homework, class work, laboratory work, etc., taken separately, in EACH subject for which such marks are to be awarded.
(3) Not less than 50 per cent. of the grand total of marks obtainable in EACH year. Of this total the possible marks in the examinations constitute 70 per cent., and the remaining 30 per cent. will be the possible marks for home work, class work, laboratory work, etc., in each year.

A "Distinction" may be awarded to any candidate qualified to receive a certificate who, in the opinion of the examiners, has shown special merit in the Final Examination and his certificate may be specially endorsed with the name or names of the subjects in which he has thus distinguished himself.

Fee to be paid by each Student entering the Final Examination, Five Shillings.

ENGINEERING DEPARTMENT.

Course 11.—MECHANICAL ENGINEERING.

NATIONAL CERTIFICATE COURSES (see page 26).

AWARD OF LOWER AND HIGHER CERTIFICATES.

The Institution of Mechanical Engineers, in conjunction with the Board of Education, has approved of the grouped courses of instruction for the award of certificates at the end of—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

ADVANCED COURSE.

Students must have passed the Senior Course or produce evidence of equivalent attainments.

After obtaining the Higher National Certificate, students wishing to qualify for Associate Membership of the Institution of Mechanical Engineers should take the A3 Course (See page 59).

TRADE COURSES, see pages 37 to 40.

Course 12.—ELECTRICAL ENGINEERING.

NATIONAL CERTIFICATE COURSES, see page 26.

The Institution of Electrical Engineers, in conjunction with the Board of Education, has approved of the grouped courses of instruction for the award of certificates at the end of—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

ADVANCED COURSE.

Students must have passed the Senior Course or produce evidence of equivalent attainments.

Electrical Students are expected to sit at the Examinations held by the Union of Lancashire and Cheshire Institutes in the subjects of the course.

Time Table : Mechanical and Electrical (see pages 59 and 60). Classes 80 to 117.

See Course 6 for Part Time Day Classes in Mechanical and Electrical Engineering.

NOTE.—Holders of the National Certificates in Mechanical or Electrical Engineering, who become candidates for Election as Students, Graduates, or Associate Members of the Institutions of

Mechanical or Electrical Engineers, and are able to satisfy the Council of their eligibility under the by-laws for one of these classes in respect of occupation and practical training, will be exempted from certain subjects in the Examinations for Election as Students and Associate Members.

Particulars relating to these exemptions may be obtained from the Head of the Department.

Students who desire to sit for the Final Examination in Electrical Engineering Practice, City and Guilds of London Institute, are now allowed to take Part I., consisting of a paper on Advanced Electrical Technology at the end of the First Year of the Advanced Course. A Certificate will not be awarded for success in Part I. only, but candidates will be notified of their success or failure in that Part.

If a candidate enters for Part I. and one section of Part II. in the same year, failure in Part I. will carry with it failure in the section of Part II. The class of Certificate awarded to a candidate successful in Part I. and one section of Part II. will be determined upon the results obtained in Part II.

For TRADE COURSES, see pages 37 to 40.

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering (Mechanical and Electrical).

Students wishing to proceed to a Degree must first pass the Matriculation examination and should consult the Head of the Engineering Department.

BUILDING DEPARTMENT.

Course 13.—BUILDING.

NATIONAL CERTIFICATE COURSES (see page 61).

The Institute of Builders, in conjunction with the Board of Education, award an Ordinary Certificate on the satisfactory completion of a Three Years' Senior Course, and a Higher Certificate after a further Two Years' Advanced Course.

The conditions governing the award of National Certificates are given on page 26.

Senior Course (Ordinary Certificate).

1st and 2nd Years, see page 61. Classes 118 to 140.

3rd Year. Building Construction and at least two of the following :—

Building Science,
Building Geometry,
Building Mathematics,
Builders' Quantities, or
Builders' Book-keeping.

Students who are not candidates for a National Certificate may in the third year select three subjects given in the Third Year Course, see page 61. Building Construction must be taken.

Advanced Course (Higher Certificate).

1st Year :—One subject from Group 1.

Two other subjects, of which not more than one may be from Group 3, see page 61.

2nd Year :—Three other subjects set out for the Advanced Course, not taken in the 1st year ; these three subjects being selected in accordance with the scheme for the 1st year, see page. 61.

TRADE COURSES, see pages 72 to 74.

TEXTILE DEPARTMENT.

National Certificate Courses.

The Textile Institute, in conjunction with the Board of Education, award an Ordinary National Certificate on the satisfactory completion of a Three Years' Senior Course and a Higher National Certificate after a further Two Years' Advanced Course.

The conditions governing the award of National Certificates are given on page 26.

Students may take either the Cotton Spinning or the Cotton Weaving Course.

Senior Students are expected to sit at the examinations conducted by the Union of Lancashire and Cheshire Institutes.

Advanced Students take the examinations of the City and Guilds of London Institute and should obtain a Full Technological Certificate.

Students who hold the Full Technological Certificate of the City and Guilds of London Institute in either Cotton Spinning or Cotton Weaving are advised to take the Higher Course, with a view to becoming Associates of the Textile Institute.

Course 14.—COTTON SPINNING.

Time Table, page 62.
Classes 141 to 152.

Course 15.—COTTON MANUFACTURE (Weaving).

Time Table, page 62.
Classes 153 to 176.

For the full Technological Certificate of the City and Guilds of London Institute in Cotton Manufacture (Weaving), the candidates must pass examinations in :—

Cotton Manufacture (Weaving) and Textile Technology } In the fourth and fifth years.

Also :—
Textile Economics and Textile Engineering.
or Textile Design I. and II.
or Textile Chemistry I. and II.

Special Classes suitable for Overlookers, Weavers, Spinners and Knitters are held also in the Manufacture of Rayon, and in Rayon Weaving.

See page 63.
Classes 177 to 187.

TRADE COURSES, see page 75.

SCIENCE DEPARTMENT.

Classes are arranged for Students desiring a training in Science and scientific methods. The Course of study recommended will depend on the aims of the Student.

Course 16.—PURE AND APPLIED CHEMISTRY.

NATIONAL CERTIFICATE COURSES.

The Courses arranged for the National Certificate in Chemistry and for the Higher National Certificate suit the requirements of those who desire training for a works' position. These are known

as the National Certificate Courses. Certificates are awarded by the Institute of Chemistry in conjunction with the Board of Education. The Ordinary Certificate is given on the satisfactory completion of a Three Years' Senior Course, and a Higher Certificate after a further two years' Advanced Course. Students who have obtained a Matriculation or School Certificate in the necessary subjects are excused the 1st year course. In all cases where students attend these Courses they are expected to take the appropriate examinations at the end of each session.

Course 17.—Degree and A.I.C. COURSES.

Time Tables, pages 66 to 68.

Classes, 253 to 269 and 282 to 295.

Students who desire a professional qualification in Science may prepare for a degree of B.Sc. (London), or for the Associateship of the Institute of Chemistry (A.I.C.). Before any Student is admitted to such a Course of study he must satisfy the Head of the Department that he has passed the necessary preliminary examination. For the B.Sc. (London) Course the Student should have matriculated at that University or have obtained exemption acceptable to that University. For the A.I.C. he must have matriculated or obtained the School Certificate and must register as a Student with the Institute of Chemistry. The Harris Institute is recognised by the Institute of Chemistry for the training of A.I.C. candidates, and any Students who have matriculated are advised to work for the Associateship. In either case the first Course is that for the Inter B.Sc., and 1st Year A.I.C. (page 68). Students for the Final B.Sc. and the A.I.C. attend the classes of the Advanced National Certificate Courses, A1 and A2, and for further advanced instruction.

The laboratories of the department are well equipped and advanced Students may make use of them for special work by arrangement with the Head of Department.

Course 18.—PHARMACY.

Students intending to prepare for the preliminary scientific examination of the Pharmaceutical Society should have registered as a student with that Society before joining the classes. The course of study extends over three years. Students must attend for 200 hours in Chemistry, 120 hours in Physics and 120 hours in Botany, and show satisfactory work both in written exercises and in practical work before the certificate of entry to the examination will be signed.

Students who passed the examination required for registration after October, 1935, must take a full-time day course. Such students who have not studied chemistry, physics and biology previously are advised to take the 1st year evening Pharmacy Course before entering the day courses.

The S3 Pharmacy Course is suitable for students who have taken a full time day course and require revision classes for the Part I. examination.

Time Table, page 67.
Classes 270 to 278.

Pharmacy Students who have successfully taken the Part 1 examination and who wish to extend their knowledge of Chemistry in preparation for the Part 2 Course are advised to attend the special Post Part 1 Pharmacy Course.

See page 67.
Classes, 279 to 281.

PRINTING DEPARTMENT.

Course 19.—TYPOGRAPHY.

The Classes in Typography prepare students for the City and Guilds of London Institute Examinations.

The full Course comprises instruction on three evenings per week for four years. The subjects to be taken are as follows :—

1st and 2nd years. Composing, Machines and English.
Final Course. Composing, Machines and Commercial Art.
Full Technological Course.—Composing, Machines and Commercial Art.

Time Table, page 68.
Classes 296 to 304.

COMMERCIAL DEPARTMENT.

Course 20.—SENIOR GENERAL COURSE.
Course 21a.—SENIOR CLERICAL COURSE.
Course 21b.—BOARD OF EDUCATION ENDORSED CERTIFICATE IN COMMERCE.
Course 22 and 22a.—ADVANCED COURSES.

SENIOR COURSES (20, 21a and 21b).

The First and Second Years of Course 20 consists of **four** subjects, and for Course 21a, of **three** subjects. Third Year Course consists of three subjects

In each Course (except the special ones specified later, which do not qualify for a Grouped Course Certificate), one or more subjects are obligatory ; others are generally optional.

From the latter subjects students may select the required number to make up their Course.

Before selecting a Course, students should **consult both the Time Table printed** (on pages 64 to 66), **and the tutors** who will be present to enrol on September 15th and September 16th, 1937.

A student taking a course may, so far as his attainments and the Time Table permit, sit in a class and enter for an examination of a higher year than the remaining subjects of his course. Transfers from one class to another are not permitted after the first two weeks of the session. The detailed syllabuses of examinations in the subjects may be found complete in the Prospectus of the Lancashire and Cheshire Institutes.

Students are expected to take the Examinations of the Union of Lancashire and Cheshire Institutes.

Board of Education Endorsed Certificates in Commerce, Course 21b.—The conditions of award will be similar to those for the National Certificate Courses, see page 26. Students enrolling for the Endorsed Certificate Courses should consult the Head of the Commercial Department.

ADVANCED COURSES.

This Course is intended to assist in preparing for the Professional, Secretarial and Accountancy Examinations. (See Course 22).

Classes preparing students for the intermediate and final examinations of the Incorporated Association of Rating and Valuation Officers will be formed if sufficient students enrol. (See Course 22a).

SENIOR COURSE (20).

General Course. (Four Subjects) :—

FIRST YEAR (S1).

OBLIGATORY : Commerce.

OPTIONAL : **Three** of the following Subjects :—

Commercial Arithmetic.
English.
Geography.
Book-keeping.
A Foreign Language (French, German or Spanish).
Cotton Spinning, or
Cotton Weaving.

General Course. (Four Subjects) :—

SECOND YEAR (S2).

OBLIGATORY : Commerce.

OPTIONAL : **Three** of the following Subjects :— *

Commercial Arithmetic.
English.
Geography.
Book-keeping.
A Foreign Language (French, German or Spanish).
Typewriting.
Cotton Spinning or
Cotton Weaving.

* (A first year subject may be taken provided it has not been offered before).

General Course. (Three Subjects) :—

THIRD YEAR (S3).

OBLIGATORY : Commerce.

OPTIONAL : Any **two** of the following :—

Book-keeping and Accountancy.
Arithmetic.
English Language and Literature.
Shorthand (minimum of 80 words per minute).
A Foreign Language (French or German).
Cotton Spinning, or
Cotton Weaving.

SENIOR COURSE (21a).

Clerical Course A. (Three Subjects) :—

FIRST YEAR (S1).

(1) Shorthand (Grade I. or Grade II.).
or
Typewriting (Grade I. or Grade II.).

(2) Arithmetic
or
Book-keeping.

(3) English
or
Foreign Language (French, German, Spanish—Grade III.).

Clerical Course A. (Three Subjects) :—

SECOND YEAR (S2).

(1) Shorthand (Grade II. or III.).
or
Typewriting (Grade II. or III.).

(2-3) **TWO** of the following subjects :—
Commerce (1st year).
Book-keeping (1st or 2nd year).*
Arithmetic (1st or 2nd year).*
English **or** Foreign Language (French or German, Grade IV.).

Clerical Course B. (Three Subjects) :—

FIRST YEAR (S1).

(1) Shorthand (Grade I. or Grade II.).
(2) Typewriting (Grade I. or Grade II).
(3) English
or
Foreign Language (French, German, Spanish.—Grade III.).

Clerical Course B. (Three Subjects) :—

SECOND YEAR (S2.)

(1) Shorthand (Grade II.—80 words, or Grade III.).
(2) Typewriting (Grade II. or III).
(3) **ONE** of the following subjects :—
Book-keeping (1st year).
Commerce (1st year).
English.
Foreign Language (French or German, Grade IV.).

Shorthand.

In all grades the dictation tests will be of five minutes' duration.

Grade I. at 50 and 60 words per minute.

Grade II. at 70 and 80 words per minute, and

Grade III. at 90, 100, 120 and 140 words per minute

* If a subject chosen for the Second Year Course has been taken in the first year, then the next higher grade must be taken.

BOARD OF EDUCATION ENDORSED CERTIFICATE IN COMMERCE.

Course 21b.

1ST YEAR COURSE				AT	CLASS NO.
	Geography	Monday,	7.15–8.15	A	213
	Commerce	Tuesday	7.15–8.15	T.	196
	Book-keeping	Thursday,	7.15–9.15	T.	192 or 193
	Arithmetic	Friday,	7.15–8.15	T.	214
	English	Friday,	8.15–9.15	T.	220
2ND YEAR COURSE.					
	Geography	Monday,	8.15–9.15	A.	228
	Commerce	Tuesday	8.15–9.15	T.	217
	Book-keeping	Wednesday,	7.15–9.15	T.	216
	English	Friday,	7.15–8.45	T.	234
	Arithmetic	Friday	8.15–9.15	T.	231
3RD YEAR COURSE.					
	Commerce	Wednesday	7.15–9.15	T.	233
	Book-keeping	Tuesday,	7.15–9.15	T.	232
	Economics	Monday,	7.15–9.15	T.	244

TIME TABLE OF COMMERCIAL CLASSES.

See pages 64 to 66.

Classes 188 to 252.

Students should note carefully the buildings in which the classes are held.

FIRST YEAR.

NOTE. All females taking Arithmetic attend Class 190 or 191.

All males taking Arithmetic (except such as also take Geography) attend Class 188 or 189.

Males taking both Arithmetic and Geography attend Classes 190 or 191 and 213.

The classes in Shorthand are held in the same building as the Arithmetic classes.

In Shorthand, students who have previously done nothing may find it advisable during the first session to work for a local examination. They should consult their tutors on the matter. The more advanced theory classes consist of :—Revision, Theory and Speed to 60 words per minute.

The Shorthand Theory Class for **beginners** does not prepare for the Examinations of the U.L.C.I. It is necessary for Group Course Candidates who wish to secure Scholarships that a speed examination be taken.

In Typewriting, students must consult the tutor on enrolment night as to which hour is available.

ADVANCED COMMERCIAL COURSES.

Course 22.

Three subjects, **one** at least to be chosen from Group A.

GROUP A.	GROUP B.
Accounting and Auditing.	Mercantile Law.
Economics.	A second Foreign Language.
A Foreign Language.	Banking and Currency.

Time Table, page 66. Classes 240 to 248.

Course 22a.

This Course is intended for Rating and Valuation Officers. For time table of the Intermediate Classes see page 66. Classes 249 to 252.

Classes preparing for the Final examination will be formed if sufficient students enrol.

PART TIME DAY CLASSES IN COMMERCIAL SUBJECTS.

Part Time Day Classes have been formed for persons over 16 years of age desirous of instruction in any of the following subjects : TYPEWRITING, SHORTHAND, COMMERCE, BOOK-KEEPING, ECONOMICS, AND COMMERCIAL CORRESPONDENCE.

See Course 5.—For Time Table see page 56.

TRADE COURSES

Course 23.—ENGINEERING WORKSHOP PRACTICE.

Applicants for these classes must have attended a preliminary Technical Evening Course or be otherwise qualified.

This is a Three Years' Course, suitable for fitters, turners and machinists. For times of classes and subjects to be taken, see page 69. Classes 305 to 313. Students entering for this course are expected to sit for the examination set by the Union of Lancashire and Cheshire Institutes. The examinations take place about April, at the end of each year's course.

Course 24.—MOTOR MECHANICS COURSE.

This is a three years' Course, preparing Students for the examinations of the Union of Lancashire and Cheshire Institutes, or the examinations of the City and Guilds of London Institute.

The aim of the Course is to give sufficient knowledge of principles and their application to the construction and operation of motor vehicles, to enable the mechanic to deal with repairs, adjustments and general servicing.

See page 69 for times of classes. Classes 314 to 322.

Course 25.—MOTOR BODY BUILDING.

For Time Table see page 70.
Classes 323 to 328.

Course 26.—ELECTRIC WELDING.

For Time Table, see page 70.
Classes 329—331.

Course 27.—SHEET AND PLATE METALWORK.

For Time Table, see page 70.
Classes 332 to 335.

Course 28.—ELECTRICAL INSTALLATION WORK.

The scheme of work and of certification in Electrical Installation Work is that recommended by the City and Guilds of London Institute, in conjunction with the Board of Education, and approved by the Electrical Contractors' Association. The course is intended for those who have attended a preliminary Technical Evening Course, or are otherwise qualified. It is designed to cover three years, at the end of which the student should have reached the standard of a journeyman.

In the final year of the course the examination will be set and marked by the City and Guilds of London Institute for the purpose of the award of the Electricians' Interim Certificate. An apprentice or learner employed by an Electrical Installation Contractor, or a candidate otherwise engaged in electrical installation work, who has obtained the Electrician's Interim Certificate and who is desirous of obtaining the Electrician's Certificate, must forward to the City and Guilds of London Institute a statement of his practical training and work. If approved, he will be awarded the Electrician's Certificate. For times of classes and subjects to be taken, see pages 70 and 71. Classes 336—344.

Course 29.—RADIO SERVICE WORK.

This scheme of work has been devised by the advisory committee on Radio Service Work of the City and Guilds of London Institute, including the Radio Manufacturers' and Wireless Retailers' Associations to meet the present need for the training and certification of men engaged in Radio Service Work, and is intended for students actually engaged in the industry who will only be able to attend part-time courses.

It is designed to cover three years. In the final year the examination will be set and marked by the City and Guilds of London Institute and failure to obtain 50 per cent. of the possible marks for practical work will carry with it failure in the examination as a whole.

For Time Table, see page 71.

Classes 345 to 353.

Course 30.—CARPENTRY AND JOINERY.

Course 31.—PLUMBING.

Course 32.—BRICKLAYERS.

Applicants for the above courses must have attended a preliminary Technical Evening Course, or produce evidence of attainments equivalent to the preliminary Technical Evening Course. For times of classes and subjects taken, see pages 72 to 74. Classes 354 to 367, 386 to 397 and 398 to 406. Students taking these courses are expected to sit for the College examination for the first and second years of the course, and for the third year of the course to sit for the Union of Lancashire and Cheshire Institutes Examination.

Carpentry and Joinery students may after completing the third year proceed to prepare for the final examination in Carpentry and Joinery of the City and Guilds of London Institute, or for the Senior National Certificate in Building by entering the first year of the National Certificate Course.

Plumbing students, after the third year, may proceed to prepare for the final examination in Plumber's work of the City and Guilds of London Institute.

Course 33.—GAS FITTING.

Time Table, page 72.

Classes 368 to 376.

Course 34.—GAS SUPPLY.

Time Table, page 73.
Classes 377 to 385.

TRADE COURSES FOR TEXTILES.
(Courses 35 and 36).

A three years' course is arranged in Cotton Spinning and in Cotton Weaving. These Trade Courses are for students who have attended a preliminary Technical Evening Course, or are otherwise qualified. They are arranged for attendance on two evenings per week, and are specially suited for practical men. Successful students may follow up their studies in the National Certificate Courses and work for the Full Technological Certificate of the City and Guilds of London Institute.

Course 35.—COTTON SPINNING.

The main subject of Cotton Spinning is divided into three sections, viz.: Opening and Carding, Roving Preparation and Spinning. Students may take these in any order, choosing the most suitable to their requirements.

In addition, all sections will attend the class in Trade Calculations and Science which is held on alternate weeks.

Time Table page 75.
Classes 407—413.

Course 36.—COTTON MANUFACTURING (WEAVING).

The main subject of Cotton Weaving is taken in three years of progressive study, commencing with simpler cloths and mechanisms, and leading to more complex work.

Although a three years' course is planned, only the first year is offered this session.

Students will also attend the class in Trade Calculations and Science.

Time Table page 75.
Classes 414—416.

Course 37.—LABORATORY ARTS.

A short course in woodwork, metalwork and glass blowing, which should be suitable for the training of laboratory assistants.

For Time Table, see page 75.
Classes 417 to 419.

MISCELLANEOUS CLASSES AND SPECIAL COURSES.

The following classes are here indicated separately for the benefit of students who desire to take up the study of certain subjects for the Professional Entrance Examinations, and to assist students of an advanced grade to a higher standard of attainments.

A course consists of any three of the following subjects :—

Subject.	Class No.
Arithmetic	... 231.
Book-keeping	... 232.
Chemistry	... 255 and 269.
Economics of the Cotton Industry..	174.
English Language and Literature...	234.
French	... 207, 208, 227, 236, 246.
German	... 211, 212, 237.
Latin	... 210.
Mathematics	... 253, 283.
Physics	... 254, 286.
Spanish	... 209, 229.
Geography	... 213, 228.
Shorthand	... 235.

A local Examination will be held in those subjects not otherwise provided for, and certificates will be given.

Gymnasium Classes will be held as follows :—

MON.	TUES.	WED.	THUR.	FRI.	SAT.
*7—8	†7—8	*7—8	†7—8	*7—8	*9-45—10-45
†8-15—9-15	*8-15—9-15	†8-15—9-15	*8-15—9-15	†8-15—9-15	†11—12

Classes for Men are indicated by a *.
Classes for Women are indicated by a †.

Fees : 10/- per session and 5/- per session for students taking other classes in the institute.

JUNIOR COURSES.

(FULL TIME DAY).

COURSES:

JUNIOR TECHNICAL.
JUNIOR COMMERCIAL.

Classes begin on Tuesday, September 7th, 1937.
Autumn Term :—7th September, 1937—22nd December, 1937.
Spring Term :—10th January, 1938—13th April, 1938.
Summer Term :—26th April, 1938—8th July, 1938

VACATIONS:

These Schools will be closed for the Christmas Vacation from 23rd December, 1937, to 9th January, 1938 ; for the Easter Vacation, from 14th April, 1938, to 25th April, 1938 ; for the Whitsuntide Vacation, from 2nd June, 1938, to 13th June, 1938.

In each case the dates are inclusive.

FEE : £3 os. od. per Session, or £1 per term.
TIME TABLES, see pages 78 to 83.

DAY JUNIOR SCHOOLS.

CONDITIONS OF ENTRY, Etc.

(1) Day Junior Technical School.
(2) Day Commercial School.

ENTRANCE AND SCHOLARSHIP EXAMINATIONS.

Each boy or girl admitted must not be less than 13 years old at the date of admission, and must pass the School Entrance Examination.

The Entrance Examination will be held on Saturday, the 7th May, at the Technical College.

Entries must be made on a form which can be obtained from the Technical College and forwarded to the Principal, Harris Institute, Corporation Street, on or before the 7th April, 1938.

Fee : £3 for Session, September to July. This may be paid by three instalments of £1.

Parents or Guardians will be required to sign an agreement form undertaking that the pupil attends regularly for two years, or in default pay the sum of £3 3s. 0d.

The Council of the Harris Institute offer a limited number of Scholarships (providing free tuition only) to boys and girls not less than 13 years of age on October 1st, 1938, and who for two years prior to the date of the examination have been in regular attendance at a Day School within seven miles of the Preston Town Hall.

The Preston Local Education Committee award a number of Free Admissions to the School, and Book allowances are given to Candidates residing in the County Borough of Preston.

The Lancashire County Council also award a limited number of Exhibitions on the result of this Entrance Examination (open to candidates residing in the Administrative County) subject to certain conditions. The Exhibitions provide free tuition, travelling expenses, and allowance for books and maintenance. Full particulars as to these Exhibitions may be obtained from the Director of Education, County Offices, Preston.

Leaving Certificates are given to all who satisfactorily conclude their period of training, and a certain number of free Scholarships to Evening Classes are granted to those whose attainments and conduct in the Day School have merited it.

The School Uniform is as follows :—

Girls.—Navy Tunic and Girdle, Navy Knickers, White Blouse, with polo collar and long sleeves ; School Tie, Green Cap in winter, Straw Hats with School Band in Summer, Black Stockings, Black Footwear, Navy Coat ; School Blazers.

Boys.—School Cap, Tie, and School Blazers.

The above can be purchased from the School Outfitters on the presentation of the Regulation Form, which may be obtained at the School.

Every endeavour is made at the end of the course to assist worthy students to obtain suitable posts. Many employers apply to the School for employees and apprentices.

Day Junior Technical School.

The aim of the School is to provide a suitable education for boys who desire to enter Engineering, Building and other trades.

The curriculum is planned with the object of providing for the continuance of a general education, together with an education in all subjects which are necessary to boys about to enter industrial occupations.

The students are brought into close contact with their future occupation through teachers who have had experience in industry.

The students also have access to the Engineering laboratories and textile sheds, where they become acquainted with machinery and equipment which helps towards a thorough understanding of the application of scientific principles to industry.

The course of instruction extends over a period of two years, and the subjects taught include the following:—Mathematics, Engineering and Building Drawing, Geometry, Art, Science (including Applied Mechanics, Electricity, Magnetism, Heat and Chemistry) Metalwork, Woodwork, Geography, History, English, Physical Training and Organised Games.

DAY JUNIOR TECHNICAL SCHOOL.—ENTRANCE EXAMINATION.

SYLLABUSES.

Accuracy is of great importance. A thorough knowledge of the following will be required:—

Arithmetic.

The fundamental rules. Vulgar and decimal fractions. Percentages and averages. Ratio, proportion, simple interest and simple profit and loss. Elementary mensuration, rectangles and triangles. Circumference and area of circle. Surface and volume of simple solids,—prism and cylinder (weights of simple solids, given weight per unit volume). Elementary algebra. Use of symbols. Addition, subtraction, multiplication and division.

English.

(1) An essay. (2) Interpretation of a prose passage. Condensation and expansion of passages. (3) The parts of speech and elementary parsing. (4) Easy analysis of sentences. (5) The use of words in sentences to illustrate their meaning. (6) Simple letters. (7) Correction of common grammatical errors. (8) A general knowledge of good literature suitable for children.

Candidates may also be given an opportunity in this section of showing their acquaintance with present-day affairs.

Dictation.

About a dozen lines from any of such readers as are in ordinary use in the higher classes of an Elementary School. The selected extract will be dictated without a heading, and candidates will be asked to subjoin an appropriate brief title.

DAY JUNIOR COMMERCIAL SCHOOL.

The Course extends over a period of two years, and prepares boys and girls for clerical posts. The following subjects are taken : Arithmetic, Algebra, Accounts, Book-keeping, Commerce, Commercial Correspondence, Drawing, Physical Training, English, French, Games, Geography, History, Office Routine, Mathematics, Shorthand and Typewriting.

DAY JUNIOR COMMERCIAL SCHOOL.—ENTRANCE EXAMINATION.

SYLLABUSES.

Accuracy is of great importance. A thorough knowledge of the following will be required :—

Arithmetic.

Simple rules, including the use of brackets. Money tables—Ordinary weights and measures (excluding Troy weight and Apothecaries weight). Reduction of money. The simple rules as applied to weights and measures. Simple vulgar fractions. Terminating decimals. Practice. Proportion by unitary method. Easy percentages. Simple interest. The Metric System. Areas.

English.

(1) An essay. (2) Interpretation of a prose passage. Condensation and expansion of passages. (3) The parts of speech and elementary parsing. (4) Easy analysis of sentences. (5) The use of words in sentences to illustrate their meaning. (6) Simple letters. (7) Correction of common grammatical errors. (8) A general knowledge of good books suitable for children.

Candidates may also be given an opportunity in this section of showing their acquaintance with present-day affairs.

Dictation.

About a dozen lines from any of such readers as are in ordinary use in the higher classes of an Elementary School. The selected extract will be dictated without a heading, and candidates will be asked to subjoin an appropriate brief title.

[ART SCHOOL]

ART SCHOOL.

OBJECTS OF THE SCHOOL.

The objects of the School are :—

(1) To give instruction in Art to those engaged in trades and professions in which the power of drawing and a knowledge of design are essential or helpful.

(2) To train those wishing to qualify to become teachers of Art in Secondary Schools, or in Schools of Art.

(3) To provide facilities to those desiring to study Art as a branch of general education, or as an accomplishment.

(4) To train those who are desirious of taking up Art as a career, and who intend to specialise as painters, sculptors, illustrators, designers, etc.

(5) To meet the requirements of those engaged in various industrial occupations.

(6) Junior Courses. To prepare young students between the ages of 14 and 16, in order that they may specialise later on, in any of the above courses.

The School is open for three terms, viz. :—

14th September, 1937, to 22nd December, 1937.

10th January, 1938, to 13th April, 1938.

26th April, 1938, to 1st July, 1938.

FEES FOR SESSION (payable in advance).

Full Time Dav Students	£3 3 0
Students attending one day per week for Single Subjects	(Games fee 5/-) 2 2 0
Ditto per term	0 17 6
Special Classes for Crafts (Wednesday afternoons)	1 1 0
Evening Classes	see page 24
Summer Courses (one day per week) ...	0 17 6
Summer Evening Classes	0 7 6

Classes begin on Tuesday, September 14th, 1937.

General Information.

The Courses suggested below are recommended to ensure comprehensive training for definite careers, but are purposely arranged to be sufficiently elastic to meet individual requirements.

DAY CLASSES.

(1) FULL-TIME COURSES, including general principles of Art, History and Methods of Production, Drawing, Design, Colour Study, Figure Composition, Illustration, Painting, Sculpture, Commercial Art, &c. ; Graded Schemes to equip Students for the Board of Education examinations in Drawing, Painting, Industrial Design, etc. Preparation for Local Art Scholarships and Exhibitions.

(2) PART-TIME COURSES arranged mainly for the study of Industrial Art and training in single subjects.

(3) CRAFT COURSES AND CLASSES. Carving in Wood and Plaster, Writing and Illuminating, Dress Design, Embroidery, Leather Work, Wood Decoration, Etching, Aquatint, Wood and Lino Cuts, Fabric Printing, etc. Advanced Decoration (see Evening).

(4) ARCHITECTURE. Facilities to enable Architectural Students to prepare for R.I.B.A. examinations.

The Course includes Preparation of Testimonies, Perspective, Architectural Design, History of Architecture, Structural Mechanics, Building Construction.

For Time Table, see pages 76-77.

EVENING CLASSES.

Designed chiefly to furnish suitable study and to further the interests of apprentices in trades and crafts where Art plays a more or less prominent part, to offer opportunities for extended study after qualifying, to render possible the achievement of a desire to practice some branch of Art as a career, and to encourage many forms of artistic appreciation.

ADVANCED COLOUR STUDY AND PAINTING. Practice in oil and watercolour for Still Life, Portraiture and Composition.

GENERAL ART. This course endeavours to meet the needs of occupations where artistic training, though required, demands freer interpretation, and more individual treatment. In many cases such subjects as colour and figure study, architectural or modelling knowledge, illustration or lettering may predominate and be supplimented by the type of design or other specialised subjects applicable to the need.

INDUSTRIAL ART AND CRAFTS. The aim in these Courses is to secure efficient training for apprentices in trades and crafts. They cover the syllabuses of various Examining Authorities. (See Examinations, pages 52 and 53).

Full Grouped Courses of three evenings per week, include Study in Drawing and lettering, Nature and Colour, Methods of Production and Technical Problems, Knowledge of Tools and Materials, Estimating, etc., History and Styles of Architecture, Heraldry, Original Design, embodying modern requirements. Practical work.

The following is a list of the chief subjects which may be undertaken as definite Courses or practiced on the craft side alone :—

Dress Design, including costume history, making and drafting.

Painting and Decorating, including preparation of schemes of Interior Decoration. Embroidery, Leather-work, Bookbinding, Wood Decoration, Etching, etc., Lino Cuts, Writing and Illuminating, Wood and Plaster Carving, Modelling and Casting (Demonstrations at arranged periods).

Summer Courses in most crafts will be held from Easter to July.

COMMERCIAL ART. Treatments for the Press, Layouts, Posters and Show Cards, etc.

ILLUSTRATION. Including figure study and accessories, composition, etc.

TEACHERS. Study for the National Society of Art Masters' Exams., Colour, Design, Illustration, etc. Further study in various subjects and crafts.

ARCHITECTURE. Courses in Perspective, Architectural History and Drawing.

PROFESSIONAL. The Art School is open for further study and practice to Architects, Sculptors and Artists. In connection with this, advantage is usually taken of advanced work in Life Painting, Sculpture and Crafts.

TEXTILE DESIGN. Held in conjunction with Technical Weaving Courses.

ADVANCED DESIGN AND DECORATION. The application of previous courses to more ambitious work—Theatrical Settings, Costume, Interior Decoration, Lighting and Building-up, Relief Decoration, Details to scale and full size, Figure Composition, Intended for qualified Students.

LECTURES. Day and Evening lectures have been arranged with relation to Industrial and Commercial Art. These will deal definitely with practical problems in Colour and Design, Principles of Art, Historic Art, etc.

A Series of monthly lectures by specialists will be given (see separate detailed lists and time tables). All students are advised to attend.

WORK. All completed studies are to be handed in to the Teachers, to be available for inspection and criticism. They will be retained until the end of the session, when they will be returned unless required for the School's Exhibition.

DAY AND EVENING CLASSES.—TIME TABLE (see also pages 76 & 77).

	MORNING, 10-0—12-30.	AFTERNOON, 2-0—4-0.	EVENING, 7-0—9-0.
Monday	Drawing Ornament Animals Nature Drawing	Etchings & Woodcuts, &c. Still Life Painting Design Posters	General Drawing Course Nature Study Drawing (Indust. Commercial & Craft) Elem. Teachers' Class Design. Painting
Tuesday	Drawing, Antique Fabric Printing Design Perspective. Etching	Drawing (Elem. & Advanced) Antique General Knowledge Object and Memory Drawing Decoration (Advanced) Object Drawing Crafts (various)	Still Life (1st year) *Textile Art (4th year) Crafts and Embroidery Dress Design Wood Decoration, &c. Design (Commercial Art) Decoration (Advanced) *Modell ing and Casting
Wednesday	General Drawing Design Nature Drawing Architectural Drawing Still Life Painting Dress Design	Crafts (various) Still Life Drawing from the Antique Nature Study Lettering Dress Design Anatomy	Junior Course, Form & Colour Design, Industrial and Crafts Perspective or Anatomy Drawing from Life Etching. *Painting & Decorating (2nd and 3rd years) *Textile Design (2nd and 3rd years) Commercial Art
Thursday	Theory of Art Drawing and Painting from life	Games Practice	Junior Course, Design and Colour Illustration, Antique Painting (Advanced) Teachers' Class *Posters, Bookbinding *Painting & Decorating (1st and 4th years) Drawing from life
Friday	Architecture Design Illustration Posters Perspective History of Painting	Leather Work } Theory Embroidery } &Prac. General Drawing—Objects and Interiors Dress Design Design	Crafts (various) *Advanced Industrial Art and Architecture History and styles of Ornament *Architecture *English & Arithmetic 1st & 2nd years).

* These classes will terminate after the U.L.C.I. Examinations.

During the Summer term an out-of-door Sketching Class will be held on Monday, Tuesday and Friday afternoons also Wednesday mornings.

Short Summer Courses in various Crafts—Mondays and Wednesdays.

Special lectures relating to outdoor sketching and on painting will be arranged for the summer term.

EXAMINATIONS IN ART.

Internal.

Grouped Examinations will be held at the end of each term, comprising the subjects of the various Courses.

The Board of Education will hold Examinations in the following subjects of Art :—

(*a*) Drawing.
(*b*) Painting.
(*c*) Modelling.
(*d*) Pictorial Design for Reproduction in black and white or colour.
(*e*) Industrial Design for (i.) Handicrafts and
(ii.) Manufactures.

1. The Examination in Drawing will be of a standard suitable for candidates who, after a good general education, including some preliminary instruction in Drawing, up to the age of 16 or later, have devoted themselves to serious and continuous study of Drawing for, as a rule, not less than two years.

2. The Examinations in Painting, Modelling, and Pictorial Design will be of such a standard as could be attained, according to the capacity of the candidate, by two or more years of serious and continuous specialised study after passing the Examination in Drawing.

3. Examinations in Industrial Design will be of such a standard as could be attained through regular attendance at Evening or other Part Time Classes in the intervals of employment for a period of four years after the age of 16.

4. Candidates will not be admitted to the Examinations in Painting, Modelling, or Pictorial Design, unless they have previously passed the Examination in Drawing.

City and Guilds of London Institute.

Students are prepared for these Examinations in the following subjects :—Painting and Decorating, Embroidery, Principles of Art as applied to Cotton Weaving.

National Society of Art Masters.

A series of Examinations in Drawing arranged for Teachers in Elementary Schools.

UNION OF LANCASHIRE AND CHESHIRE INSTITUTES.

Students are prepared for the Examinations arranged by the U.L.C.I. Authority in the following subjects:—Junior Industrial Art, Painting and Decorating, Architecture, Embroidery, Leatherwork, Woodcarving, Textile Design, etc.

SCHOLARSHIPS.

Harris Art Scholarship.

One Scholarship, of the value of £7 10s. 0d. per annum, tenable for three years, will be awarded annually.

The Scholarship will be open to all Students of the School of Art, who have attended for not less than one year immediately preceding the award, and will be tenable at the Harris Institute.

The Scholarship will be awarded on the results of the annual examinations, in conjunction with the Student's work of the session.

Should one or more of these Scholarships fall vacant before the full period of three years, two or three (as the case may be), will be given instead of one, in the year when they lapse.

Free Studentships.

Free Studentships to the Day Classes are offered to Students of the School (Day or Evening), who are studying with a view to becoming designers, craft workers, or teachers.

Method of award, the same as for the Harris Art Scholarship.

Free Studentships to the Evening Classes are offered to students taking definite courses, and will be awarded on the result of marks given for homework, attendance, and internal examinations.

Special Scholarships are awarded to Students who have left or are about to leave Elementary Schools, who intend to follow occupations requiring an Art Training.

PRIZES : "STEELE" BEQUEST.

Three Prizes (one Day and two Evening) of £4 each are offered for the best work done by Students each Session.

SOCIAL AND ATHLETIC ACTIVITIES.

A Sketch Club is organised by the Staff and Students for the purpose of encouraging individual effort. Monthly competitions are arranged during the Session, and a series of subjects are set for the long vacation.

All Students are eligible. Further information and particulars may be obtained from members of the Staff.

A Dramatic Club is being formed and Social evenings will be arranged, when there will be informal dances, musical items, and short plays, etc.

Excursions to Art Galleries, Exhibitions, Works, etc., will also be arranged during the session.

A Rugby Football Club has been formed, and intending players should report at once to the Secretary. Hockey is also played.

Notices of the various activities, giving times and dates will be placed on the notice board in the corridor.

Also see page 7.

The Gymnasium is open at the recognised times to Students on payment of the sports fee. See pages 41 or 75.

REFECTORY.

There is a fully equipped Dining Room at the Technical College. Lunches, teas and light refreshment may be obtained from 10-45 a.m. to 7-15 p.m.

The Refectory is for the convenience of the students and staff and all students may use the Refectory between the times stated.

HARRIS INSTITUTE, PRESTON.

TIME TABLE OF CLASSES. SESSION 1937-38.

T—*Technical College.* A—*Avenham Institute.*

TECHNICAL DAY CLASSES.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	PROFESSIONAL ENTRANCE COURSE (Matriculation, etc.)						
1	T English	H. H. Allen	11.15–12.15	...	11.15–12.15	2—3	...
2	T History	H. H. Allen	3—4	...	...	3—4	...
3	T French	H. H. Allen	...	2—3	...	...	11.15–12.15 2—3
4	T Latin	H. H. Allen	...	9.15–11.15	...	...	...
5	T Mathematics	F. B. Landolt	9.30–11.15	11.30–12.30	9.30–11.15	...	...
6	T Physics	F. B. Landolt	...	3—4	...	9.30–10.30	9.30–11
7	T Chemistry	R. Hope	...	9.15–11.15	...	10.30–12.30	...
8	T Geography	H. Newton	...	...	...	11.15–12.15	3—4
9	T Biology	H. W. Edmunds	2—3	10.0–11.30	...	...	...
	INTER-B.Sc. (Science and Engineering.)						
10	T Pure Mathematics	F. B. Landolt	11.30–12.30	9.30–10.30 2—3	...	...	...
11	T Applied Mathematics	J. S. Wrigley	...	...	9.30–12	...	...
12	T Heat and General Physics ...	F. B. Landolt	...	...	2–4.30	...	...
13	T Magnetism and Electricity ...	F. B. Landolt	...	...	...	...	2–4.30
14	T Sound and Optics	F. B. Landolt	2–4.30	...	...	...	...
15	T Engineering Drawing ...	J. S. Wrigley	3—5	...	...	...	...
16	T Chemistry	E. Taylor	...	2–4.30	9.30–12.30	9.30–12.30	11.30–12.30
17	T Geology	H. W. Edmunds	...	...	...	...	...
18	T Biology	H. W. Edmunds	10.30–11.30	9.30–12.30	...	2–4.30	9.30–11.30

Final B.Sc. (Science and Engineering) classes will be arranged to suit the subjects offered by the students.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	PRELIMINARY SCIENTIFIC : Pharmacy, Dental, Medical, Dispensing.						
19	T Chemistry, Org. (Theory) ...	E. Taylor	9.30–10.30	...	...	...	...
20	T Chemistry, Inorg. (Theory) ...	E. Taylor	...	2—3	9.30–10.30	9.30–10.30	11.30–12.30
21	T Chemistry, (Practical)... ...	E. Taylor	...	3–4.30	10.30–12.30	10.30–12.30	...
22	T Physics (Theory)	F. B. Landolt	11.30–12.30	...	2—3	...	2—3
23	T Physics (Practical)	F. B. Landolt	2–4.30	...	3–4.30	...	3–4.30
24	T Biology (Theory)	H. W. Edmunds	10.30–11.30	9.30–10.30	...	...	9.30–11.30
25	T Biology (Practical)	H. W. Edmunds	...	10.30–12.30	...	2–4.30	...
	SCIENCE FOR HORTICULTURE.						
26	T Biology and Chemistry ...	H. W. Edmunds, R. Hope	...	...	9—11 (Sept. to March).	...	...
27	T Surveying	J. S. Wrigley	...	...	...	2.30–5 (April to July)	...
	PART TIME DAY COMMERCIAL CLASSES.						
28	T Typewriting—Instruction and Practical	W. Webster	11.15–12.15	...	11.15–12.15	9.15–11.15	10.15–11.15
29	T Shorthand	W. Webster, H. Newton ...	...	9.15–11.0	9.15–10.15	9.15–11.15	11.30–12.15
30	T Book-keeping	H. Newton	9.15–11.15	...	...	...	...
31	T Commerce	W. Webster	...	...	10.15–11.15	...	9.15–10.15
32	T Commercial Correspondence ...	R. Cross	...	...	...	...	...
33	T Economics	H. Newton	...	11.15–12.15	...	...	...
	PART TIME DAY ENGINEERING. (National Certificate Course) **S1**						
34	T Mathematics	A. Woods	11.30-12.30 and 2–3	...	...	...	...
35	T Engineering Science	J. E. Taylor	9.30–11.30	...	...	...	...
36	T Engineering Drawing ...	J. S. Wrigley	3—5	...	...	...	...
37	T Motor Engineering	F. H. Clayton	...	...	7.15–9.15	...	...

	S2						
38	T Mathematics	F. W. Walker	9.30–11.30	...	...	...	...
39	T Mechanics and Heat Engines	J. S. Wrigley and F. W. Walker	11.30–12.30 and 2–3	...	...	...	...
40	T Engineering Drawing ...	J. E. Taylor, G. E. Hall ...	3—5	...	...	...	...
41	T Electrical Engineering Science	A. Woods	7.15–9.15	...	...	...	...
42	T Motor Engineering	H. Hindley	...	...	...	7.15–9.15	...
	MECHANICAL ENGINEERING. (National Certificate)						
	S3						
43	T Mathematics	A. Jackson	...	...	...	7.15–9.15	...
44	T Mechanics	F. W. Walker	...	...	2–4.30	...	...
45	T Heat Engines	F. W. Walker	...	...	9.30–12	...	...
	A1						
46	T Strength of Materials	J. E. Taylor	...	...	2–4.30	...	...
47	T Theory of Machines	J. S. Wrigley	...	...	9.30–12	...	...
48	T Mathematics	J. S. Wrigley	7.15–9.15	...	...	...	...
	A2						
49	T Elec. Eng. for Mech. Engrs. ...	J. H. Hulse	...	...	...	7.15–9.15	...
50	T Machine Design	J. E. Taylor	...	...	9.30–12	...	...
51	T Heat Engines	J. S. Wrigley	...	...	2–4.30	...	...
	A3 1st and 2nd Terms*						
52	T Chemistry	R. Hope	...	9.15–11.15	...	...	...
53	T Economics	H. Newton	...	11.15–12.15	...	...	...
54	T Physics	F. B. Landolt	...	2-4.30	...	...	...
55	T Chemistry (General)	E. Taylor	...	...	...	...	7–8
56	T Chemistry (for Engineers) ...	E. Taylor	...	...	...	...	8–9
57	T Workshop Organisation and Management	H. Newton	...	...	7.15–9.15	...	...

*3rd Term.—Advanced Engineering Laboratory.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday
	TEXTILE CLASSES. (Cotton Spinning and Weaving)						
58	T Textile Testing (Theory) ...	D. Atkinson	...	...	...	9.30–10.45	...
59	T Textile Testing (Practical) ...	D. Atkinson	...	...	...	10.45–12.0	...
60	T Weaving Mechanism	D. Atkinson	9.30–10.45	...	...	...	...
61	T Weaving (Practical)	W. Jackson	10.45–12.0	...	...	...	10.45–12.0
62	T Weaving Calculations	D. Atkinson	...	...	9.30–10.45	...	...
63	T Cloth Dissection, Analysis ...	D. Atkinson	...	...	10.45–12.0	...	...
64	T Fabric Structure	D. Atkinson	...	9.30–10.45	...	...	...
65	T Practical Designing	D. Atkinson	...	10.45–12.0	...	...	...
66	T Yarn Preparation	D. Atkinson	...	...	...	...	9.30–10.45
	PART TIME DAY BUILDING. (National Certificate Course) **S1**						
67	T Building Science	E. M. Pearson	...	9.30–11.30	...	...	...
68	T Mathematics	J. E. Taylor	...	11.30–12.30	...	...	...
69	T Geometry	D. J. Jones	...	2—4	...	...	...
70	T Building Construction ...	E. M. Pearson	...	4—5	...	...	...
71	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...
	S2						
72	T Mathematics	J. Slater	...	...	...	2—4	...
73	T Geometry	E. M. Pearson	...	...	...	11.30–12.30	...
74	T Building Science	E. M. Pearson	...	...	...	9.30–11.30	...
75	T Building Construction ...	G. H. Broadbent	...	7.15–9.15	...	4—5	...
	INTERMEDIATE R.I.B.A.						
76	T Structural Mechanics	E. M. Pearson	...	10–12.30	...	...	...
77	A Architecture and Design ...	G. A. Clucas	...	...	10–12.30	...	10–12.30
78	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...
79	A Architectural History ...	G. A. Clucas	...	...	...	...	7—9

	MECHANICAL ENGINEERING. (National Certificate Course)							
	S1							
80	† Mathematics	T. Wilkinson...	...	...	...	...	7.15–9.15	...
81	† Engineering Drawing	F. Callow	...	7.15–9.15	...	...	...	
82	† Engineering Science	F. W. Walker	7.15–9.15	...	...	...	...	
	S2							
83	† Mathematics	J. Bagot	...	...	...	7.15–9.15	...	
84	† Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...	
85	† Mechanics and Heat Engines...	G. E. Hall	...	...	...	...	7.15–9 15	
	S3							
86	† Mathematics	G. E. Hall	...	7.15–9.15	...	...	...	
87	† Mechanics	F. W. Walker	...	...	7.15–9.15	...	...	
88	† Heat Engines	F. W. Walker	...	...	...	7.15–9.15	...	
	A1							
89	† Mathematics	J. S. Wrigley	7.15–9.15	...	...	...	...	
90	† Theory of Machines	J. S. Wrigley	...	...	7.15–9.15	...	...	
91	† Strength of Materials	J. E. Taylor	..	...	...	...	7.15–9.15	
	A2							
92	† Heat Engines	J. S. Wrigley	...	7.15–9.15	...	...	...	
93	† Machine Design	J. E. Taylor	7.15–9.15	...	...	...	...	
94	† Electrical Engineering for Mechanical Engineers	J. H. Hulse	...	...	...	7.15–9.15	...	
	A3							
95	† Workshop Organisation and Management	H. Newton	...	...	7.15–9.15	...	...	
96	† Chemistry (General)	E. Taylor	...	...	...	...	7—8	
97	† Chemistry (for Engineers) ...	E. Taylor	...	...	...	...	8—9	
98	† Physics	T. McGreevy	7.15–8.45	...	...	...	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	ELECTRICAL ENGINEERING (National Certificate Course)						
	S1						
99	T Mathematics	R. H. Wignall	7.15–9.15	...	...	...	...
100	T Engineering Drawing	F. Callow, S. Laraway ...	...	...	...	...	7.15–9.15
101	T Engineering Science	G. E. Hall	...	...	...	7.15–9.15	...
	S2						
102	T Mathematics	J. Bagot	...	7.15–9.15	...	...	...
103	T Mechanical Engineering Science	H. E. Jones	...	...	...	7.15–9.15	...
104	T Electrical Engineering Science	A. Woods	7.15–9.15	...	...	...	...
	S3						
105	T Mathematics	A. Jackson	...	...	...	7.15–9.15	...
106	T Electro-Technics	A. Woods	...	7.15–9.15	...	...	...
107	T Electrical Laboratory	A. Woods	...	...	...	...	7.15–9.15
	A1						
108	T Mathematics	J. E. Taylor	...	...	...	7.15–9.15	...
109	T Electrical Technology, Sect. I.	J. Eatock	...	...	7.15–9.15	...	...
110	T Electrical Technology, Sect. II.	J. Eatock	7.15–9.15	...	...	...	...
	A2						
111	T Generation and Transmission of Electrical Energy ...	T. McGreevy...	...	7.15–9.15	...	...	...
112	T Distribution and Utilization of Electrical Energy ...	T. McGreevy...	...	...	...	...	7.15–9.15
113	T Heat Engines	F. W. Walker	...	...	...	7.15–9.15	...
	A3						
114	T Workshop Organisation and Management	H. Newton	...	...	7.15–9.15	...	...
115	T Chemistry (General)	E. Taylor	...	...	...	...	7—8
116	T Chemistry (for Engineers) ...	E. Taylor	...	...	...	...	8—9
117	T Enginneering Drawing ...	F. Callow	...	7.15–8.15	...	...	...

	BUILDING.						
	S1						
118	T Building Science	W. Taylor	...	7.15–9.15	...	...	...
119	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...
120	T Geometry	J. N. Walker	...	...	...	...	7.15–9.15
	S2						
121	T Mathematics	W. Taylor	7.15–9.15	...	...	...	...
122	T Building Construction ...	G. H. Broadbent	...	7.15–9.15	...	...	...
123	T Building Science	J. Holt	...	...	...	7.15–9.15	...
	S3						
124	T Building Construction ...	H. Walters	...	...	...	7.15–9.15	...
125	T Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
126	T Geometry	J. N. Walker	7.15–9.15	...	...	...	...
127	T Brickwork and Concreting ...	H. Lonsdale	...	...	7.15–9.15	...	...
128	T Carpentry and Joinery ...	H. Allen	...	...	...	...	7.15–9.15
129	T Mathematics	G. E. Hall	...	7.15–9 15	...	...	...
130	T Building Science	E. M. Pearson	...	...	7.15–9.15	...	...
	A1 and A2						
	Group 1.						
131	T Building Construction (A or B)	E. M. Pearson	...	...	...	7.15–9.15	...
132	T Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
133	T Builders' Quantities and Estimating	T. J. Higginson	7.15–9.15	...	...	...	...
134	T Structural Work	E. M. Pearson	...	...	...	...	7.15–9.15
	Group 2.						
135	T Carpentry and Joinery ...	G. H. Broadbent	...	...	...	...	7.15–9.15
136	T Architectural History (see Art School						
137	T Equipment of Buildings ...	E. M. Pearson	...	...	...	...	7.15–9.15
	Group 3, Practice Class.						
138	T Building Construction (A or B)	H. Walters	...	...	7.15–9.15	...	...
139	T Carpentry and Joinery ...						
140	T Structural Work						

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	COTTON SPINNING.						
	S1 (National Certificate)						
141	T Mathematics	J. Preston	...	...	7.15–9.15*	...	...
142	T Textile Drawing	F. Taylor	7.15–9.15	...	...	...	...
143	T Cotton Spinning (Practical) ...	J. H. Harrison	...	...	...	...	7.15–9.15*
144	T Cotton Spinning (Theory) ...	J. Mitchell	...	7.15–9.15	...	...	...
	S2						
145	T Mathematics	R. Chatburn	7.15–9.15*	...	...	...	...
146	T Textile Science	F. Jackson, G. O. Stephens	...	...	...	7–9.30	...
147	T Cotton Spinning (Practical) ...	J. H. Harrison	...	...	...	...	...
148	T Cotton Spinning (Theory) ...	S. Jackson	...	...	7.15–9.15	...	7.15–9.15*
	S3						
149	T Cotton Spinning (Theory) ...	J. Mitchell	...	...	7.15–9.15	...	...
150	T Cotton Spinning (Practical) ...	J. H. Harrison	...	...	...	...	7.15–9.15*
151	T Textile Engineering	J. Preston	...	...	...	...	7.15–9.15*
152	T Textile Science	F. Jackson, G. O. Stephens	...	...	...	7–9.30	...
	COTTON MANUFACTURE (WEAVING).						
	S1 (National Certificate)						
153	T Mathematics	J. Preston	...	...	7.15–9.15*	...	...
154	T Textile Drawing	F. Taylor	7.15–9.15	...	...	...	...
155	T Cotton Weaving (Practical) ...	H. Gorton	...	...	...	...	7.15–9.15*
156	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...

*Alternate weeks.

	S2						
157	T Cotton Weaving (Theory) ...	W. Dagger	...	...	...	...	7.15–9.15
158	T Cotton Weaving (Practical) ...	W. Jackson, C. J. Breakell	...	...	7.15–9.15*	...	...
159	T Mathematics	R. Chatburn	7.15–9.15*	...	...	...	...
160	T Textile Science	F. Jackson, G. O. Stephens	...	...	...	7–9.30	...
	S3						
161	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	...	7.15–9.15
162	T Cotton Weaving (Practical) ...	W. Jackson, C. J. Breakell	...	...	7.15–9.15*	...	...
163	T Textile Science	F. Jackson, G. O. Stephens	...	...	...	7–9.30	...
164	A Textile Design and Colour ...	F. Southworth	...	...	7—9*	...	...
	A1						
165	T Cotton Weaving (Theory) ...	T. S. Taylor	...	...	7.15–9.15	...	...
166	T Cotton Weaving (Practical) ...	N. Highfield	7.15–9.15*	...	...	...	...
167	T Textile Technology I. ...	D. Atkinson	7.15–9.15*	...	...	...	...
168	T Textile Engineering	F. Taylor	...	7.15–9.15	...	...	...
169	A Textile Design I.	W. T. Garnar	...	7—9	...	...	...
170	T Textile Chemistry I.	C. A. Hatton	...	...	...	7–9.30	...
	A2						
171	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	7.15–9.15	...	...
172	T Cotton Weaving (Practical) ...	W. Dagger	7.15–9.15*	...	...	...	...
173	T Textile Technology II.... ...	D. Atkinson	7.15–9.15*	...	...	...	...
174	T Textile Economics	J. C. G. Dawson	...	...	...	7.15–9.15	...
175	A Textile Design II.	W. T. Garnar	...	7—9	...	...	...
176	T Textile Chemistry II.	H. Dawson	...	...	...	...	7–9.30
	HIGHER COURSES.						
	1st Year.						
177	T Cotton Spinning	J. H. Harrison	...	7.15–9.15	...	...	...
178	T Textile Chemistry I.	C. A. Hatton	...	...	...	7–9.30	...
179	T Textile Technology I. ...	D. Atkinson	7.15–9.15*	...	...	...	...

*Alternate weeks.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	2nd Year.						
180	T Textile Technology II. ...	D. Atkinson	7.15–9.15*	...	...	...	...
181	T Textile Microscopy	C. M. Hey	...	7.15–9.15	...	...	...
182	T Textile Chemistry II.	H. Dawson	...	...	...	...	7–9.30
	Special Classes.						
183	T Rayon Manufacture	C. A. Hatton	...	...	...	7–9.30	...
184	T Hosiery	Miss E. Beaton	...	...	...	7.15–9	...
185	T Adult Spinners I.	S. Jackson	7.15–9.0	...	...	...	...
186	T Adult Spinners II.	S. Jackson	...	...	7.15–9	...	...
187	T Practical Rayon Weaving ...	W. Jackson	...	7.15–9	...	...	...
	COMMERCIAL COURSES.						
	S1						
188	T Arithmetic	E. Singleton	7.15–8.15	...	...	...	...
189	T Arithmetic	E. Singleton	8.15–9.15	...	...	...	...
190	A Arithmetic	F. R. Snalam	7.15–8.15	...	...	...	...
191	A Arithmetic	F. R. Snalam	8.15–9.15	...	...	...	...
192	T Book-keeping	W. Webster	...	...	...	...	...
193	T Book-keeping	W. Webster	...	...	...	7.15–8.15	...
194	T Book-keeping	T. Bradshaw	...	...	...	8.15–9.15	...
195	T Book-keeping	T. Bradshaw	...	...	7.15–8.15	...	...
196	T Commerce	S. J. Williams	...	...	8.15–9.15	...	...
197	T Commerce	H. Newton	...	7.15–8.15	...	...	...
198	T English	H. Entwistle, Miss R. S. Cross W. A. C. Clarke	...	...	...	...	8.15–9.15
199	T English	F. R. Snalam	...	8.15–9.15	...	...	...
200	T Shorthand (More Adv. Theory)	F. V. Bradshaw	7.15–8.15	...	...	...	7.15–8.15
201	T Shorthand (Elementary) ...	F. V. Bradshaw	8.15–9.15	...	...	...	...
202	A Shorthand (Elementary) ...	F. M. Crawley	7.15–8.15	...	...	...	...
203	A Shorthand (More Adv. Theory)	F. M. Crawley	8.15–9.15	...	...	...	...

COMMERCIAL COURSES.

S1—*continued.*

204	T Typewriting	J. Hilton	...	6.15–7.15	...	...	...
205	T Typewriting	J. Hilton	...	7.15–8.15	...	...	...
206	T Typewriting	J. Hilton	...	8.15–9.15	...	...	...
207	T French (Beginners)	J. Kettle	...	...	7.15–9.15	...	...
208	T French	J. Kettle	...	...	8.15–9.15	...	...
209	A Spanish	J. Kettle	8.15–9.15	...	...	...	...
210	A Latin	W. A. C. Clarke	...	...	...	7.15–8.15	...
211	T German (Beginners)	C. E. Robin	...	...	...	...	7.15–9.15
212	T German	C. E. Robin	...	...	...	...	8.15–9.15
213	A Geography	H. C. Pye	7.15–8.15	...	...	...	...

S2

214	T Arithmetic	E. Singleton	...	...	...	...	7.15–8.15
215	A Book-keeping	H. A. Brown	...	...	...	7.15–9.15	...
216	T Book-keeping	T. Cunliffe, F. Whitehead ...	...	...	7.15–9.15	...	...
217	T Commerce	S. J. Williams	...	8.15–9.15	...	...	...
218	T Commerce	H. Newton	...	...	...	...	7.15–8.15
219	T English	H. Entwistle	...	7.15–8.15	...	...	...
220	T English	F. R. Snalam	...	...	...	...	8.15–9.15
221	A Shorthand (Initial Speed) ...	W. R. White...	...	...	...	7.15–9.15	...
222	T Shorthand (60 to 80 words) ...	W. Hanson	...	...	...	7.15–9.15	...
223	T Shorthand (50 to 60 words) ...	Miss M. Nelson	...	...	...	7.15–9.15	...
224	T Typewriting	J. Hilton	...	...	...	...	6.15–7.15
225	T Typewriting	J. Hilton	...	...	...	...	7.15–8.15
226	T Typewriting	J. Hilton	...	...	...	...	8.15–9.15
227	T French	T. C. Hayes	...	...	7.15–9.15	...	...
228	A Geography	H. C. Pye	8.15–9.15	...	...	...	...
229	A Spanish	J. Kettle	7.15–8.15	...	...	...	...
230	T German	H. H. Allen	...	...	...	...	7.15–9.15

S3

231	T Arithmetic	E. Singleton	...	...	...	...	8.15–9.15
232	T Book-keeping	N. Hindley	...	7.15–9.15	...	...	...
233	T Commerce	S. J. Williams, J. McHugh	...	...	7.15–9.15	...	...
234	T English Language & Literature	W. A. C. Clarke	...	...	...	...	7.15–8.45
235	A Shorthand (from 80 words) ...	T. Ashworth, Miss D. Roberts	...	...	...	7.15–9.15	...
236	A French	H. H. Allen	7.15–9.15	...	...	...	...
237	A German	H. H. Allen	...	7.15–9.15	...	...	...
238	T Cotton Spinning (Theory) ...	J. Mitchell	...	7.15–9.15	...	...	...
239	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...

In French and German, beginners take two consecutive periods of 60 minutes, and S1 students take the second period only.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday	Wednesday.	Thursday.	Friday.
	A1 and 2						
240	† Accounting and Auditing (A1)	J. Donaldson	...	7.15–9.15	...	...	...
241	† Accounting and Auditing (A2)	N. Hindley	...	...	...	7.15–9.15	...
242	† Mercantile Law (A1)	J. White	...	...	8.15–9.15	...	...
243	† Mercantile Law (A2)	J. White	...	7.15–8.15	...	...	...
244	† Economics and Banking (A1)...	W. Webster	7.15–9.15	...	...	...	...
245	† Economics and Banking (A2)...	W. Webster	...	...	7.15–9.15	...	...
246	† French	F. W. Jackson	...	...	...	7.15–9.15	...
247	† Cotton Spinning (Theory) ...	J. Mitchell	...	7.15–9.15	...	...	...
248	† Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...
	RATING AND VALUATION OFFICERS COURSE.						
249	† Municipal Law	T. Houghton...	7.15–8.15	...	...	...	...
250	† Registration of Electors and Correspondence, Précis, etc.	J. Mullineaux	8.15–9.15	...	...	...	...
251	† Book-keeping and Office Organisation, etc. ...	T. A. Moss	...	...	7.15–9.15	...	...
252	† Assessment, Rating, etc. ...	D. M. Leach	...	...	...	7.15–8.45	...
	CHEMISTRY. (National Certificate Course) **S1**						
253	† Mathematics	F. B. Landolt	7—9	...	...	...	...
254	† Physics	F. B. Landolt	...	7–9.30	...	...	...
255	† Inorganic Chemistry	E. Taylor, R. Hope ...	...	...	...	...	7–9.30
	S2						
256	† Physics (Theory and Practical)	H. W. Edmunds	...	...	7–9.30	...	...
257	† Organic Chemistry (Theory and Practical)	E. Taylor	...	7—8			
		J. N. Aldington	...	8—9.30	...	...	...
258	† Inorganic Chemistry (Theory) and Practical)	R. Hope	...	...	...	7–9.30	...
	S3						
259	† Organic Chemistry (Theory and Practical) ...	J. N. Aldington	...	7–9.30	...	...	...
260	† Inorganic Chemistry (Theory and Practical)	F. Jackson	...	...	7–9.30	...	...
261	† Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...

	A1						
262	† Organic Chemistry (Theory) ...	E. Taylor	7—8	...	...	...	...
263	† Organic Chemistry (Practical).	J. N. Aldington	...	...	7–9.30	...	...
264	† Inorganic Chemistry (Theory)	E. Taylor	8—9	...	...	...	...
265	† Inorganic Chemistry (Practical)	W. G. Creasey	...	...	...	7–9.30	...
	A2						
266	† Organic Chemistry (Theory) ...	E. Taylor	7—8	...	...	...	...
267	† Organic Chemistry (Practical)	J. N. Aldington	...	...	7–9.30	...	...
268	† Inorganic Chemistry (Theory)	E. Taylor	8—9	...	...	...	...
269	† Inorganic Chemistry (Practical)	W. G. Creasey	...	...	...	7–9.30	...

A1 and A2 Theory will be taken in alternate years. The A2 Course will be taken in 1937–38.

	PHARMACY.						
	S1					...	
270	† Botany	H. W. Edmunds	7—9	...	...	...	...
271	† Physics	F. B. Landolt	...	7–9.30	...	...	...
272	† Chemistry	E. Taylor, R. Hope ...	...	...	...	...	7–9.30
	S2						
273	† Botany	H. W. Edmunds	...	7—9	...	...	...
274	† Physics	H. W. Edmunds	...	...	7–9.30	...	...
275	† Inorganic Chemistry (Theory and Practical)	R. Hope	...	...	...	7–9.30	...
	S3						
276	† Botany	H. W. Edmunds	...	7—9	...	...	...
277	† Physics	F. B. Landolt	...	...	...	...	7–9.30
278	† Inorganic Chemistry (Theory and Practical)	F. Jackson	...	...	7–9.30	...	...
	POST COURSE (Part 1.)						
279	† Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...
280	† Organic Chemistry	J. N. Aldington	...	7–9.30	...	...	...
281	† Inorganic Chemistry (Practical)	J. N. Aldington	...	...	7–9.30	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday
	INTER. B.Sc. AND 1ST YEAR A.I.C. COURSE.						
282	T Inorganic Chemistry	F. Jackson	...	...	7–9.30	...	...
283	T Pure Mathematics I.	G. O. Stephens	...	7—9	...	...	...
284	T Pure Mathematics II.	J. Slater	...	7—9	...	...	...
285	T Applied Mathematics	J. Slater	...	...	...	...	...
286	T Physics	F. B. Landolt	...	...	...	7—9	...
287	T Engineering Drawing	J. E. Taylor	7.15–9.15	...	...	...	7–9.30
	Alternative More Advanced Chemistry.						...
288	T Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...
289	T Inorganic Chemistry	E. Taylor	8—9	...	...	...	...
290	T Practical Chemistry	J. N. Aldington	...	...	7–9.30	...	...
	B.Sc., A.I.C. COURSES and ADVANCED WORK (Practical)						
291	T Chemistry Theory	E. Taylor	...	8—9	...	...	...
292	T Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...
293	T Inorganic Chemistry	E. Taylor	7–9.30	...	...	...	...
294	T Organic Chemistry	J. N. Aldington	...	...	7–9.30	...	...
295	T Physics (Practical) ... ... *	F. B. Landolt	...	...	...	...	7–9.30
	TYPOGRAPHY. 1st Year.						
296	A Composing	E. Jones	...	...	7.15–9.15	...	...
297	A Machines	J. Taylor	7.15–9.15	...	...	...	...
298	T English	F. R. Snalam	...	...	...	...	7.15–9.15
	2nd Year.						
299	A Composing	E. Jones	...	...	...	...	7.15–9.15
300	A Machines	J. Taylor	...	...	7.15–9.15	...	...
301	T English	F. R. Snalam	...	8.15–9.15	...	...	...
	3rd and 4th Years.						
302	A Composing	E. Jones	...	7.15–9.15	...	...	...
303	A Machines	J. Taylor	...	...	...	7.15–9.15	...
304	A Commercial Art	A. Bann	...	...	7.15–9.15	...	...

* For Languages see pages 65-66.

	ENGINEERING, WORKSHOP.						
	S1						
305	T Calculations and Science ...	T. C. Nicholson	...	7.15–9.15	...	...	...
306	T Engineering Drawing	F. Callow	...	...	...	...	7.15–9.15
307	T Engineering Workshop Processes	G. W. Robinson	...	...	7.15–9.15	...	...
	S2						
308	T Calculations and Science ...	D. F. F. Brewester	...	7.15–9.15	...	...	...
309	T Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...
310	T Engineering Workshop Processes	O. Jones	...	...	...	...	7.15–9.15
	S3						
311	T Engineering Workshop Processes	O. Jones	...	...	...	7.15–9.15	...
312	T Engineering Workshop Practice	O. Jones	...	...	...	...	7.15–9.15
313	T Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...
	MOTOR MECHANICS COURSE.						
	S1						
314	T Calculations and Science ...	J. Slater	...	...	...	...	7.15–9.15
315	T Motor Engineering	F. H. Clayton	...	...	7.15–9.15	...	...
316	T Engineering Drawing	F. Callow	...	7.15–9.15	...	...	...
	S2						
317	T Calculations and Science ...	D. F. F. Brewester	...	7.15–9.15	...	...	...
318	T Engineering Workshop Processes and Practice ...	G. W. Robinson	...	...	7.15–9.15	...	...
319	T Motor Engineering	H. Hindley	...	...	...	7.15–9.15	...
	S3						
320	T Engineering Workshop Processes and Practice ...	O. Jones	...	...	...	7.15–9.15	...
321	T Motor Eng. (Mech. Equip.) ...	H. Hindley	...	7.15–9.15	...	...	...
322	T Motor Eng. (Elect. Equip.) ...	J. F. Parsonage	7.15–9.15	...	...	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	MOTOR BODY BUILDING.						
	S1						
323	T Technical Drawing	H. Lavery	7.20–9.20	...	...	...	...
324	T Body Building	H. Lavery	...	..	...	...	7.20–9.20
325	T Calculations and Science ...	T. C. Nicholson	...	7.15–9.15	...	..	...
	S2						
326	T Technical Drawing	H. Lavery	7.20–9.20	...	...	...	...
327	T Body Building	H. Lavery	...	...	...	...	7.20–9.20
328	T Calculations and Science ...	D. F. F. Brewester	...	7.15–9.15	...	...	...
	ELECTRIC WELDING.						
329	T Electric Welding (Theory) ...	S. H. Jones	...	...	7.15–9.15	...	...
330	T Electric Welding (Practical) I.	S. H. Jones	7.15–9.15	...	...	...	...
331	T Electric Welding (Practical) II.	S. H. Jones	...	...	...	7.15–9.15	...
	SHEET AND PLATE METALWORK.						
	S1						
332	T Trade Processes and Materials	J. Royle	...	7–9.30	...	...	...
333	T Calculations and Drawing ...	C. V. Case	...	...	...	7–9.30	...
	S2						
334	T Trade Processes and Materials	J. Royle	...	...	7–9.30	...	...
335	T Calculations and Drawing ...	C. V. Case	...	7–9.30	...	...	...
	ELECTRICAL INSTALLATION.						
	S1						
336	T Installation Rules, Theory and Calculations	J. Brennand	...	7.15–9.15	...	...	...
337	T Practical Work; Sketching and Drawing	J. Brennand	...	...	7.15–9.15	...	...
338	T Engineering Science	J. Billcliffe	...	...	...	...	7.15–9.15

	S2							
339	T Installation Rules, Theory and Calculations	S. Garnett	...	...	7.15–9.15	...	...
340	T Practical Work ; Sketching and Drawing	S. Garnett	...	7.15–9.15	...	...	...
341	T Electrical Engineering Science	A. Woods	7.15–9.15	...	...	...	...
	S3							
342	T Installation Rules, Theory and Calculations	G. Pimley	7.15–9.15	...	...	...	...
343	T Practical Work, Sketching and Drawing	G. Pimley	...	...	...	...	7.15–9.15
344	T Mathematics	J. Bagot	...	7.15–9.15	...	...	...
	RADIO SERVICE WORK.							
	S1							
345	T Mathematics	R. H. Wignall	7.15–9.15	...	...	...	...
346	T Radio Theory	... ...	...	...	7.15–9.15	...	...
347	T Calculations and Practical work	... ...	...	...	...	...	7.15–9.15
	S2							
348	T Physics	F. B. Landolt	...	7.15–9.15	...	...	...
349	T Radio Theory	... ...	...	...	7.15–9.15	...	...
350	T Calculations and Practical work	... ...	...	...	...	7.15–9.15	...
	S3							
351	T Electrical Engineering Science	A. Woods	7.15–9.15	...	...	...	...
352	T Radio Theory	... ...	...	7.15–9.15	...	...	...
353	T Calculations and Practical work	... ...	...	...	7.15–9.15	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	PLUMBING.						
	S1						
354	T Plumbing (Theory)	F. Coupe	...	...	7.15–9.15	...	...
355	T Plumbing (Practical)	J. Pilkington	7.15–9.15	...	...	...	...
356	T Geometry and Calculations ...	J. N. Walker	...	7.15–9.15	...	...	...
	S2						
357	T Plumbing (Practical)	F. Coupe	...	...	...	...	7.15–91·5
358	T Plumbing (Theory)	F. Coupe	7.15–9.15	...	...	...	...
359	T Plumbing Science & Calculation	F. W. Steele	...	7.15–9.15	...	...	...
	S3						
360	T Plumbing (Practical)	J. Dixon	...	...	7.15–9.15	...	...
361	T Plumbing (Theory)	J. Dixon	7.0–8.30	...	...	...	...
362	T Plumbing (Science)	J. Dixon	8.30–9.30	...	...	...	...
363	T Building Construction	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
	A						
364	T Plumbing (Practical)	J. Dixon	...	...	7.15–9.15	...	...
365	T Plumbing (Theory)	J. Dixon	7.0–9.30	...	...	...	...
366	T Building Construction or ...	G. H. Broadbent	...	7.15–9.15	...	...	...
367	T Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
	GAS FITTING.						
	S1						
368	T Gas Fitting (Theory)	J. Pilkington	...	...	7.15–9.15	...	...
369	T Gas Fitting (Practical) ...	J. Pilkington...	...	...	...	7.15–9.15	...
370	T Science and Calculations ...	A. E. R. Bill	...	...	...	...	7.15–9.15
	S2						
371	T Gas Fitting (Theory)	J. Pilkington	...	...	...	...	7.15–9.15
372	T Gas Fitting (Practical) ...	J. Pilkington...	...	7.15–9.15	...	...	...
373	T Mathematics	W. Taylor	7.15–9.15	...	...	...	...

	S3							
374	T Gas Fitting (Theory)	J. Pilkington...	...	...	...	...	...	7.15–9.15
375	T Gas Fitting (Practical) ...	J. Pilkington...	...	7.15–9.15	...	...	...	...
376	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...	...
	GAS SUPPLY.							
	S1							
377	T Mathematics	T. Wilkinson...	...	...	...	7.15–9.15	...	
378	T Engineering Drawing ...	F. Callow	...	7.15–9.15	...	...	...	
379	T Engineering Science	F. W. Walker	7.15–9.15	...	...	...	...	
	S2							
380	T Inorganic Chemistry	E. Taylor, R. Hope ...	...	...	...	...	...	7–9.30
381	T Mathematics	J. Bagot	...	...	...	7.15–9.15	...	
382	T Engineering Drawing ...	F. Callow	...	...	7.15–9.15	...	...	
	S3							
383	T Engineering Science	G. E. Hall	...	...	...	...	7.15–9.15	
384	T Inorganic Chemistry	R. Hope	...	...	...	7–9.30	...	
385	T Gas Supply	... ...	...	...	...	...	...	
	CARPENTRY AND JOINERY.							
	S1							
386	T Carpentry and Joinery (Theory) ...	H. Fisher	7.15–9.15	...	...	...	...	
387	T Carpentry and Joinery (Practical) ...	J. Smith	...	...	...	...	7.15–9.15	
388	T Geometry and Calculations ...	J. N. Walker	...	7.15–9.15	...	...	...	
	S2							
389	T Carpentry and Joinery (Theory) ...	H. Fisher	...	...	7.15–9.15	...	...	
390	T Carpentry and Joinery (Practical) ...	H. G. Yeadon	...	7.15–9.15	...	...	...	
391	T Science and Calculations ...	A. E. R. Bill	...	...	...	...	7.15–9.15	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	S3						
392	T Carpentry and Joinery (Theory)	H. Allen	...	...	...	...	7.15–9.15
393	T Carpentry and Joinery (Practical)	H. Allen	...	7.15–9.15	...	...	...
394	T Building Construction ...	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
	A						
395	T Carpentry and Joinery (Theory)	G. H. Broadbent	...	...	...	...	7.15–9.15
396	T Carpentry and Joinery (Practical)	H. Allen	...	7.15–9.15	...	...	...
397	T Geometry	J. N. Walker...	7.15–9.15	...	...	...	...
	BRICKLAYERS. **S1**						
398	T Building Construction ...	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
399	T Geometry	J. N. Walker	...	7.15–9.15	...	...	...
400	T Science and Calculations ...	A. E. R. Bill...	...	...	...	...	7.15–9.15
	S2						
401	T Building Construction... ...	G. H. Broadbent	...	7.15–9.15	...	...	...
402	T Geometry	J. N. Walker	...	...	...	...	7.15–9.15
403	T Brickwork and Masonry ...	H. Lonsdale	...	...	7.15–9.15	...	...
	S3						
404	T Building Construction ...	H. Walters	...	...	...	7.15–9.15	...
405	T Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
406	T Brickwork and Concreting ...	H. Lonsdale	...	...	7.15–9.15	...	...

	COTTON SPINNING.							
407	T Opening and Carding (Theory)	J. H. Harrison	...	7.15–9.15	...	...	...	
A								
408	T Opening and Carding (Practical)	J. H. Harrison	...	...	...	7.15–9.15*	...	
409	T Roving Preparation (Theory)	J. H. Harrison	...	...	...	...	...	7.15–9.15
B								
410	T Roving Preparation (Practical)	J. H. Harrison	...	...	...	7.15–9.15*	...	
411	T Spinning (Theory)	S. Jackson	7.15–9.15	...	...	...	...	
C								
412	T Spinning (Practical)	S. Jackson	...	...	...	...	7.15–9.15*	
413	T Trade Calculations and Science	J. Preston	...	...	7.15–9.15*	...	...	

Students take A., **or** B. **or** C., **AND Trade Calculations and Science.**

	COTTON MANUFACTURE (WEAVING).							
	S1							
414	T Cotton Manufacture (Weaving) (Theory)	D. Atkinson	...	...	...	7.15–9.15	...	
415	T Cotton Manufacture (Weaving) (Practical)	J. W. Blackhurst	...	...	...	...	7.15–9.15*	
416	T Trade Calculations and Science	J. Preston	...	...	7.15–9.15*	...	...	
	LABORATORY ARTS.							
417	T Metalwork	G. W. Robinson	...	...	7.15–9.15	...	...	
418	T Woodwork	H. Allen	...	7.15–9.15	...	...	...	
419	T Glass Blowing	H. Helm	7.15–9.15	...	...	...	...	
	GYMNASIUM CLASSES.							
420	T Ladies	Misses Archer and Albin ...	8.15–9.15	7—8	8.15–9.15	7—8	8.15–9.15	
421	T Men	F. Wilcock, A. Dunbill and J. Kettle	7—8	8.15–9.15	7—8	8.15–9.15	7—8	

ART SCHOOL (AVENHAM INSTITUTE).

DAY.	ROOM.	TIMES OF CLASSES.	SUBJECTS.	TEACHERS.
Monday ...	11 and Museum	10.0–12.30	General Drawing, Animals, Nature Drawing	G. A. Clucas.
	11–12–2	2.0–3.30	Painting Still Life	W. Rathbone.
	10–2A	2.0–3.30	General Drawing, Illustration, Design	W. Rathbone and G. A. Clucas
	1	3.30–4.0	Lecture, Design and Colour (1st and 2nd year alternately) ...	G. A. Clucas
	1—10	7.0–7.30	Lecture, Form and Colour } ... ... {	A. Bann
		7.0–7.30	Lecture, Form and Colour } {	W. Rathbone.
	1	7.0–9.0	Drawing—Industrial and Crafts	
	9–10	7.0–9.0	Drawing—Industrial and Commercial Art (Painting and Decorating, Advertising, etc.) ... ... {	W. Rathbone, A. Bann and R. Lawson
	11–12	7.0–9.0	Drawing and Painting—General Art and Teachers' Course {	W. Rathbone
	12	7.0–9.0	Painting Ornament, etc., 4th and 5th years, P. & D. ...	M. Duckett W. Rathbone
Tuesday ...	2–2A	10.0–12.30	Perspective, Etching	G. A. Clucas
	12	10.0–12.30	Design and Fabric Printing	W. Rathbone.
	12	10.0–12.30	Figure Drawing	W. Rathbone.
	12	2.0–3.30	Advanced Decoration and Figure Composition	W. Rathbone.
	10	2.0–3.30	Object and Memory Drawing	A. Bann.
	9	3.30–4 0	Lecture, Form and Colour, 1st and 2nd year alternately ...	W. Rathbone and A. Bann.
	1	2.0–4.0	Crafts, Various	M. Duckett
	1 and 9	7.0–7.30	Lecture, Design and Colour } ... ... {	G. A. Clucas.
		7.0–7.30	Lecture, Design and Colour } {	W. Rathbone.
	1	7.0–9.0	Crafts.—Embroidery, etc.	M. Duckett
	2	7.0–9.0	Dress Design	
	7	7.0–9.0	Modelling and Casting*	W. Rathbone
	9	7.0–9.0	Design, Industrial P. & D., 1st to 5th years	G. A. Clucas and R. Lawson
	10	7.0–9.0	Textile Design, 4th year*	W. Garnar
	11	7.0–9.0	Design—Commercial Art	A. Bann and E. Barton

Day.	Room.	Times of Classes.	Subjects.	Teachers.
Wednesday...	9	10.0–12.30	Architectural Drawing, etc.	G. A. Clucas
	11	10.0–12.30	Still Life, Dress Design	B. Eckersley
	12	10.0–12.30	Still Life, Painting and General Drawing	W. Rathbone
	10	2.0–2.30	Lecture, Figure Drawing and Composition } Alternately	W. Rathbone.
	10	2.0–2.30	Lecture, Form and Colour ... ... } Alternately	B. Eckersley
	10	2.30–4.30	Lettering and Commercial Art (Theory and Practice) ...	A. Bann.
	2	2.30–4.30	Dress Design and General Drawing	
	11	2.30–4.30	Figure Drawing and Anatomy	W. Rathbone
	1	7.0–9.0	Commercial Art Course (Lettering and Lay-outs)	A. Bann
	2	7.0–9.0	Drawing from Life	G. A. Clucas
	2a	7.0–9.0	Etching	G. A. Clucas
	8	7.0–7.30	Painting and Decorating (Theoretical), 2nd and 3rd years*	F. W. Sharples
	8	7.30–9.0	Painting and Decorating (Practical), 2nd and 3rd years* ...	F. W. Sharples
	9	7.0–9.0	Form and Colour (Junior Course)	
	10	7.0–9.0	Textile Design, 2nd and 3rd years*	F. Southworth
	11	7.0–9.0	Design and Colour, Crafts and Industrial	M. Duckett
	12	7.0–9.0	Dress Design	
Thursday ...	11	10.0–12.30	General Knowledge, etc., Drawing	G. A. Clucas
	2	10.30–12.30	Drawing and Painting from life	W. Rathbone
		2.0–4.0	School Closed for Games or Gymnasium	
	8	7.0–7.30	Painting and Decorating (Theoretical), 1st and 4th years ...	R. E. Cusworth
	8	7.30–9.0	Painting and Decorating (Practical), 1st and 4th years ...	R. E. Cusworth
	9	7.0–9.0	Junior Course (Design and Colour)	
	10	7.0–9.0	Bookbinding	A. Bann
	11–12	7.0–9.0	Illustration	W. Rathbone.
	12	7.0–9.0	Anatomy	W. Rathbone
	11–12	7.0–9.0	Figure Drawing	W. Rathbone and E. Barton
	2	7.0–9.0	Drawing from life	W. Rathbone
Friday ...	12	10–12.30	Architectural Drawing	G. A. Clucas
	10	10–12.30	Architectural Design, Perspective	G. A. Clucas
	11	10–12.30	Illustration and History of Painting	W. Rathbone
	1	2.0–2.30	Lecture, Design and Colour (1st and 2nd years alternately)...	M. Duckett.
	1	2.30–4.0	Design, Crafts, etc. (Theory and Practice)	M. Duckett.
	10	7.0–7.30	Lecture, Architectural History*	G. A. Clucas
	10	7.30–9.0	Advanced Industrial Art*	G. A. Clucas
	1	7.0–9.0	Crafts—Various*	M. Duckett.
	9	7.0–9.0	English and Arithmetic, 1st and 2nd years Junior Art* ...	F. Allen.

* These Classes will terminate after the U.L.C.I. Examinations.

Day Junior Technical School.

TIME TABLE.

Monday—	9.15—10.15		10.15—12.15	1.45—2.45		2.45—4.45
1A. ...	History		Workshop	Geography		Science
1B. ...	History		Science	Geography		Workshop
	9.15—11.15		11.15—12.15	1.45—3.0	3.0—3.45	3.45—4.45
2A. ...	Science		Mathematics	Mathematics	Drill	History
2B. ...	Geometry		Mathematics	Mathematics	Drill	History
Tuesday—	9.15—10.0	10.0–10.30	10.30—12.15	1.45—3.15	3.15—4.45	
1A. ...	Mathematics	Drill	Workshop	Art	Mathematics	
1B. ...	Mathematics	Drill	Geometry	Art	Mathematics	
	9.15—11.15		11.15—12.15	1.45—2.15	2.15—3.0	3.0—4.45
2A. ...	Geometry		Geography	Drill	Mathematics	Workshop
2B. ...	Science		Geography	Drill	Mathematics	Applied Mechanics
Wednesday—	9.15—11.0		11.15—12.15		1.45—4.15	
1A. ...	Science		English		Games.	
1B. ...	Workshop		English			
	9.15—10.15		10.15—12.15			
2A. ...	English		Science		Games	
2B. ...	English		Workshop			
Thursday—	9.15—11.0	11.0–11.30	11.30—12.15		1.45—3.45	3.45—4.45
1A. ...	Geometry	Drill	Mathematics		Workshop	Mathematics
1B. ...	Workshop	Drill	Mathematics		Science	Mathematics
	9.15—10.15		10.15—12.15	1.45—2.30	2.30—3.30	3.30—4.45
2A. ...	Mathematics		Tech. Drawing	Mathematics	Chemistry	Art
2B. ...	Mathematics		Tech. Drawing	Mathematics	Chemistry	Art
Friday—	9.15—10.45		10.45–11.30	1.45—3.0	3—4	4—4.45
1A. ...	Tch. Drawing		English	Mathematics	English	General Information
1B. ...	Tch. Drawing		English	Mathematics	English	General Information
	9.15—10.0	10.0–10.30	11.30–12.15	1.45—2.45		2.45—4.45
2A. ...	Geography	Drill	Drill	English		Workshop
2B. ...	Geography	Drill	Drill	English		Science
			10.30–12.15			
			Mechanics			
			Workshop			

DAY JUNIOR TECHNICAL SCHOOL.

TIME TABLE ANALYSIS (FIRST YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Mathematics ...	T. M. Naylor	...	...	...	3.45–4.45	...
	G. E. Hall	...	9.15–10.0	...	11.30–12.15	1.45–3
		...	3.15–4.45	...	...	...
English	R. S. Cross	...	...	11.15–12.15	...	10.45–11.30
	H. H. Allen	...	...	...	...	3–4
History	R. S. Cross	9.15–10.15	...	...	...	...
Geography ...	H. H. Allen	1.45–2.45B	...	...	...	...
	J. Kettle	1.45–2.45A	...	...	...	...
Science	E. M. Pearson	2.45–4.45 (A)	...	9.15–11.15 (A)	...	...
		10.15–12.15 (B)	...	...	1.45–3.45 (B)	...
Workshop ...	J. H. Hulse	10.15–12.15 (A)	10.30–12.15 (A)	...	1.45–3.45 (A)	...
		2.45–4.45 (B)	...	9.15–11.15 (B)	9.15–11.0 (B)	...
Geometry ...	G. E. Hall	...	10.30–12.15 (B)	...	9.15–11.0 (A)	...
Technical Drawing ...	E. M. Pearson	...	...	...	...	9.15–10.45
	J. E. Taylor	...	...	...	...	9.15–10.45
Art	G. A. Clucas	...	1.45–3.15	...	...	...
Organised Games	A. Woods	...	...	1.45–4.15	...	...
Drill	J. Kettle	...	10.0–10.30	...	11.0–11.30	11.30–12.15
General Information	... ...	...	...	...	...	4.0–4.45

DAY JUNIOR TECHNICAL SCHOOL.

(SECOND YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS				
		Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Mathematics ...	G. E. Hall...	1.45–3.0 11.15–12.15	2.15–3.0 ...	... ...	... ...	... ...
	... ...	...	...	...	1.45–2.30	...
	J. E. Taylor	...	...	...	9.15–10.15	..
English	J. Kettle	...	...	9.15–10.15	...	1.45–2.45
History	R. S. Cross	3.45–4.45	...	...	...	...
Geography ...	H. H. Allen	...	11.15–12.15	...	...	9.15–10.0
Science	A. Woods	9.15–11.15 (A)	9.15–11.15 (B)	10.15–12.15 (A)	...	2.45–4.45 (B)
Applied Mechs. ...	F. W. Walker	...	3.0–4.45 (B)	...	...	10.30–12.15 (A)
Workshop ...	J. H. Hulse	...	3.0–4.45 (A)	10.15–12.15 (B)	...	2.45–4.45 (A) 10.30–12.15 (B)
Geometry ...	G. E. Hall	9.15–11.15 (B)	...	...	...	...
	J. E. Taylor	...	9.15–11.15 (A)	...	...	...
Tech. Drawing	J. S. Wrigley	...	...	...	10.15–12.15 (A)	...
	J. E. Taylor	...	...	...	10.15–12.15 (B)	...
Art	G. A. Clucas	...	...	...	3.30–4.45	...
Organised Games	A. Woods	...	...	1.45–4.15	...	...
Drill	J. Kettle	3.0–3.45	1.45–2.15	...	...	10.0–10.30
Chemistry ...	E. Taylor	...	...	...	2.30–3.30	...

DAY JUNIOR COMMERCIAL SCHOOL.

TIME TABLE.

	9.15—10.15	10.15—11	11—11.15 INTERVAL.	11.15—12.15	1.45—2.45	2.45—3.45	3.45—4.30	
Monday—								
1A. ...	English	French		History	Arith. & Accts.	Com. Corr.	Typing	
1B. ...	French	English		History	Shorthand	Typing	3.45—4.45	
2A. ...	Shorthand	Mathematics		English	History	Geography	Drill (Girls)	
2B. ...	Shorthand	Mathematics		English	History	Geography	Drill (Girls)	
Tuesday—	9.15—10.15	10.15—11		11.15—12.15	1.45—2.45	2.45—3.45	3.45—4.45	
1A. ...	Geography	Mathematics		English	Shorthand	French	Drill (Girls)	
1B. ...	Geography	Mathematics		English	Arithmetic	Shorthand	Drill (Girls)	
2A. ...	Shorthand	Book-keeping		Commerce	Typing	Com. Corr.		
2B. ...	Typing	Book-keeping		Commerce	Com. Corr.	Typing		
Wednesday—	9.15—10.15	10.15—11		11.15—12.15	1.45—2.45	2.45—3.45	3.45—4.30	
1A. ...	Typing	Shorthand		Arithmetic	Shorthand	Arithmetic	Typing	
1B. ...	Com. Corr.	French		Arithmetic	Arithmetic	Shorthand	4.0—4.45	
2A. ...	Arithmetic	English		French	Shorthand	2.45—4.0	Drill (Girls)	
2B. ...	Arithmetic	English		French	Typing	Book-keeping	Drill (Girls)	
						Book-keeping		
Thursday—	9.15—10.15	10.15—11		11.15—12.15	1.45—4.15			
1A. ...	Mathematics	French		History	Games			
1B. ...	Mathematics	French		History	Games			
2A. ...	French	Arithmetic		Shorthand	Games			
2B. ...	French	Arithmetic		Shorthand	Games			
Friday—	9.15—10.15	10.15—11	11—11.30	11.30—12.15	1.45—2.45	2.45—3.45	3.45—4.45	
1A. ...	Commerce	Shorthand	Drill	Arithmetic	English	Art	Drill (Boys)	
1B. ...	Commerce	Shorthand	Drill	Arithmetic	English	Art	Drill (Boys)	
2A. ...	Arithmetic	English	French	Commerce	Art	French	Drill (Boys)	
2B. ...	Arithmetic	English	French	Commerce	Art	French	Drill (Boys)	

DAY JUNIOR COMMERCIAL SCHOOL.

TIME TABLE ANALYSIS (FIRST YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday	Thursday.	Friday.
English	A. Ellison	9.15–10.15 (A) 10.15–11.0 (B)	11.15–12.15 ...	... ...	... ...	... 1.45–2.45
French	J. Kettle	9.15–10.15 (B) 10.15–11.0 (A)	2.45–3.45 (A) ...	10.15–11.0 (B) ...	10.15–11.0 ...	... ...
History	R. S. Cross	11.15–12.15	...	...	11.15–12.15	...
Geography ...	A. Ellison	...	9.15–10.15	...	...	...
Com. Corr. ...	R. S. Cross	2.45–3.45 (A)	...	9.15–10.15 (B)	...	...
Commerce ...	R. S. Cross	...	...	...	...	9.15–10.15
Arithmetic ...	A. Ellison	1.45–2.45 (A)	1.45–2.45 B	11.15–12.15 1.45–2.45 (B) 2.45–3.45 (A)	...	11.30–12.15
Mathematics ...	R. S. Cross	...	10.15–11.0	...	9.15–10.15	...
Typewriting ...	H. Newton	2.45–3.45 (B) 3.45–4.30 (A)	... ...	9.15–10.15 (A) 3.45–4.30 (B)	... ...	... ...
Shorthand ...	H. Newton	1.45–2.45 (B)	1.45–2.45 (A) 2.45–3.45 (B)	10.15–11.0 (A) 1.45–2.45 (A) 2.45–3.45 (B)	...	10.15–11.0
Art	G. A. Clucas	...	...	...	...	2.45–3.45
Drill and Games	A. Ellison ... ... J. Kettle	... ...	3.45–4.45 ...	... ...	1.45–4.15 ...	11–11.30 (Girls) 3.45–4.45 (Boys)
Intervals ...	... ...	11–11.15	11–11.15	11–11.15	11–11.15	...

DAY JUNIOR COMMERCIAL SCHOOL.

SECOND YEAR.

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday	Thursday	Friday.
English	A. Ellison	11.15–12.15	...	10.15–11.0	...	10.15–11.0
French	J. Kettle	...	...	11.15–12.15	9.15–10.15	11.0–11.30 2.45–3.45
History	R. S. Cross	1.45–2.45	...	...	...	...
Geography ...	A. Ellison	2.45–3.45	...	...	...	...
Com. Corr. ...	R. S. Cross	...	2.45–3.45 (A) 1.45–2.45 (B)	...	...	...
Commerce ...	R. S. Cross	...	11.15–12.15	...	...	11.30–12.15
Arithmetic ...	A. Ellison	...	...	9.15–10.15	10.15–11.0	9.15–10.15
Mathematics ...	R. S. Cross	10.15–11.0	...	...	...	...
Book-keeping ...	W. Webster	...	10.15–11.0	2.45–4.0	...	...
Typewriting ...	W. Webster	...	1.45–2.45 (A) 9.15–10.15 (A or B) 2.45–3.45 (B)	1.45–2.45 (A or B)	...	...
Shorthand ...	W. Webster	9.15–10.15	9.15–10.15 (A or B)	1.45–2.45 (A or B)	11.15–12.15	...
Art	G. A. Clucas	...	...	...	...	1.45–2.45
Drill and Games	A. Ellison ... ... J. Kettle	3.45–4.45 ...	... ...	4.0–4.45 ...	1.45–4.15 ...	... 3.45–4.45 (Boys)
Intervals ...	... ...	11–11.15	11–11.15	11–11.15	11–11.15	...

HARRIS INSTITUTE, PRESTON.

CLASSES AFFILIATED TO MANCHESTER AND LIVERPOOL UNIVERSITIES.

These provide complete Courses of Instruction for the Joint Matriculation of the Northern Universities; the Intermediate B.Sc. and Intermediate B.Sc. (Tech.), Manchester; the Intermediate B.Sc., Liverpool; the Intermediate Examinations of the University of London; and the various Preliminary Professional Examinations, including Medical, Dental, and Pharmaceutical.

LONDON UNIVERSITY (EXTERNAL DEGREES).

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering.

INSTITUTE OF CHEMISTRY.

Approval has been granted by the Institute of Chemistry and courses may now be taken leading to the Associateship of the Institute of Chemistry (A.I.C.).

DAY CLASSES.

ART. AGRICULTURE.
PART TIME DAY ENGINEERING COURSES.
PART TIME DAY COMMERCIAL SCHOOL.
MATRICULATION AND INTERMEDIATE SCIENCE.
DENTAL AND PHARMACEUTICAL COURSES.
PART TIME TEXTILE CLASSES.
DAY JUNIOR TECHNICAL AND COMMERCIAL SCHOOLS.

EVENING CLASSES.

ART. SCIENCE AND MISCELLANEOUS.

ORGANISED COURSES:

BUILDING TRADES. COMMERCIAL.
COTTON SPINNING. COTTON WEAVING.
MECHANICAL ENGINEERING. SCIENCE.
PHYSICS AND ELECTRICAL ENGINEERING.

All communications to be addressed to—

T. M. NAYLOR, Principal.

July, 1937.

Crozier & Co., Printers,

PRESTON
HARRIS INSTITUTE

FOUNDED 1828

PROSPECTUS

SESSION 1938-39

HARRIS INSTITUTE, PRESTON

TELEPHONE NUMBERS :
TECHNICAL COLLEGE 4016. AVENHAM INSTITUTE 3093.

THE INSTITUTE COMPRISES
THE TECHNICAL COLLEGE (CORPORATION STREET)
AND THE AVENHAM INSTITUTE.

PROSPECTUS
of
CLASSES

SESSION 1938-39.

A—

1. **TECHNICAL DAY CLASSES** - **Re-open Sept. 13**
2. **JUNIOR DAY SCHOOLS** - „ „ **6**
   (*Technical and Commercial*)
3. **EVENING CLASSES** - - „ „ **19**

B—

1. **DAY ART CLASSES** - - **Re-open Sept. 13**
2. **EVENING ART CLASSES** - „ „ **19**

SPECIAL NOTICE—Evening Students will be enrolled at the Technical College, Corporation Street, from 7 to 9 p.m. on Wednesday and Thursday evenings, September 14th and 15th, and may also enrol during the week commencing Monday, September 12th, between 9 a.m. and 5 p.m. (Saturday, 9 to 12).

Students who do not enrol on these dates will be charged an extra fee of 2/6. This will be strictly enforced.

PRICE 2D. BY POST, $3\frac{1}{2}$D.

1938-39.

HARRIS INSTITUTE, PRESTON.

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Mr. W. H. HARRIS.
Mr. H. PARKER, J.P.
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Mr. J. H. TOULMIN, J.P.

Vice-President:

Mr. G. J. GIBBS, M.I.Mech.E., A.M.I.E.E.

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Mr. Alderman R. C. HANDLEY, J.P.
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Mr. J. P. SMITH.
Mr. A. W. WILSON, F.L.A.S.

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Mr. Alderman R. DURHAM.
Mr. Councillor O. A. GOODIER, J.P.
Mr. Councillor F. JAMIESON, J.P.
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Professor E. W. MARCHANT (Liverpool).

Principal:

Mr. T. M. NAYLOR, M.Sc., A.M.Inst.C.E., A.M.I.Mech.E.

TECHNICAL COLLEGE





AVENHAM INSTITUTE

Staff:

Principal : T. M. Naylor, M.Sc., A.M.I.C.E., A.M.I.Mech.E.

ART SCHOOL.

Headmaster : W. Rathbone, A.R.M.S., F.I.B.D.

Secondmaster : G. A. Clucas, A.T.D

Assistants.

Miss M. Duckett. Miss A. Bann.

Assistants for Evening Classes.

Miss E. Barton.
T. Blackburn.
W. Garnar
E. Robinson, F.I.B.D.
W. Shone.
F. Allen.
Miss E. Rostron.
R. E. Cusworth.
V. Johnston.
F. W. Sharples.
F. Southworth.

BUILDING DEPARTMENT.

Head : E. M. Pearson, A.R.S.I., A.M.I.Struct.E.

Handicraft Teacher : J. H. Hulse.

Lecturers for Evening Classes :

H. Allen.
G. H. Broadbent.
H. Lonsdale.
W. Taylor.
H. Walters, A.R.I.B.A.
J. Smith.
J. T. Higginson.
J. N. Walker.
A. E. R. Bill.
H. Fisher.
J. Dixon.
F. Coupe.
J. Pilkington.
J. Holt, A.M.I.C.E.
H. D. Dodd, L.R.I.B.A.
A. E. R. Margerison.
F. W. Steele.
H. G. Yeadon.

CHEMISTRY, PHARMACY and PHYSICS DEPARTMENT.

Head : E. Taylor, M.Sc. (Leeds) ; A.I.C.

Lecturer in Chemistry : C. C. Addison, B.Sc., Ph.D.

Lecturer in Natural Science : H. W. Edmunds, B.Sc. (Birm.).

Lecturer in Physics : F. B. Landolt, B.Sc. (Lond.).

Lecturers in Chemistry for Evening Classes :

W. G. Creasy, B.Sc. (Lond.), A.I.C.
N. S. Capper, Ph.D.

Lecturer in Mathematics :

J. Slater, B.Sc. (Manc.).
G. O. Stephens, Ph.D.

COMMERCIAL DEPARTMENT AND DAY JUNIOR COMMERCIAL SCHOOL.

Head : W. WEBSTER, F.C.I.S.

Assistants :

Miss R. S. CROSS.
Miss A. ELLISON
H. NEWTON, B.A. (Com.).

Lecturers for Evening Classes :

T. ASHWORTH.
Mrs. E. BARNES.
F. BRADSHAW.
T. BRADSHAW.
H. A. BROWN.
Miss F. M. CRAWLEY.
T. CUNLIFFE.
H. ENTWISTLE, A.C.I.S.
W. HANSON.
J. HILTON.
T. HOUGHTON.
J. NIGHTINGALE.
N. HINDLEY, A.C.A.
Miss M. A. MORRIS.
Miss M. NELSON.
Miss D. ROBERTS.
E. SINGLETON.
F. R. SNALAM.
J. WHITE.
W. R. WHITE.
F. WHITEHEAD.
S. W. WILLIAMS, B.Com.
T. A. MOSS.
J. D. H. WALMSLEY.

LANGUAGES DEPARTMENT.

Lecturer in Charge : H. H. ALLEN, B.A.

Assistants :

J. KETTLE, B.A.
A. FRANKISH, B.A.

Lecturers for Evening Classes :

C. E. ROBIN, M.A.
W. A. C. CLARKE, B.A.
H. C. PYE.
T. C. HAYES.

ENGINEERING DEPARTMENT.

Head : J. S. WRIGLEY, M.Sc., A.M.I.Mech.E.

Lecturer in Electrical Engineering (with special responsibility) :
A. WOODS.

Senior Lecturer in Mechanical Engineering :
F. W. WALKER, A.M.C.T.

Lecturers :

G. E. HALL, B.Sc. (Manc.), A.M.I.Mech.E.
J. E. TAYLOR, M.Sc. (Tech.), A.M.I.Mech.E.

Lecturers for Evening Classes :

F. CALLOW.
J. EATOCK.
S. GARNETT.
J. H. HULSE.
T. A. WETTON.
O. JONES.
F. L. BROUGHTON, B.Sc., A.M.Inst.C.E.
H. HINDLEY.
F. H. CLAYTON.
J. F. PARSONAGE, B.Sc.
J. BRENNAND.
E. L. MORTIMER, B.Sc.
S. GUNSON.
G. PIMLEY, A.I.E.E.
J. BAGOT, B.Sc.
R. H. WIGNALL.
J. SLATER, B.Sc.
D. F. F. BREWESTER, A.M.Inst.C.E.
T. C. NICHOLSON.
S. H. JONES.
T. WILKINSON.
C. V. CASE.
J. ROYLE.
A. JACKSON, A.M.Inst.C.E.

Engineer : O. JONES.
Mechanic : G. W. ROBINSON.

JUNIOR TECHNICAL SCHOOL.

Head : THE PRINCIPAL.

The Staff consists of teachers from the Engineering, Building and Commercial Departments.

TEXTILE DEPARTMENT.

Head : D. ATKINSON, F.T.I.

Instructor : W. JACKSON.

Lecturers for Evening Classes :

J. W. BLACKHURST.
R. CHATBURN.
W. DAGGER.
J. G. C. DAWSON, B.Com.
H. DAWSON B.Sc., (TECH.).
N. HIGHFIELD.
C. A. HATTON, M.Sc. (TECH), A.I.C.
S. JACKSON.
J. MITCHELL, A.T.I.
J. PRESTON, A.T.I.
F. TAYLOR.
G. O. STEPHENS, Ph.D.

TYPOGRAPHY.

Lecturers :

J. TAYLOR. E. JONES.

ADMINISTRATION.

Registrar : J. A. GORTON.

Clerks : E. D. HARDMAN ;
ELIZ. A. RICHARDSON ; DOROTHY LOCKWOOD ; JESSIE DONALDSON.

Library Assistants :
NELLIE CLARKSON. DOROTHY M. SINGLETON.

Refectory Superintendent : MRS. F. MCGOWAN.

Custodians : E. H. TRINDER (Technical College).
W. D. BREEZE (Avenham Institute).

Assistant Custodians : F. W. GARDINER ; J. GARDNER ; W. W. KITCHIN.

BRIEF HISTORICAL NOTE.

" That . . . . lectures be delivered on such subjects and at such times as may be thought desirable and convenient."

WITH this enunciation of the means for attainment of its ideals, the future Harris Institute entered, in 1828, upon the first stage of its active existence. Its founders were men prominent in business and social life, who had met in response to a circular from Mr. Joseph Livesey inviting their co-operation. The text of that circular is appended to this note.

Under the zealous guidance of Dr. John Gilbertson, they undertook the equipping of rooms in Cannon Street to serve as a library and museum, and made such provision as they could for the apparatus and instruments necessary for the lectures. Thus, with an annual fee of 6/6, the " Institution for the Diffusion of Knowledge," opened its doors to high endeavour.

A Centre with aims somewhat more ambitious than those of the ordinary Mechanics' Institute seems to have been the purpose for which the founders were striving; and their foresight was justified by the fact that, after the second year, membership had reached a total of 400/500. Larger premises became necessary; and, through the liberality of Thos. German, sometime Mayor, the Avenham Institute was opened in 1849, five years after acquisition of the site.

Serious financial difficulties arising from time to time were surmounted by patient effort, and membership grew steadily. The School of Art was established in 1859, and that of Science in 1865. Among the names of many distinguished lecturers who addressed the Institution in these early days, it is interesting to recall those of Sir Isaac Pitman and Dean Stanley; while the Cambridge University Extension scheme, adopted in 1880, stimulated a further increase of studious activity.

The year 1881 witnessed a great change. Avenham Institute was taken over for future administration by the trustees of Mr. E. R. Harris, who had been a leading figure in the legal life of Preston and the county, and had bequeathed over £300,000 for the general benefit of the town. This new arrangement led, *inter alia*, to a scheme whereby the Harris Free Library became the recipient of over 7,000 volumes from the shelves at Avenham.

The first grant from the Preston Corporation to the Harris Institute came in 1896, and in the following year a great project was consummated by the opening of the Technical College. The affiliation of the Harris Institute to the universities of Manchester and Liverpool in 1901 constitutes another landmark in its history ; while the next decade saw the establishment of the two Junior Schools, Technical (1912) and Commercial (1915). Considerable extensions to the Technical College, even now overtaxed, were made in 1931.

Space forbids, unfortunately, the individual mention of countless benefactors, who, in the persons of private citizens or as public bodies or firms, have successively enriched the resources of the Harris Institute ; but to them, no less than to its original founders and sponsors, it owes the constant tribute of deep and grateful acknowledgement.

COPY OF ORIGINAL CIRCULAR.

Sir,

It having been ascertained that a strong feeling exists in favour of the establishment of an Institution in Preston, upon similar principles to the Mechanics' Institutes in different parts of the kingdom, it is thought advisable, to prevent any premature steps being taken, first to have a private meeting to deliberate upon the subject, and if it appear desirable to proceed, to make such preliminary arrangements as may appear necessary.

A meeting for the above purposes will be held This Evening (Thursday) in Mr. Smith's Large Room, No. 11 Cannon Street (over Mr. Templeton's School), at which your attendance is particularly desired.

I am,

Sir, your servant,

J. LIVESEY.

Preston, 11th Sept., 1828.

I. Wilcockson, Printer, Preston.

CALENDAR.

1938.		
September	6th.	Junior Technical and Junior Commercial Schools begin.
	12th.	Council.
	13th.	Day Classes begin.
	13th.	Open Night.
	14th.	Registration of Evening Students.
	15th.	Registration of Evening Students.
	16th.	Registration of Evening Students (Scholarship holders).
	19th.	Evening Classes begin.
November	7th.	Engineering and Building Committee.
	7th.	Textile Committee.
	14th.	Art, Science and Commerce Committee.
December	5th.	Council and Annual Meeting
	16th.	Prize Distribution.
	21st.	Christmas Vacation begins (Day and Evening Classes).
1939.		
January	9th.	Evening Classes begin.
	9th.	Day Classes begin.
March	6th.	Council.
April	6th.	Easter Vacation begins (Day and Evening Classes).
	13th.	Evening Classes begin.
	18th.	Day Classes begin.
May	6th.	Junior Technical and Junior Commercial Schools Entrance Examination.
	25th.	Whitsuntide Vacation begins.
June	6th.	Day Classes begin.
	12th.	Council.
	29th.	Junior Technical and Junior Commercial Schools' Sports.
July	7th.	Senior Day Classes and Art Evening Classes close.
	7th.	Junior Technical and Junior Commercial Schools close.

THE LIBRARY.

Senior Students in all departments should note that the Technical College Library exists primarily for their benefit, and that a good selection of the latest publications in their various subjects may be consulted. Although it is not practicable to arrange the lending of books for outside reading, students are strongly urged to avail themselves of the valuable facilities for reference which are afforded within the College. The production of a comprehensive catalogue, with separate author- and subject-index has been completed ; and it will prove of use to those desirous of ascertaining the extent of the Library's resources in any particular subject.

SOCIAL AND ATHLETIC ACTIVITIES.

Various Social and Athletic Activities are held during the session, and notices are posted in the corridor giving the dates and times of the forthcoming events.

In connection with the Art Department, there is a Sketch Club, Students' Union and Dramatic Club, for details see page 58.

The Harris Institute Rugby Football Club, practice games and fixtures Saturday afternoons. Intending players should give their names at once to the Secretary. There is also a Hockey Club, and players are invited to join this.

The Institute possesses a Gymnasium which is fully equipped. For further information see pages 23, 45 and 58.

A social evening is allotted to each department when short plays and informal dances are held.

Students are invited to contribute to the Magazine, particulars of which will be posted up at the appropriate times.

Full particulars of these events are published on the notice board in the main corridor.

REFECTORY.

The Council has instituted a fully equipped Dining Room. Lunches, teas and light refreshments may be obtained from 10-30 a.m. to 7-15 p.m.

The Refectory is for the convenience of the students and staff, and all students may use the Refectory between the times stated.

The Refectory Superintendent, Mrs. McGowan, will arrange special teas, suppers, etc., as required.

REGULATIONS.

APPLICABLE TO ALL STUDENTS ATTENDING CLASSES AT THE HARRIS INSTITUTE.

Students are expected to attend punctually at the Classes for which they enrol.

All students are expected to take an examination at the end of the course in those subjects for which they enrolled at the opening of the Session.

Smoking within the School buildings is strictly prohibited ; and Students must not loiter about the corridors.

The Lecturers are authorised to report periodically through the Principal, on attendance, homework and conduct of each Student.

The Council shall have power in dealing with Students who are unsatisfactory in these or other respects, to remove their names from the Register without return of fee.

SCHOLARSHIPS AND PRIZES.

A limited number of Scholarships and Prizes will be awarded at the discretion of the Council.

Prizes are also awarded by the Preston Building Trades Employers' Association, the Preston and District Engineers and Ironfounders Employers' Association, the North Lancashire Master Cotton Spinners and Manufacturers' Association, the Preston Master Printers' Federation, the Institute of British Foundrymen, and the Typographical Association, Preston.

Full particulars of Scholarships and Prizes may be obtained on application.

SUMMARY OF DAY, PART-TIME DAY AND EVENING COURSES.

DEPARTMENT.	DAY AND PART-TIME DAY.	EVENING.
ART.	General principles of Art, History and Methods of Production, Drawing, Design, Colour Study, Figure Composition, Illustration, Painting, Sculpture, Commercial Art, Etching, etc. Industrial Art and Crafts. Architecture, Courses in Perspective, Architectural History and Drawing. Textile Design. Advanced Design and Decoration. Students prepared for examinations under the Board of Education; City and Guilds of London Institute; Union of Lancashire and Cheshire Institutes; and the National Society of Art Masters, etc. (See pages 52 to 58).	Designed chiefly to furnish suitable study and to further the interests of apprentices in trades and crafts where Art plays a more or less prominent part. Students prepared for examinations under the Board of Education; City and Guilds of London Institute; Union of Lancashire and Cheshire Institutes; and the National Society of Art Masters, etc. (See pages 52, 58 and 80 to 81).
BUILDING	National Certificates of the Institute of Builders. Building Courses (Union of Lancashire and Cheshire Institutes) (COURSE NO. 7) Intermediate A.R.I.B.A.	National Certificates of the Institute of Builders. Building Courses (Union of Lancashire and Cheshire Institutes) Builders' Quantities, Carpentry and Joinery, Plumbing, Domestic and Sanitary Engineering — For City and Guilds Certificates. Carpentry and Joinery, Plumbing, Bricklaying — Union of Lancashire and Cheshire Institute Trade Courses. COURSES NOS. 12, 29, 30 and 31).

COMMERCE	Royal Society of Arts Certificates (COURSE NO. 5)	Union of Lancashire and Cheshire Institutes' Grouped Courses; Royal Society of Arts Certificates and Professional Examinations of all the leading Professional Associations and Institutions, covering their syllabuses in Arithmetic, Book-keeping, Commerce, English and Commercial Correspondence, Shorthand, Typewriting, French, Spanish, Latin, German and Geography. (COURSES NOS. 19 and 20). Advanced Union of Lancashire and Cheshire Institute Courses, including Accounting and Auditing, Mercantile Law, Economics and Banking. (COURSE NO. 21). For Languages see under Language Dept.
PRINTING		The classes in Typography prepare students for the City and Guilds of London Institute Examinations. (COURSE NO. 18).
SCIENCE	Chemistry, Botany, Physics and Zoology as required for :— Preliminary Scientific Examination, Part 1 Pharmacy and Dispensers' Examination. L.D.S. of the Universities of Manchester, Liverpool, Edinburgh and London The Conjoint Examination M.R.C.S.; L.R.C.P. (Lond.). Pre-Registration Examination of the University of Edinburgh. Inter B.Sc. Universities of Manchester, Liverpool and London. The Associateship of the Institute of Chemistry (A.I.C.) Biology and Chemistry for Nurserymen and Gardeners. (COURSES NOS. 1, 2, 3 and 4).	Science Degree of London University. Associateship of the Institute of Chemistry (A.I.C.). National Certificate in Chemistry. Higher National Certificate in Chemistry. Preliminary Scientific Examination of the Pharmaceutical Society. Laboratory Arts Course. (COURSES NOS. 15, 16, 17 and 35).

Department.	Day and Part-Time day.	Evening.
ENGINEERING	Engineering Degree of London University. National Certificates in Mechanical Engineering. National Certificates in Electrical Engineering. A.M.Inst.C.E. Classes A.M.I.Mech.E. Classes (Course No. 6)	Engineering Degree of London University. National Certificates in Mechanical Engineering. National Certificates in Electrical Engineering. A.M.Inst. C.E. Classes. A.M.I.Mech.E. Classes. Engineering Workshop Course. Automobile Engineering. Motor Mechanics Course and Inst. Auto. Engineers Repair Certificate Course. Sheet and Plate Metal Trades Course. Gas Supply Course. Electric Welding. Electrical Installation. Radio Service. (Courses Nos. 10, 11, 22, 23, 24, 25, 26, 27, 28 and 3 2).
LANGUAGES AND MATRICULATION	Northern Universities and University of London College of Preceptors and other Professional entrance examinations (Course No. 1)	Courses in French, German, Spanish and Latin.
TEXTILE	National Certificates in Cotton Spinning or Weaving in Union of Lancashire and Cheshire Institutes and City and Guilds grouped courses. Associateship of the Textile Institute. (Course No. 8).	National Certificates in Cotton Spinning or Weaving in Union of Lancashire and Cheshire Institutes and City and Guilds Grouped courses. Associateship of the Textile Institute. Special Classes for Overlookers, Weavers, Spinners, in Hosiery, and in Rayon and Rayon Weaving. Courses Nos. 13, 14, 33 and 34.

JUNIOR COMMERCIAL ...	The Course extends over a period of two years, and prepares boys and girls for clerical posts. The following subjects are taken—Arithmetic, Art, Algebra, Accounts, Book-keeping, Commerce, Commercial Correspondence, Physical Training, English, French, Games, Geography, History, Office Routine, Mathematics, Science, Shorthand and Typewriting (See pages 46 to 50)	
JUNIOR TECHNICAL ...	The Course extends over a period of two years, and prepares boys entering Engineering, Building and other trades. The following subjects are taken—Mathematics, Engineering and Building Drawing, Geometry, Art, Science (including Applied Mechanics, Electricity, Magnetism, Heat, Chemistry), Metalwork, Woodwork, Geography, History, English, Physical Training and Organised Games (See pages 46 to 50)	

DAY CLASSES

TECHNICAL DAY CLASSES.

COURSES:

1. PROFESSIONAL ENTRANCE COURSE (Matriculation, etc.).
2. INTERMEDIATE B.Sc.
3. PRELIMINARY SCIENTIFIC—
   - (*a*) Pharmacy.
   - (*b*) Dental.
   - (*c*) Dispensers.
4. ELEMENTARY BIOLOGY.
5. COMMERCIAL SUBJECTS.
6. ENGINEERING (Mechanical and Electrical).
7. BUILDING.
8. TEXTILE (Cotton Spinning and Weaving).
9. GYMNASIUM CLASSES.

Classes begin on Tuesday, September 13th, 1938.

Autumn Term :—13th September, 1938—20th December, 1938.
Spring Term :—9th January, 1939—5th April, 1939.
Summer Term : 18th April, 1939—7th July, 1939.
(all dates inclusive).

ENROLMENT:

Students can enrol at the Technical College on Wednesday and Thursday evenings, September 14th and 15th, from 7 to 9 p.m., or at the Avenham Institute or Technical College on any day after September 12th.

TECHNICAL DAY CLASSES.

Course 1.—PROFESSIONAL ENTRANCE COURSE (Matriculation, etc.).

(Northern Universities, University of London and Professional Societies).

Intending Students should procure, from the Authorities concerned, a copy of the Regulations relating to the particular examination for which they propose to enter. As Northern Matriculation is no longer available, students who would normally have required it will be prepared on the lines of the syllabus for School Certificate B (External).

Time Table, see page 59.

Classes 1 to 9.

Fees: £3 15s. od. per subject, or
£15 15s. od. for the full course.
Sports 5/-.

Course 2.—INTERMEDIATE B.Sc. (Science and Engineering).

(Northern Universities and University of London.)

NOTE.—The Institute is affiliated to the Universities of Manchester and Liverpool, and recognised as a privileged Institution under their Ordinances, to the extent that the attendance in the courses in Biology, Physics, Mathematics and Chemistry at the Institute is accepted as satisfying the attendance for the Intermediate B.Sc. Courses.

Time Table, see page 59.

Classes 10 to 19.

Fees: £3 15s. od. per subject.
Sports 5/-.

Advanced Students who have passed Inter B.Sc. or other examination of equivalent standard can be afforded facilities to work for the B.Sc. (Lond.) or the A.I.C. The Institute is fully equipped for advanced work of this character, and is approved by London University for Engineering Degree Course Work and by the Institute of Chemistry for the training of candidates for the Associateship.

Fees: £3 3s. od. per day for the Session.

Course 3.—PRELIMINARY SCIENTIFIC.

(*a*) PHARMACY. PHARMACEUTICAL SOCIETY'S EXAMINATION, PART I.

The Institute is recognised by the Pharmaceutical Society for instruction in the subjects of Part I. Examination, viz. :—Chemistry, Physics and Biology.

SPECIAL NOTE.—The Pharmaceutical Society of Great Britian require that candidates must register with them as Pharmaceutical Students before beginning any portion of their curriculum of studies.

All Students must produce evidence of such registration.

Attendance at an approved course in Physics, Chemistry and Biology is neccessary. Students must show satisfactory work both in written exercises and in practical work before the certificate of entry to the examination can be signed.

Time Table, see page 60 and under.

Classes 20 to 26.

Fees £10 10s. 0d. for the course, or,
£3 15s. 0d. per subject. Sports 5/–.

(*b*) FIRST EXAMINATION FOR MEDICAL DEGREES; candidates require Chemistry, Physics and Biology.

Time Table, see page 60 and under.

Classes 20 to 26.

Fees : £10 10s. 0d. for the course, or
£3 15s. 0d. per subject.
Sports 5/-.

(*c*) DENTAL L.D.S., PART I. (Conjoint. London, Manchester, Liverpool and Edinburgh); candidates require Chemistry and Physics in their first examination but are advised to take the Biology of the Course in preparation for their later work.

Time Table, see page 60 and under.

Classes 20 to 24.

Fees : £3 15s. 0d. per subject. Sports 5/-.

(*d*) DISPENSERS' EXAMINATION ; candidates require Chemistry.

Time Table, see page 60 and under.

Classes 20 to 22.

Fee : £3 15s. 0d. Sports 5/-.

TIMES OF CLASSES.

	9.30—10.30	10.30—11.30	11.30—12.30	2—3	3—4.30
Monday ...	Biology Lecture	Biology Practical		Organic Chemistry Lecture	Chemistry Tutorial
Tuesday ...	Chemistry Lecture	Chemistry Practical		Physics Optics and Sound Lecture	Practical
Wednesday ...	Physics Heat & General Lecture & Practical			Chemistry Lecture	Chemistry Practical
Thursday ...	Biology Lecture	Biology Practical		Chemistry Lecture	Chemistry Practical
Friday ...	Biology Lecture	Biology Practical		Physics Magnetism and Electricity Lecture	Practical

Course 4.—ELEMENTARY BIOLOGY, SCIENCE and SURVEYING.

A course for Park Apprentices and Nurserymen: for those wishing to study the scientific basis of horticulture.

It consists of classes in elementary biology and science and a short practical course in surveying.

This and subsequent courses are intended to prepare for the Diploma of Park Administration and for the certificate of the R.H.S.

Time Table, see page 60.

Fee, 10/6 for bona fide gardeners.

Classes 27 to 30.

Course 5.—COMMERCIAL SUBJECTS.

Time Table, see page 60.

Classes 31 to 36.

Fees: £1 per subject per term, or £2 10s. per term for the course. Sports 2/6.

Course 6.—ENGINEERING (Part Time Day).

(National Certificate Courses in Mechanical and Electrical Engineering).

NOTE.—In the first two years, Mechanical and Electrical Students will take the same course, and all Students must attend on one evening per week in order to complete the course and qualify for the National Certificate Examinations.

For general regulations and conditions of admission, see under Evening Classes, pages 28 to 30.

Time Table, see pages 61, 62.
Classes 31 to 65.
Fee : £2 2s. 0d. per session.

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering (Mechanical and Electrical).

Students wishing to proceed to a degree must first pass the Matriculation examination, and should consult the Head of the Engineering Department.

Course 7.—BUILDING (Part Time Day).

(National Certificate Course.

Time Table, see page 62.
Classes 75—79.
Fee £1 1s. 0d. per Session.

INTERMEDIATE R.I.B.A.

Time Table, see page 62.
Classes 80 to 83.
Fee : £2 2s. 0d. per session.

Course 8.—TEXTILE (Part Time Day).

A part-time course in Cotton Spinning, Weaving and Designing, suitable for Students who desire a good general knowledge of the principles and processes involved in the making and selling of cotton and rayon fabrics.

The classes shown in the Time Table are held in the mornings of each day, but arrangements, where necessary, may be made for tuition in the ancillary subjects in afternoon or evening classes.

Time Table, see page 62.
Classes 66 to 74.
Fees : £1 1s. 0d. per morning for the session.
£4 4s. 0d. for the full course.
Sports 5/-.

Course 9.—GYMNASIUM.

A course of instruction will be given on Saturday mornings if a sufficient number of Students enrol.

Fee : 10/- per session (5/- if attending other classes).

For Gymnasium classes held during the evening session see page 45 or 79.

NOTE.—The fees stated for the various courses do not apply to Students residing in County Boroughs other than Preston.

Such Students should enquire at the Office before enrolling to ascertain the fees of their courses. The Lancashire County Council Capitation Scale will be applied.

WOMEN DAY STUDENTS.

All women students, whether entering for the first time or not, are required to report to their Tutor-in-charge, Miss R. S. Cross, at 3 p.m., on Tuesday, September 20th, 1938.

Those who may enrol after the above date **must** see Miss Cross on the first Thursday afternoon subsequent to their enrolment ; and this time will be kept free each week throughout the Session in order to afford an opportunity for such further interviews as may be necessitated by circumstances of conduct or by other eventualities.

EVENING CLASSES

EVENING CLASSES.

SENIOR AND ADVANCED TECHNICAL AND COMMERCIAL COURSES.

These Courses proceed by progressive stages thus :—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

TECHNICAL COURSES.

10.—MECHANICAL ENGINEERING (National Certificate).
11.—ELECTRICAL ENGINEERING (National Certificate).
12.—BUILDING (National Certificate).
13.—COTTON SPINNING (National Certificate).
14.—COTTON MANUFACTURE (WEAVING) (National Certificate).
15.—PURE AND APPLIED CHEMISTRY (National Certificate).
16.—SCIENCE DEGREE and A.I.C. COURSES.
17.—PHARMACY.
18.—TYPOGRAPHY.

COMMERCIAL COURSES.

19.—GENERAL COMMERCIAL.
20.—SENIOR CLERICAL COURSE.
21 and 21A.—ADVANCED COMMERCIAL.

LANGUAGE COURSES.

See pages 40 and 41.

TRADE COURSES.

The following Courses are held :—

22.—ENGINEERING WORKSHOP PRACTICE.
23.—MOTOR MECHANICS and I.A.E. REPAIR CERTIFICATE.
24.—MOTOR BODY BUILDING.
25.—ELECTRIC WELDING.
26.—SHEET AND PLATE METALWORK.
27.—ELECTRICAL INSTALLATION WORK.
28.—RADIO SERVICE WORK.
29.—CARPENTRY AND JOINERY.
30.—PLUMBING
31.—BRICKLAYERS.
32.—GAS SUPPLY.
33.—COTTON SPINNING.
34.—COTTON MANUFACTURE (WEAVING).
35.—LABORATORY ARTS.

MISCELLANEOUS, SCIENCE, LANGUAGES, Etc.

Physics, Chemistry, Mathematics, Latin, English, French, German, Spanish, Economics Geography. Gymnasium Classes (see page 79).

ENROLMENT:

Students will be enrolled at the Technical College on Wednesday and Thursday evenings, September 14th and 15th, from 7 to 9 p.m. and may enrol during the week commencing September 12th, between 9 a.m. and 5 p.m. (Saturday, 9—12).

Classes begin on Monday, September 19th, 1938.

VACATIONS:

The College will be closed for the Christmas vacation from December 21st, 1938, to January 7th, 1939, and for the Easter vacation from April 6th to April 12th, 1939.

The dates in each case are inclusive.



EVENING CLASSES.

GENERAL REGULATIONS.

CONDITIONS OF ADMISSION.

Before admission to a **Senior Course** a Student must have passed the 2nd year of the Preparatory Technical or Commercial Course (conducted by a Local Education Authority) in the Junior Evening Institutes or have reached an equivalent educational standard.

Before admission to a **Trade Course** a Student must have passed the 1st year of the Preparatory Technical Course (held in the Junior Evening Institutes), or have reached an equivalent educational standard.

Exceptions to the above conditions may be made only where Students are over 16 years of age, in which cases such Students must satisfy the Principal of the Institute that they are able to benefit by the classes to which they seek admission.

Students under 16 years of age who fail to satisfy the conditions of admission should attend the **Evening Junior Courses** (Technical or Commercial), conducted by the **Preston Education Committee in Junior Evening Institutes.** These Junior Courses link up the work of the Elementary School with the Evening Classes of the Harris Institute.

Full particulars may be obtained from THE DIRECTOR OF EDUCATION, Education Offices, Lancaster Road, Preston.

Scholars leaving the Elementary Day Schools should join a Junior Evening Institute immediately, in order to qualify for admission to the Harris Institute as soon as possible.

The Refectory is open to all Students from 10-30 a.m. to 7-15 p.m. Special lunches, teas or suppers may be had by arrangement with the Refectory Superintendent.

PROMOTION TO HIGHER YEARS.

To qualify for certificates and to pass on to the higher years of a course it is necessary that Students should :—

(*a*) Reach a certain standard of attainments, tested by examinations, held at the end of the Session, and

(*b*) Have made satisfactory progress during the Session, based on records of attendance, homework, classwork, etc.

FEES FOR SESSION.

All fees are payable in advance, and are not returnable.

	s.	d.
1st Year Course S1	12	6
2nd Year Course S2	15	0
3rd Year Course S3	17	6
4th Year Course A1	20	0
5th Year Course A2	20	0
Non-Course Students	17s. 6d. per subject.	

* If Typewriting is included in a Commercial Course, an additional fee of 5s. will be charged.

Students who do not enrol on the dates given will be charged an additional fee of 2s. 6d. This rule will be strictly enforced. The Council reserve the right to discontinue any Class in the event of a small number joining.

Students who desire to take the Examinations of the Union of Lancashire and Cheshire Institutes, or the City and Guilds of London Institute may be called upon to pay the whole or a portion of the Examination Fees.

NOTE.—The above fees do not apply to Students residing in County Boroughs other than Preston.

Such Students should enquire at the Office before enrolling to ascertain the fees of their courses. The Lancashire County Council Capitation Scale will be applied.

Applications for the remission of fees in cases of unemployment or other causes should be made to the Principal before enrolment.

NATIONAL CERTIFICATE COURSES.

National Certificate Courses are arranged in the following :—

Mechanical Engineering,
Electrical Engineering,
Pure and Applied Chemistry.
Building.
Textile.

Certificates are awarded at the end of

(*a*) A Three Years' Course (Senior).
(*b*) A further Two Years' Course (Advanced).

The Certificates in each case are awarded by the Board of Education in conjunction with one of the following Professional Institutions :—

(*a*) Mechanical Engineering : Institution of Mechanical Engineers.
(*b*) Electrical Engineering : Institution of Electrical Engineers.
(*c*) Pure and Applied Chemistry : Institute of Chemistry.
(*d*) Building : Institute of Builders.
(*e*) Textile : Textile Institute.

CONDITIONS OF AWARD OF CERTIFICATE.

In order to obtain a certificate a candidate must make not less than 70 per cent. of the possible attendances in each year of the course, and must obtain—

(1) Not less than 40 per cent. of the possible marks in EACH subject in the examination held at the end of each year.
(2) Not less than 40 per cent. of the possible marks obtainable in EACH year for homework, class work, laboratory work, etc., taken separately, in EACH subject for which such marks are to be awarded.
(3) Not less than 50 per cent. of the grand total of marks obtainable in EACH year. Of this total the possible marks in the examinations constitute 70 per cent., and the remaining 30 per cent. will be the possible marks for home work, class work, laboratory work, etc., in each year.

A "Distinction" may be awarded to any candidate qualified to receive a certificate who, in the opinion of the examiners, has shown special merit in the Final Examination and his certificate may be specially endorsed with the name or names of the subjects in which he has thus distinguished himself.

Fee to be paid by each Student entering the Final Examination, Five Shillings.

ENGINEERING DEPARTMENT.

Course 10.—MECHANICAL ENGINEERING.

NATIONAL CERTIFICATE COURSES (see page 30).

AWARD OF LOWER AND HIGHER CERTIFICATES.

The Institution of Mechanical Engineers, in conjunction with the Board of Education, has approved of the grouped courses of instruction for the award of certificates at the end of—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

ADVANCED COURSE.

Students must have passed the Senior Course or produce evidence of equivalent attainments.

After obtaining the Higher National Certificate, students wishing to qualify for Associate Membership of the Institution of Mechanical Engineers should take the A3 Course (See page 63).

TRADE COURSES, see pages 41 to 42.

Course 11.—ELECTRICAL ENGINEERING.

NATIONAL CERTIFICATE COURSES, see page 30.

The Institution of Electrical Engineers, in conjunction with the Board of Education, has approved of the grouped courses of instruction for the award of certificates at the end of—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

ADVANCED COURSE.

Students must have passed the Senior Course or produce evidence of equivalent attainments.

Electrical Students are expected to sit at the Examinations held by the Union of Lancashire and Cheshire Institutes in the subjects of the course.

Time Table : Mechanical and Electrical (see pages 63 and 64). Classes 84 to 118.

See Course 6 for Part Time Day Classes in Mechanical and Electrical Engineering.

NOTE.—Holders of the National Certificates in Mechanical or Electrical Engineering, who become candidates for Election as Students, Graduates, or Associate Members of the Institutions of

Mechanical or Electrical Engineers, and are able to satisfy the Council of their eligibility under the by-laws for one of these classes in respect of occupation and practical training, will be exempted from certain subjects in the Examinations for Election as Students and Associate Members.

Particulars relating to these exemptions may be obtained from the Head of the Department.

Students who desire to sit for the Final Examination in Electrical Engineering Practice, City and Guilds of London Institute, are now allowed to take Part I., consisting of a paper on Advanced Electrical Technology at the end of the First Year of the Advanced Course. A Certificate will not be awarded for success in Part I. only, but candidates will be notified of their success or failure in that Part.

If a candidate enters for Part I. and one section of Part II. in the same year, failure in Part I. will carry with it failure in the section of Part II. The class of Certificate awarded to a candidate successful in Part I. and one section of Part II. will be determined upon the results obtained in Part II.

For TRADE COURSES, see pages 42 to 43.

ENGINEERING DEGREE COURSE.

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering (Mechanical and Electrical).

Students wishing to proceed to a Degree must first pass the Matriculation examination and should consult the Head of the Engineering Department.

BUILDING DEPARTMENT.

Course 12.—BUILDING.

NATIONAL CERTIFICATE COURSES (see page 65).

The Institute of Builders, in conjunction with the Board of Education, award an Ordinary Certificate on the satisfactory completion of a Three Years' Senior Course, and a Higher Certificate after a further Two Years' Advanced Course.

The conditions governing the award of National Certificates are given on page 30.

Senior Course (Ordinary Certificate).

1st and 2nd Years, see page 65. Classes 119 to 131.

3rd Year. Building Construction and at least two of the following :—

Building Science,
Building Geometry,
Building Mathematics,
Builders' Quantities, or
Builders' Book-keeping.

Students who are not candidates for a National Certificate may in the third year select three subjects given in the Third Year Course, see page 65. Building Construction must be taken.

Advanced Course (Higher Certificate).

1st Year :—Building construction (A) or (B) and

Two other subjects, of which not more than one may be from Group 3, see page 65.

2nd Year :—Building Construction (A) or (B) whichever was not taken in the 1st Year, and two other subjects set out for the Advanced Course, not taken in the 1st Year ; these three subjects being selected in accordance with the scheme for the 1st Year, see page 65.

NOTE.—Builders Quantities may not be offered in the 2nd Year.

TRADE COURSES, see pages 76 to 78.

TEXTILE DEPARTMENT.

National Certificate Courses.

The Textile Institute, in conjunction with the Board of Education, award an Ordinary National Certificate on the satisfactory completion of a Three Years' Senior Course and a Higher National Certificate after a further Two Years' Advanced Course.

The conditions governing the award of National Certificates are given on page 30.

Students may take either the Cotton Spinning or the Cotton Weaving Course.

Senior Students are expected to sit at the examinations conducted by the Union of Lancashire and Cheshire Institutes.

Advanced Students take the examinations of the City and Guilds of London Institute and should obtain a Full Technological Certificate.

Students who hold the Full Technological Certificate of the City and Guilds of London Institute in either Cotton Spinning or Cotton Weaving are advised to take the Higher Course, with a view to becoming Associates of the Textile Institute.

Course 13.—COTTON SPINNING.

Time Table, page 66.

Classes 142 to 153.

Course 14.—COTTON MANUFACTURE (Weaving).

Time Table, pages 62 and 63.

Classes 154 to 177.

For the full Technological Certificate of the City and Guilds of London Institute in Cotton Manufacture (Weaving), the candidates must pass examinations in :—

Cotton Manufacture (Weaving) } In the fourth
Textile Technology } and fifth years.

Also :—

Textile Economics and Textile Engineering.
or Textile Design I. and II.
or Textile Chemistry I. and II.

Special Classes suitable for Overlookers, Weavers, Spinners and Knitters are held also in the Manufacture of Rayon, and in Rayon Weaving.

See pages 67 and 68.

Classes 178 to 188.

TRADE COURSES, see pages 78 and 79.

SCIENCE DEPARTMENT.

Classes are arranged for Students desiring a training in Science and scientific methods. The Course of study recommended will depend on the aims of the Student.

Course 15.—PURE AND APPLIED CHEMISTRY.

NATIONAL CERTIFICATE COURSES.

The Courses arranged for the National Certificate in Chemistry and for the Higher National Certificate suit the requirements of those who desire training for a works' position. These are known

as the National Certificate Courses. Certificates are awarded by the Institute of Chemistry in conjunction with the Board of Education. The Ordinary Certificate is given on the satisfactory completion of a Three Years' Senior Course, and a Higher Certificate after a further two years' Advanced Course. Students who have obtained a Matriculation or School Certificate in the necessary subjects are excused the 1st year course. In all cases where students attend these Courses they are expected to take the appropriate examinations at the end of each session.

Course 16.—Degree and A.I.C. COURSES.

Time Tables, pages 70 to 71.

Classes, 255 to 271 and 281 to 294.

Students who desire a professional qualification in Science may prepare for a degree of B.Sc. (London), or for the Associateship of the Institute of Chemistry (A.I.C.). Before any Student is admitted to such a Course of study he must satisfy the Head of the Department that he has passed the necessary preliminary examination. For the B.Sc. (London) Course the Student should have matriculated at that University or have obtained exemption acceptable to that University. For the A.I.C. he must have matriculated or obtained the School Certificate and must register as a Student with the Institute of Chemistry. The Harris Institute is recognised by the Institute of Chemistry for the training of A.I.C. candidates, and any Students who have matriculated are advised to work for the Associateship. In either case the first Course is that for the Inter B.Sc., and 1st Year A.I.C. (page 72). Students for the Final B.Sc. and the A.I.C. attend the classes of the Advanced National Certificate Courses, A1 and A2, and for further advanced instruction.

The laboratories of the department are well equipped and advanced Students may make use of them for special work by arrangement with the Head of Department.

Course 17.—PHARMACY.

Students intending to prepare for the preliminary scientific examination of the Pharmaceutical Society should have registered as a student with that Society before joining the classes. The course of study extends over three years. Students must attend for 200 hours in Chemistry, 120 hours in Physics and 120 hours in Botany, and show satisfactory work both in written exercises and in practical work before the certificate of entry to the examination will be signed.

Students who passed the examination required for registration after October, 1935, must take a full-time day course. Such students who have not studied chemistry, physics and biology previously are advised to take the preliminary evening Pharmacy Course before entering the day courses.

The Revision Pharmacy Course is suitable for students who have taken a full time day course and require revision classes for the Part I. examination.

Time Table, page 71.
Classes 272 to 280.

Pharmacy Students who have successfully taken the Part 1 examination and who wish to extend their knowledge of Chemistry in preparation for the Part 2 Course are advised to attend the special Post Part 1 Pharmacy Course.

See page 71.
Classes, 278 to 280.

PRINTING DEPARTMENT.

Course 18.—TYPOGRAPHY.

The Classes in Typography prepare students for the City and Guilds of London Institute Examinations.

The full Course comprises instruction on three evenings per week for four years. The subjects to be taken are as follows :—

1st and 2nd years. Composing, Machines and English.
Final Course. Composing, Machines and Commercial Art.
Full Technological Course.—Composing, Machines and Commercial Art.

Time Table, page 72.
Classes 295 to 303.

COMMERCIAL DEPARTMENT.

Course 19.—SENIOR GENERAL COURSE.
Course 20.—SENIOR CLERICAL COURSE.
Course 21 and 21a.—ADVANCED COURSES.

SENIOR COURSES (19 and 20).

The First and Second Years of Course 19 consists of **four** subjects, and for Course 20, of **three** subjects. Third Year Course consists of three subjects

In each Course (except the special ones specified later, which do not qualify for a Grouped Course Certificate), one or more subjects are obligatory ; others are generally optional.

From the latter subjects students may select the required number to make up their Course.

Before selecting a Course, students should **consult both the Time Table printed** (on pages 68 to 70), **and the tutors** who will be present to enrol on September 14th and September 15th, 1938.

A student taking a course may, so far as his attainments and the Time Table permit, sit in a class and enter for an examination of a higher year than the remaining subjects of his course. Transfers from one class to another are not permitted after the first two weeks of the session. The detailed syllabuses of examinations in the subjects may be found complete in the Prospectus of the Lancashire and Cheshire Institutes.

Students are expected to take the Examinations of the Union of Lancashire and Cheshire Institutes.

ADVANCED COURSES.

This Course is intended to assist in preparing for the Professional, Secretarial and Accountancy Examinations. (See Course 21).

Classes preparing students for the intermediate and final examinations of the Incorporated Association of Rating and Valuation Officers will be formed if sufficient students enrol. (See Course 21a).

SENIOR COURSE (19).

General Course. (Four Subjects) :—

FIRST YEAR (S1).

OBLIGATORY : Commerce.

OPTIONAL : **Three** of the following Subjects :—

Commercial Arithmetic.
English.
Geography.
Book-keeping.
A Foreign Language (French, German or Spanish).
Cotton Spinning, or
Cotton Weaving.

General Course. (Four Subjects) :—

SECOND YEAR (S2).

OBLIGATORY : Commerce.

OPTIONAL : **Three** of the following Subjects :— *

Commercial Arithmetic.
English.
Geography.
Book-keeping.
A Foreign Language (French, German or Spanish).
Cotton Spinning or
Cotton Weaving.

* (A first year subject may be taken provided it has not been offered before).

General Course. (Three Subjects) :—

THIRD YEAR (S3).

OBLIGATORY : Commerce.

OPTIONAL : Any **two** of the following :—

Book-keeping.
Economics.
English Language and Literature.
Mercantile Law.
A Foreign Language (French or German).
Cotton Spinning, or
Cotton Weaving.

SENIOR COURSE (20).

Clerical Course A. (Three Subjects) :—

FIRST YEAR (S1).

(1) Shorthand (Grade I. or Grade II.).
or
Typewriting (Grade I. or Grade II.).

(2) Arithmetic
or
Book-keeping.

(3) English
or
Foreign Language (French, German, Spanish—Grade III.).

Clerical Course A. (Three Subjects) :—

SECOND YEAR (S2).

(1) Shorthand (Grade II. or III.).
or
Typewriting (Grade II. or III.).

(2-3) **TWO** of the following subjects :—
Commerce (1st year).
Book-keeping (1st or 2nd year).*
Arithmetic (1st or 2nd year).*
English **or** Foreign Language (French or German, Grade IV.).

Clerical Course B. (Three Subjects) :—

FIRST YEAR (S1).

(1) Shorthand (Grade I. or Grade II.).
(2) Typewriting (Grade I. or Grade II).
(3) English
or
Foreign Language (French, German, Spanish.—Grade III.).

Clerical Course B. (Three Subjects) :—

SECOND YEAR (S2.)

(1) Shorthand (Grade II.—80 words, or Grade III.).
(2) Typewriting (Grade II. or III).
(3) **ONE** of the following subjects :—
Book-keeping (1st year).
Commerce (1st year).
English.
Foreign Language (French or German, Grade IV.).

Shorthand.

In all grades the dictation tests will be of five minutes' duration.

Grade I. at 50 and 60 words per minute.
Grade II. at 70 and 80 words per minute, and
Grade III. at 90, 100, 120 and 140 words per minute

* If a subject chosen for the Second Year Course has been taken in the first year, then the next higher grade must be taken.

Students who have no knowledge of Shorthand will find it advisable during the first session to work for an internal examination. They should consult their tutors on the matter. The more advanced theory classes consist of :—Revision, Theory and Speed to 60 words per minute.

The Shorthand Theory Class for **beginners** does not prepare for the Examinations of the U.L.C.I. It is necessary for Group Course Candidates who wish to secure Scholarships that a speed examination be taken.

In Typewriting, students must consult the tutor on enrolment night as to which hour is available.

ADVANCED COMMERCIAL COURSES.

Course 21.

Three subjects, **one** at least to be chosen from Group A.

GROUP A.	GROUP B.
Accounting and Auditing.	Mercantile Law.
Economics.	A second Foreign Language.
A Foreign Language.	Banking and Currency.

Time Table, page 70. Classes 242 to 250.

Course 21a.

This Course is intended for Rating and Valuation Officers. For time table of the Intermediate Classes see page 70. Classes 251 to 254.

Classes preparing for the Final examination will be formed if sufficient students enrol.

LANGUAGES DEPARTMENT.

GENERAL AND COMMERCIAL CLASSES.

These classes are designed to meet the requirements of those who select a Language as part of a course for the U.L.C.I., R.S.A., or other external examinations, and also to furnish a suitable medium of instruction for those who are not necessarily aiming at any particular examination but who desire to maintain and increase their familiarity with some foreign language for its own sake.

Time Table on pages 69 and 70.

SCIENTIFIC AND TECHNICAL.

Students in the Scientific and Engineering Departments, especially those in the more advanced sections who may look forward to opportunities for research, are reminded that a foreign language, especially German, may ultimately prove of great value in extending the scope of their work.

Time Tables on pages 69 and 90.

Students, before joining Language Classes, should consult the Head of the Department.

PART TIME DAY CLASSES IN COMMERCIAL SUBJECTS.

Part Time Day Classes have been formed for persons over 16 years of age desirous of instruction in any of the following subjects :

TYPEWRITING, SHORTHAND, COMMERCE, BOOK-KEEPING, ECONOMICS, AND COMMERCIAL CORRESPONDENCE.

See Course 5.—For Time Table see page 60.

TRADE COURSES.

Course 22.—ENGINEERING WORKSHOP PRACTICE.

Applicants for these classes must have attended a preliminary Technical Evening Course or be otherwise qualified.

This is a Three Years' Course, suitable for fitters, turners and machinists. For times of classes and subjects to be taken, see page 73. Classes 304 to 312. Students entering for this course are expected to sit for the examination set by the Union of Lancashire and Cheshire Institutes. The examinations take place about April, at the end of each year's course.

Course 23.—MOTOR MECHANICS COURSE.

This is a three years' Course, preparing Students for the examinations of the Union of Lancashire and Cheshire Institutes, or the examinations of the City and Guilds of London Institute.

The aim of the Course is to give sufficient knowledge of principles and their application to the construction and operation of motor vehicles, to enable the mechanic to deal with repairs, adjustments and general servicing.

See page 73 for times of classes. Classes 313 to 321.

Course 24.—MOTOR BODY BUILDING.

For Time Table see page 74.

Classes 322 to 327.

Course 25.—ELECTRIC WELDING.

For Time Table, see page 74.

Classes 328—330.

Course 26.—SHEET AND PLATE METALWORK.

For Time Table, see page 74.

Classes 331 to 336.

Course 27.—ELECTRICAL INSTALLATION WORK

The scheme of work and of certification in Electrical Installation Work is that recommended by the City and Guilds of London Institute, in conjunction with the Board of Education, and approved by the Electrical Contractors' Association. The course is intended for those who have attended a preliminary Technical Evening Course, or are otherwise qualified. It is designed to cover three years, at the end of which the student should have reached the standard of a journeyman.

In the final year of the course the examination will be set and marked by the City and Guilds of London Institute for the purpose of the award of the Electricians' Interim Certificate. An apprentice or learner employed by an Electrical Installation Contractor, or a candidate otherwise engaged in electrical installation work, who has obtained the Electrician's Interim Certificate and who is desirous of obtaining the Electrician's Certificate, must forward to the City and Guilds of London Institute a statement of his practical training and work. If approved, he will be awarded the Electrician's Certificate. For times of classes and subjects to be taken, see pages 74 and 75. Classes 337—345.

Course 28.—RADIO SERVICE WORK.

This scheme of work has been devised by the advisory committee on Radio Service Work of the City and Guilds of London Institute, including the Radio Manufacturers' and Wireless Retailers' Associations to meet the present need for the training and certification of men engaged in Radio Service Work, and is intended for students actually engaged in the industry who will only be able to attend part-time courses.

It is designed to cover three years. In the final year the examination will be set and marked by the City and Guilds of London Institute and failure to obtain 50 per cent. of the possible marks for practical work will carry with it failure in the examination as a whole.

For Time Table, see page 75.

Classes 346 to 354.

Course 29.—CARPENTRY AND JOINERY.

Course 30.—PLUMBING.

Course 31.—BRICKLAYERS.

Applicants for the above courses must have attended a preliminary Technical Evening Course, or produce evidence of attainments equivalent to the preliminary Technical Evening Course. For times of classes and subjects taken, see pages 76 to 78. Classes 378 to 389, 355 to 368 and 390 to 398. Students taking these courses are expected to sit for the College examination for the first and second years of the course, and for the third year of the course to sit for the Union of Lancashire and Cheshire Institutes Examination.

Carpentry and Joinery students may after completing the third year proceed to prepare for the final examination in Carpentry and Joinery of the City and Guilds of London Institute, or for the Senior National Certificate in Building by entering the first year of the National Certificate Course.

Plumbing students, after the third year, may proceed to prepare for the final examination in Plumber's work of the City and Guilds of London Institute.

Course 32.—GAS SUPPLY.

Time Table, page 76.
Classes 369 to 377.

TRADE COURSES FOR TEXTILES.
(Courses 33 and 34).

A three years' course is arranged in Cotton Spinning and in Cotton Weaving. These Trade Courses are for students who have attended a preliminary Technical Evening Course, or are otherwise qualified. They are arranged for attendance on two evenings per week, and are specially suited for practical men. Successful students may follow up their studies in the National Certificate Courses and work for the Full Technological Certificate of the City and Guilds of London Institute.

Course 33.—COTTON SPINNING.

The main subject of Cotton Spinning is divided into three sections, viz.: Opening and Carding, Roving Preparation and Spinning. Students may take these in any order, choosing the most suitable to their requirements.

In addition, all sections will attend the class in Trade Calculations and Science which is held on alternate weeks.

Time Table page 78.
Classes 399—406.

Course 34.—COTTON MANUFACTURING (WEAVING).

The main subject of Cotton Weaving is taken in three years of progressive study, commencing with simpler cloths and mechanisms, and leading to more complex work.

Students will also attend the class in Trade Calculations and Science.

Time Table page 79.
Classes 407—412.

Course 35.—LABORATORY ARTS.

A short course in woodwork, metalwork and glass blowing, which should be suitable for the training of laboratory assistants.

For Time Table, see page 79.
Classes 413 to 415.

MISCELLANEOUS CLASSES AND SPECIAL COURSES.

The following classes are here indicated separately for the benefit of students who desire to take up the study of certain subjects for the Professional Entrance Examinations, and to assist students of an advanced grade to a higher standard of attainments.

A course consists of any three of the following subjects :—

Subject.	Class No.
Arithmetic	... 217.
Book-keeping	... 234.
Chemistry	... 257 and 266.
English Language and Literature...	236.
French	... 211, 229, 237, 248.
German	... 214, 232, 239.
Latin	... 213.
Mathematics	... 255, 282, 283.
Physics	... 256, 285.
Spanish	... 212, 231.
Geography	... 216, 230.
Shorthand	... 235.

An Internal Examination will be held in those subjects not otherwise provided for, and certificates will be given.

Gymnasium Classes will be held as follows :—

MON.	TUES.	WED.	THUR.	FRI.	SAT.
*7—8	†7—8	*7—8	†7—8	*7—8	*9-45—10-45
†8-15—9-15	*8-15—9-15	†8-15—9-15	*8-15—9-15	†8-15—9-15	†11—12

Classes for Men are indicated by a *.
Classes for Women are indicated by a †.

Fees : 10/- per session and 5/- per session for students taking other classes in the institute.

JUNIOR COURSES.

(FULL TIME DAY).

COURSES:

JUNIOR TECHNICAL.
JUNIOR COMMERCIAL.

Classes begin on Tuesday, September 6th, 1938.
Autumn Term :—6th September, 1938—20th December, 1938.
Spring Term :—9th January, 1939—5th April, 1939.
Summer Term :—18th April, 1939—7th July, 1939

(All dates inclusive).

FEE : £3 0s. 0d. per Session, or £1 per term.
TIME TABLES, see pages 82 to 89.

DAY JUNIOR SCHOOLS.

CONDITIONS OF ENTRY, Etc.

(1) Day Junior Technical School.
(2) Day Commercial School.

ENTRANCE AND SCHOLARSHIP EXAMINATIONS.

Each boy or girl admitted must not be less than 13 years old at the date of admission, and must pass the School Entrance Examination.

The Entrance Examination will be held on Saturday, the 6th May, at the Technical College.

Entries must be made on a form which can be obtained from the Technical College and forwarded to the Principal, Harris Institute, Corporation Street, on or before the 5th April, 1939.

Fee : £3 for Session, September to July. This may be paid by three instalments of £1.

Parents or Guardians will be required to sign an agreement form undertaking that the pupil attends regularly for two years, or in default pay the sum of £3 3s. 0d.

The Council of the Harris Institute offer a limited number of Scholarships (providing free tuition only) to boys and girls not less than 13 years of age on October 1st, 1939, and who for two years

prior to the date of the examination have been in regular attendance at a Day School within seven miles of the Preston Town Hall.

The Preston Local Education Committee award a number of Free Admissions to the School, and Book allowances are given to Candidates residing in the County Borough of Preston.

The Lancashire County Council also award a limited number of Exhibitions on the result of this Entrance Examination (open to candidates residing in the Administrative County) subject to certain conditions. The Exhibitions provide free tuition, travelling expenses, and allowance for books and maintenance. Full particulars as to these Exhibitions may be obtained from the Director of Education, County Offices, Preston.

Leaving Certificates are given to all who satisfactorily conclude their period of training, and a certain number of free Scholarships to Evening Classes are granted to those whose attainments and conduct in the Day School have merited it.

The School Uniform is as follows :—

Girls.—Navy Tunic and Girdle, Navy Knickers, White Blouse, with polo collar and long sleeves in winter and short sleeves in summer ; School Tie, Velour Hat in winter, Straw Hats with School Band in Summer, Black Stockings, Black Footwear, Navy Coat ; School Blazer.

Boys.—School Cap, Tie, and School Blazer.

The above should be purchased from the School Outfitters on the presentation of the Regulation Form, which may be obtained at the College Office.

Every endeavour is made at the end of the course to assist worthy students to obtain suitable posts. Many employers apply to the School for employees and apprentices.

DAY JUNIOR TECHNICAL SCHOOL.

The aim of the School is to provide a suitable education for boys who desire to enter Engineering, Building and other trades.

The curriculum is planned with the object of providing for the continuance of a general education, together with an education in all subjects which are necessary to boys about to enter industrial occupations.

The students are brought into close contact with their future occupation through teachers who have had experience in industry.

The students also have access to the Engineering laboratories and textile sheds, where they become acquainted with machinery and equipment which helps towards a thorough understanding of the application of scientific principles to industry.

The course of instruction extends over a period of two years, and the subjects taught include the following :—Mathematics, Engineering and Building Drawing, Geometry, Art, Science (including Applied Mechanics, Electricity, Magnetism, Heat and Chemistry) Metalwork, Woodwork, Geography, History, English, Physical Training and Organised Games.

DAY JUNIOR TECHNICAL SCHOOL.—ENTRANCE EXAMINATION.

Syllabuses.

Accuracy is of great importance. A thorough knowledge of the following will be required :—

Arithmetic.

The fundamental rules. Vulgar and decimal fractions. Percentages and averages. Ratio, proportion, simple interest and simple profit and loss. Elementary mensuration, rectangles and triangles. Circumference and area of circle. Surface and volume of simple solids,—prism and cylinder (weights of simple solids, given weight per unit volume). Elementary algebra. Use of symbols. Addition, subtraction, multiplication and division.

English.

(1) An essay. (2) Condensation and expansion of passages. (3) The parts of speech and elementary parsing. (4) Easy analysis of sentences. (5) The use of words in sentences to illustrate their meaning. (6) Simple letters. (7) Correction of common grammatical errors. (8) A general knowledge of good literature suitable for children.

Candidates may also be given an opportunity in this section of showing their acquaintance with present-day affairs.

Dictation.

About a dozen lines from any of such readers as are in ordinary use in the higher classes of an Elementary School. The selected extract will be dictated without a heading, and candidates will be asked to subjoin an appropriate brief title.

DAY JUNIOR COMMERCIAL SCHOOL.

The Course extends over a period of two years, and prepares boys and girls for clerical posts. The following subjects are taken: Arithmetic, Algebra, Accounts, Book-keeping, Commerce, Commercial Correspondence, Drawing, Physical Training, English, French, Games, Geography, History, Office Routine, Mathematics, Science, Shorthand and Typewriting.

DAY JUNIOR COMMERCIAL SCHOOL.—ENTRANCE EXAMINATION.

SYLLABUSES.

Accuracy is of great importance. A thorough knowledge of the following will be required :—

Arithmetic.

Simple rules, including the use of brackets. Money tables—Ordinary weights and measures (excluding Troy weight and Apothecaries weight). Reduction of money. The simple rules as applied to weights and measures. Simple vulgar fractions. Terminating decimals. Practice. Proportion by unitary method. Easy percentages. Simple interest. The Metric System. Areas.

English.

(1) An essay. (2) Condensation and expansion of passages. (3) The parts of speech and elementary parsing. (4) Easy analysis of sentences. (5) The use of words in sentences to illustrate their meaning. (6) Simple letters. (7) Correction of common grammatical errors. (8) A general knowledge of good books suitable for children.

Candidates may also be given an opportunity in this section of showing their acquaintance with present-day affairs.

Dictation.

About a dozen lines from any of such readers as are in ordinary use in the higher classes of an Elementary School. The selected extract will be dictated without a heading, and candidates will be asked to subjoin an appropriate brief title.

JUNIOR LIBRARY.

The Junior Library is reserved exclusively for the use of pupils in the two Junior Schools, and any of the books may be borrowed for home reading. There is a wide selection of good fiction, together with miscellaneous works on a variety of interesting subjects; and pupils are advised to take full advantage of the opportunities which their own Library offers them.

[ART SCHOOL]

ART SCHOOL.

OBJECTS OF THE SCHOOL.

The objects of the School are :—

(1) To give instruction in Art to those engaged in trades and professions in which the power of drawing and a knowledge of design are essential or helpful.

(2) To train those wishing to qualify to become teachers of Art in Secondary Schools, or in Schools of Art.

(3) To provide facilities to those desiring to study Art as a branch of general education, or as an accomplishment.

(4) To train those who are desirious of taking up Art as a career, and who intend to specialise as painters, sculptors, illustrators, designers, etc.

(5) To meet the requirements of those engaged in various industrial occupations.

(6) Junior Courses. To prepare young students between the ages of 14 and 16, in order that they may specialise later on, in any of the above courses.

The School is open for three terms, viz. :—

13th September, 1938, to 20th December, 1938.

9th January, 1939, to 5th April, 1939.

18th April, 1939, to 7th July, 1939.

FEES FOR SESSION (payable in advance).

Full Time Day Students	£3 3 0 (Games fee 5/-)
Students attending one day per week for Single Subjects	2 2 0
Ditto per term	0 17 6
Special Classes for Crafts (Tuesday afternoons)	1 1 0
Evening Classes	see page 29
Summer Courses (one day per week) ...	0 17 6
Summer Evening Classes	0 7 6

Classes begin on Tuesday, September 13th, 1938.

General Information.

The Courses suggested below are recommended to ensure comprehensive training for definite careers, but are purposely arranged to be sufficiently elastic to meet individual requirements.

DAY CLASSES.

(1) FULL-TIME COURSES, including general principles of Art, History and Methods of Production, Drawing, Design, Colour Study, Figure Composition, Illustration, Painting, Sculpture, Commercial Art, &c. ; Graded Schemes to equip Students for the Board of Education examinations in Drawing, Painting, Industrial Design, etc. Preparation for Local Art Scholarships and Exhibitions.

(2) PART-TIME COURSES arranged mainly for the study of Industrial Art and training in single subjects.

(3) CRAFT COURSES AND CLASSES. Carving in Wood and Plaster, Writing and Illuminating, Dress Design, Embroidery, Leather Work, Wood Decoration, Etching, Aquatint, Wood and Lino Cuts, Fabric Printing, etc. Advanced Decoration (see Evening).

(4) ARCHITECTURE. Facilities to enable Architectural Students to prepare for R.I.B.A. examinations.

The Course includes Preparation of Testimonies, Perspective, Architectural Design, History of Architecture, Structural Mechanics, Building Construction.

For Time Table, see pages 80—81.

EVENING CLASSES.

Designed chiefly to furnish suitable study and to further the interests of apprentices in trades and crafts where Art plays a more or less prominent part, to offer opportunities for extended study after qualifying, to render possible the achievement of a desire to practice some branch of Art as a career, and to encourage many forms of artistic appreciation.

ADVANCED COLOUR STUDY AND PAINTING. Practice in oil and watercolour for Still Life, Portraiture and Composition.

GENERAL ART. This course endeavours to meet the needs of occupations where artistic training, though required, demands freer interpretation, and more individual treatment. In many cases such subjects as colour and figure study, architectural or modelling knowledge, illustration or lettering may predominate and be supplimented by the type of design or other specialised subjects applicable to the need.

INDUSTRIAL ART AND CRAFTS. The aim in these Courses is to secure efficient training for apprentices in trades and crafts. They cover the syllabuses of various Examining Authorities. (See Examinations, pages 56 and 57).

Full Grouped Courses of three evenings per week, include Study in Drawing and lettering, Nature and Colour, Methods of Production and Technical Problems, Knowledge of Tools and Materials, Estimating, etc., History and Styles of Architecture, Heraldry, Original Design, embodying modern requirements. Practical work.

The following is a list of the chief subjects which may be undertaken as definite Courses or practiced on the craft side alone :—

Dress Design, including costume history, making and drafting.

Painting and Decorating, including preparation of schemes of Interior Decoration. Embroidery, Leather-work, Bookbinding, Wood Decoration, Etching, etc., Lino Cuts, Writing and Illuminating, Wood and Plaster Carving, Modelling and Casting (Demonstrations at arranged periods), Soft Toy Making.

Summer Courses in most crafts will be held from Easter to July.

COMMERCIAL ART. Treatments for the Press, Layouts, Posters and Show Cards, etc.

ILLUSTRATION. Including study of figure and accessories, composition, etc.

TEACHERS. Study for the National Society of Art Masters' Exams., Colour, Design, Illustration, etc. Further study in various subjects and crafts.

ARCHITECTURE. Courses in Perspective, Architectural History and Drawing.

PROFESSIONAL. The Art School is open for further study and practice to Architects, Sculptors and Artists. In connection with this, advantage is usually taken of advanced work in Life Painting, Sculpture and Crafts.

TEXTILE DESIGN. Held in conjunction with Technical Weaving Courses.

ADVANCED DESIGN AND DECORATION. The application of previous courses to more ambitious work—Theatrical Settings, Costume, Interior Decoration, Lighting and Building-up, Relief Decoration, Details to scale and full size, Figure Composition, Intended for qualified Students.

LECTURES. Day and Evening lectures have been arranged with relation to Industrial and Commercial Art. These will deal definitely with practical problems in Colour and Design, Principles of Art, Historic Art, etc.

A Series of monthly lectures by specialists will be given (see separate detailed lists and time tables). All students are advised to attend.

WORK. All completed studies are to be handed in to the Teachers, to be available for inspection and criticism. They will be retained until the end of the session, when they will be returned unless required for the School's Exhibition.

DAY AND EVENING CLASSES.—TIME TABLE (see also pages 80 & 81).

	MORNING, 10-0—12-30.	AFTERNOON, 2-0—4-0.	EVENING, 7-0—9-0.
Monday	Drawing Ornament Animals Nature Drawing	Still Life Painting Design Posters	General Drawing Course Nature Study Drawing (Indust. Commercial and Craft) Elem. Teachers' Class Design Painting Dress Design
Tuesday	Drawing, Antique Fabric Printing Design Perspective Etching	Drawing (Elem. & Advanced) Antique General Knowledge Object and Memory Drawing Decoration (Advanced) Object Drawing Crafts (various)	Still Life (1st year) *Textile Art (4th year) Design, Industrial and Crafts Wood Decoration, &c. Design (Commercial Art) Decoration (Advanced) *Modelling and Casting
Wednesday	General Drawing Design Nature Drawing Architectural Drawing Still Life Painting Dress Design	Crafts (various) Still Life Drawing from the Antique Nature Study Lettering Anatomy	Junior Course, Form and Colour Crafts and Embroidery Perspective or Anatomy Drawing from Life Etching *Painting and Decorating (2nd year) *Textile Design (3rd year) Commercial Art Modelling and Casting
Thursday	Theory of Art Drawing and Painting from life Etching	Games Practice Object Drawing	Junior Course, Design and Colour Illustration, Antique Painting (Advanced) Teachers' Class *Bookbinding *Painting and Decorating (3rd and 4th years) Drawing from life
Friday	Architecture Design Illustration Posters Perspective History of Painting	Leather Work } Theory Embroidery } &Prac. General Drawing—Objects and Interiors Dress Design Design Drawing and Painting from Life	Crafts (various) *Advanced Industrial Art and Architecture History and styles of Ornament *Architecture *English and Arithmetic 1st and 2nd years) Painting and Decorating (1st year)

* These classes will terminate after the U.L.C.I. Examinations.

During the Summer term an out-of-door Sketching Class will be held on Monday, Tuesday and Friday afternoons also Wednesday mornings.

Short Summer Courses in various Crafts—Mondays and Wednesdays.

Special lectures relating to outdoor sketching and on painting will be arranged for the summer term.

EXAMINATIONS IN ART.

Internal.

Grouped Examinations will be held at the end of each term, comprising the subjects of the various Courses.

The Board of Education will hold Examinations in the following subjects of Art :—

(*a*) Drawing.
(*b*) Painting.
(*c*) Modelling.
(*d*) Pictorial Design for Reproduction in black and white or colour.
(*e*) Industrial Design for (i.) Handicrafts and
(ii.) Manufactures.

1. The Examination in Drawing will be of a standard suitable for candidates who, after a good general education, including some preliminary instruction in Drawing, up to the age of 16 or later, have devoted themselves to serious and continuous study of Drawing for, as a rule, not less than two years.

2. The Examinations in Painting, Modelling, and Pictorial Design will be of such a standard as could be attained, according to the capacity of the candidate, by two or more years of serious and continuous specialised study after passing the Examination in Drawing.

3. Examinations in Industrial Design will be of such a standard as could be attained through regular attendance at Evening or other Part Time Classes in the intervals of employment for a period of four years after the age of 16.

4. Candidates will not be admitted to the Examinations in Painting, Modelling, or Pictorial Design, unless they have previously passed the Examination in Drawing.

City and Guilds of London Institute.

Students are prepared for these Examinations in the following subjects :—Painting and Decorating, Embroidery, Design and Colour for Textiles.

National Society of Art Masters.

A series of Examinations in Drawing arranged for Teachers in Elementary Schools.

UNION OF LANCASHIRE AND CHESHIRE INSTITUTES.

Students are prepared for the Examinations arranged by the U.L.C.I. Authority in the following subjects :—Junior Industrial Art, Painting and Decorating, Architecture, Embroidery, Leatherwork, Woodcarving, Textile Design, etc.

SCHOLARSHIPS.

Harris Art Scholarship.

One Scholarship, of the value of £7 10s. 0d. per annum, tenable for three years, will be awarded annually.

The Scholarship will be open to all Students of the School of Art, who have attended for not less than one year immediately preceding the award, and will be tenable at the Harris Institute.

The Scholarship will be awarded on the results of the annual examinations, in conjunction with the Student's work of the session.

Should one or more of these Scholarships fall vacant before the full period of three years, two or three (as the case may be), will be given instead of one, in the year when they lapse.

Free Studentships.

Free Studentships to the Day Classes are offered to Students of the School (Day or Evening), who are studying with a view to becoming designers, craft workers, or teachers.

Method of award, the same as for the Harris Art Scholarship.

Free Studentships to the Evening Classes are offered to students taking definite courses, and will be awarded on the result of marks given for homework, attendance, and internal examinations.

Special Scholarships are awarded to Students who have left or are about to leave Elementary Schools, who intend to follow occupations requiring an Art Training.

PRIZES : "STEELE" BEQUEST.

Three Prizes (one Day and two Evening) of £4 each are offered for the best work done by Students each Session.

SOCIAL AND ATHLETIC ACTIVITIES.

A Sketch Club is organised by the Staff and Students for the purpose of encouraging individual effort. Monthly competitions are arranged during the Session, and a series of subjects are set for the long vacation.

All Students are eligible. Further information and particulars may be obtained from members of the Staff.

A Dramatic Club is being formed and Social evenings will be arranged, when there will be informal dances, musical items, and short plays, etc.

Excursions to Art Galleries, Exhibitions, Works, etc., will also be arranged during the session.

A Rugby Football Club has been formed, and intending players should report at once to the Secretary. Hockey is also played.

Notices of the various activities, giving times and dates will be placed on the notice board in the corridor.

Also see page 9.

The Gymnasium is open at the recognised times to Students on payment of the sports fee. See pages 45 or 79.

REFECTORY.

There is a fully equipped Dining Room at the Technical College. Lunches, teas and light refreshment may be obtained from 10-30 a.m. to 7-15 p.m.

The Refectory is for the convenience of the students and staff and all students may use the Refectory between the times stated.



TIME TABLE OF CLASSES. SESSION 1938-39.

T—*Technical College.* A—*Avenham Institute.*

TECHNICAL DAY CLASSES.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	PROFESSIONAL ENTRANCE, Etc.						
1	T English	H. H. Allen	10.15–11.15	...	...	2—3	1.45–2.45
2	T History	H. H. Allen	...	3—4	...	9.15–10.15	...
3	T French	H. H. Allen	2—3	2—3	...	...	11.15–12.15
4	T Latin	H. H. Allen	...	11.15–12.15	...	3—4	...
5	T Mathematics	F. B. Landolt	11.30–12.30	9.30–11	...	...	9.30–11
6	T Physics	F. B. Landolt	3—4	11–12.30	...	3—4	...
7	T Chemistry	C. C. Addison	...	...	9.30–11.30	10.30–12.30	...
8	T Geography	H. Newton	...	...	11.30–12.30	10.15–11.15	...
9	T Biology*	H. W. Edmunds	...	...	11.30–12.30	...	...
	* Practical at times to be arranged.						
	INTER-B.Sc. (Science and Engineering.)						
10	T Pure Mathematics	F. B. Landolt	11.30–12.30	...	...	9.30–10.30	...
11	T Applied Mathematics	J. S. Wrigley	...	...	9.30–12	...	...
12	T Heat and General Physics ...	F. B. Landolt	...	...	9.30–12.30	...	...
13	T Magnetism and Electricity ...	F. B. Landolt	...	...	...	...	2–4.30
14	T Sound and Optics	F. B. Landolt	...	2–4.30	...	...	...
15	T Engineering Drawing ...	J. S. Wrigley	3—5	...	...	...	...
16	T Chemistry	E. Taylor	...	9.30–12.30	2–4.30	2–4.30	...
17	T Geology...	H. W. Edmunds	...	...	...	...	...
18	T Biology	H. W. Edmunds	9.30–12.30	...	...	9.30–12.30	9.30–12.30
19	T German	C. E. Robin	...	7.15–9.15	...	...	...

Final B.Sc. (Science and Engineering) classes will be arranged to suit the subjects offered by the students.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	PRELIMINARY SCIENTIFIC : Pharmacy, Dental, Medical, Dispensing.						
20	T Chemistry, Org. (Theory) ...	E. Taylor	2—3	...	...	...	...
21	T Chemistry, Inorg. (Theory) ...	E. Taylor	3–4.30	9.30–10.30	2—3	2—3	...
22	T Chemistry, (Practical)... ...	E. Taylor	...	10.30–12.30	3–4.30	3–4.30	...
23	T Physics (Theory)	F. B. Landolt	...	2—3	9.30–10.30	...	2—3
24	T Physics (Practical)	F. B. Landolt	...	3–4.30	10.30–12.30	...	3–4.30
25	T Biology (Theory)	H. W. Edmunds	9.30–10.30	...	...	9.30–10.30	9.30–10.30
26	T Biology (Practical)	H. W. Edmunds	10.30–12.30	...	...	10.30–12.30	10.30–12.30
	SCIENCE FOR HORTICULTURE.						
27	T Biology and Chemistry ...	H. W. Edmunds	...	...	2—5 (Sept. to March).	...	...
28	T Park Management	A. V. Pearson	...	...	7.15–8.15	...	...
29	T Surveying	J. S. Wrigley	...	...	...	2.30–5	...
30	T Mathematics	J. E. Taylor	...	...	...	2.30–4.30 (April to July)	...
	PART TIME DAY COMMERCIAL CLASSES.						
31	T Typewriting	D. Roberts	9.30–10.15	10.15–11.15	11.15–12.15	9.30–10.15	11.15–12.15
32	T Shorthand	D. Roberts	10.15–11.15	9.30–10.15	10.15–11.15	10.15–11.15	9.30–10.15
33	T Bookkeeping	H. Newton	11.15–12.15	...	9.30–10.15	...	...
34	T Commerce	W. Webster	...	11.15–12.15	...	...	...
35	T Commercial Correspondence ...	R. S. Cross	...	...	...	...	10.15–11.15
36	T Economics	H. Newton	...	...	...	11.15–12.15	...

	PART TIME DAY ENGINEERING. (National Certificate Course) **S1**							
37	T Mathematics	A. Woods	11.30-12.30 and 4-5	...	...	...	...	
38	T Engineering Science	J. E. Taylor	9.30-11.30	...	...	...	...	
39	T Engineering Drawing ...	J. S. Wrigley	2—4	...	...	...	...	
40	T Motor Engineering	F. H. Clayton	...	...	7.15-9.15	...	...	
	S2							
41	T Mathematics ... (A) ...	F. W. Walker	3—5	...	...	...	...	
42	T ,, ... (B) ...	F. W. Walker	9.30-11.30	...	...	...	...	
43	T Mechanics and ... (A) ...	J. S. Wrigley	9.30-11.30	...	...	...	...	
44	T Heat Engines ... (B) ...	F. W. Walker	11.30-12.30 and 2—3	...	...	...	...	
45	T Engineering Drawing (A) ...	J. E. Taylor	11.30-12.30 and 2—3	...	...	...	...	
46	T Do. (B) ...	G. E. Hall	3—5	...	...	...	...	
47	T Electrical Engineering Science.	A. Woods	7.15-9.15	...	...	...	...	
48	T Motor Engineering	H. Hindley	...	...	...	7.15-9.15	...	
	MECHANICAL ENGINEERING. (National Certificate) **S3**							
49	T Mathematics	A. Jackson	...	...	...	7.15-9.15	...	
50	T Mechanics	F. W. Walker	...	...	2-4.30	...	...	
51	T Heat Engines	F. W. Walker	...	...	9.30-12	...	...	
	A1							
52	T Strength of Materials	J. E. Taylor	...	...	2-4.30	...	...	
53	T Theory of Machines	J. S. Wrigley	...	...	9.30-12	...	...	
54	T Mathematics	J. S. Wrigley	7.15-9.15	...	...	...	...	
	A2							
55	T Elec. Eng. for Mech. Engrs. ...	S. Gunsen	...	...	...	7.15-9.15	...	
56	T Machine Design	J. E. Taylor	...	...	9.30-12	...	...	
57	T Heat Engines	J. S. Wrigley	...	...	2-4.30	...	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday
	A3 1st and 2nd Terms*						
58	T Economics	H. Newton	...	...	...	9.15–10.15	...
59	T Chemistry	C. C. Addison	...	...	...	10.15–12.30	...
60	T Physics	F. B. Landolt	...	...	...	2—4.30	...
61	T Chemistry (General)	C. C. Addison	...	...	...	...	7–8
62	T Chemistry and Physics ...	C. C. Addison	...	...	...	...	8—9
63	T Workshop Organisation and Management	H. Newton	...	...	7.15–9.15	...	...
64	T German	C. E. Robin	...	7.15–9.15	...	...	...
65	T English Language and Literature	W. A. C. Clarke	...	...	...	7.15–8.45	...
	*3rd Term.—Advanced Engineering Laboratory.						
	TEXTILE CLASSES. (Cotton Spinning and Weaving)						
66	T Textile Testing (Theory) ...	D. Atkinson	...	...	...	9.30–10.45	...
67	T Textile Testing (Practical) ...	D. Atkinson	...	...	...	10.45–12.0	...
68	T Weaving Mechanism	D. Atkinson	9.30–10.45	...	...	...	...
69	T Weaving (Practical)	W. Jackson	10.45–12.0	...	...	...	10.45–12.0
70	T Weaving Calculations	D. Atkinson	...	...	9.30–10.45	...	...
71	T Cloth Dissection, Analysis ...	D. Atkinson	...	...	10.45–12.0	...	...
72	T Fabric Structure	D. Atkinson	...	9.30–10.45	...	...	...
73	T Practical Designing	D. Atkinson	...	10.45–12.0	...	...	...
74	T Yarn Preparation	D. Atkinson	...	...	...	...	9.30–10.45
	PART TIME DAY BUILDING. (National Certificate Course) **S1**						
75	T Building Science	E. M. Pearson	...	2—4	...	...	...
76	T Mathematics	J. E. Taylor	...	11.30–12.30	...	...	...
77	T Geometry	D. J. Jones	...	9.30–11.30	...	...	...
78	T Building Construction ...	E. M. Pearson	...	4—5	...	...	...
79	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...
	INTERMEDIATE R.I.B.A.						
80	T Structural Mechanics	E. M. Pearson	...	10–12.30	...	...	...
81	A Architecture and Design ...	G. A. Clucas	...	...	10–12.30	...	10–12.30
82	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...
83	A Architectural History ...	G. A. Clucas	...	...	...	...	7—9

	MECHANICAL ENGINEERING. (National Certificate Course)								
	S1								
84	† Mathematics	T. Wilkinson...	...	...	...	...	7.15–9.15	...
85	† Engineering Drawing	F. Callow	...	7.15–9.15	...	...	...	...
86	† Engineering Science	F. W. Walker	7.15–9.15	...	...	...	...	...
	S2								
87	† Mathematics	J. Bagot	...	...	...	...	7.15–9.15	...
88	† Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...	...
89	† Mechanics and Heat Engines...	G. E. Hall	...	...	...	...	...	7.15–9.15
	S3								
90	† Mathematics	G. E. Hall	...	7.15–9.15	...	...	...	...
91	† Mechanics	F. W. Walker	...	...	7.15–9.15	...	...	...
92	† Heat Engines	F. W. Walker	...	...	...	...	7.15–9.15	...
	A1								
93	† Mathematics	J. S. Wrigley	7.15–9.15	...	...	...	...	...
94	† Theory of Machines	J. S. Wrigley	...	...	7.15–9.15	...	...	...
95	† Strength of Materials	J. E. Taylor	..	...	...	...	...	7.15–9.15
	A2								
96	† Heat Engines	J. S. Wrigley	...	7.15–9.15	...	...	...	...
97	† Machine Design	J. E. Taylor	7.15–9.15	...	...	...	...	...
98	† Electrical Engineering for Mechanical Engineers	S. Gunson	...	...	...	...	7.15–9.15	...
	A3								
99	† Workshop Organisation and Management	H. Newton	...	...	...	7.15–9.15	...	...
100	† Chemistry (General)	C. C. Addison	...	...	...	...	...	7—8
101	† Chemistry and Physics ...	C. C. Addison	...	...	...	...	...	8—9
102	† English (S3)	W. A. C. Clarke	...	...	...	...	7.15–8.45	...
103	† German	C. E. Robin	...	7.15–9.15	...	...	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	ELECTRICAL ENGINEERING (National Certificate Course)						
	S1						
104	T Mathematics	R. H. Wignall	7.15–9.15	...	...	...	...
105	T Engineering Drawing	F. Callow, S. Laraway ...	...	...	...	...	7.15–9.15
106	T Engineering Science	J. H. Hulse	...	...	...	7.15–9.15	...
	S2						
107	T Mathematics	J. Bagot	...	7.15–9.15	...	...	...
108	T Mechanical Engineering Science	F. L. Broughton	...	...	...	7.15–9.15	...
109	T Electrical Engineering Science	A. Woods	7.15–9.15	...	...	...	...
	S3						
110	T Mathematics	A. Jackson	...	...	...	7.15–9.15	...
111	T Electro-Technics	A. Woods	...	7.15–9.15	...	...	...
112	T Electrical Laboratory	A. Woods	...	...	...	...	7.15–9.15
	A1						
113	T Mathematics	J. E. Taylor	...	...	...	7.15–9.15	...
114	T Electrical Technology, Sect. I.	J. Eatock	...	...	7.15–9.15	...	...
115	T Electrical Technology, Sect. II.	J. Eatock	7.15–9.15	...	...	...	...
	A2						
116	T Generation and Transmission of Electrical Energy ...	E. L. Mortimer	...	7.15–9.15	...	...	...
117	T Distribution and Utilization of Electrical Energy ...	S. Gunson	...	...	...	...	7.15–9.15
118	T Heat Engines	F. W. Walker	...	...	...	7.15–9.15	...

	BUILDING.							
	S1							
119	T Building Science	W. Taylor	...	7.15–9.15	...	...	...	
120	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...	
121	T Geometry	J. N. Walker ...	...	...	...	...	...	7.15–9.15
	S2							
122	T Mathematics	W. Taylor	7.15–9.15	...	...	...	...	
123	T Building Construction ...	G. H. Broadbent	...	7.15–9.15	...	...	...	
124	T Building Science	J. Holt	...	...	...	7.15–9.15	...	
	S3							
125	T Building Construction ...	H. Walters	...	...	...	7.15–9.15	...	
126	T Quantities	H. D. Dodd	...	7.15–9.15	...	...	...	
127	T Geometry	J. N. Walker	7.15–9.15	...	...	...	...	
128	T Brickwork and Concreting ...	H. Lonsdale	...	...	7.15–9.15	...	...	
129	T Carpentry and Joinery ...	H. Allen	...	...	...	...	7.15–9.15	
130	T Mathematics	G. E. Hall	...	7.15–9 15	...	...	...	
131	T Building Science	E. M. Pearson	...	...	7.15–9.15	...	...	
	A1 and A2							
	Group 1.							
132	T Building Construction (A or B)	E. M. Pearson	...	...	...	7.15–9.15	...	
133	T Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...	
134	T Builders' Quantities and Estimating	T. J. Higginson	7.15–9.15	...	...	...	...	
135	T Structural Work	E. M. Pearson	...	...	...	...	7.15–9.15	
	Group 2.							
136	T Carpentry and Joinery ...	G. H. Broadbent	...	...	...	...	7.15–9.15	
137	T Architectural History (see Art School							
138	T Equipment of Buildings ...	E. M. Pearson	...	...	...	...	7.15–9.15	
	Group 3, Practice Class.							
139	T Building Construction (A or B)	H. Walters	...	...	7.15–9.15	...	...	
140	T Carpentry and Joinery ...							
141	T Structural Work							

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	COTTON SPINNING.						
	S1 (National Certificate)						
142	T Mathematics	J. Preston	...	...	7.15–9.15*	...	...
143	T Textile Drawing	J. Preston	7.15–9.15	...	...	...	...
144	T Cotton Spinning (Practical) ...	... ...	...	...	...	...	7.15–9.15*
145	T Cotton Spinning (Theory) ...	J. Mitchell	...	7.15–9.15	...	...	...
	S2						
146	T Mathematics	R. Chatburn	7.15–9.15*	...	...	...	...
147	T Textile Science	H. Dawson, G. O. Stephens	...	...	...	7–9.30	...
148	T Cotton Spinning (Practical) ...	... ...	...	...	...	...	7.15–9.15*
149	T Cotton Spinning (Theory) ...	... ...	...	7.15–9.15	...	...	...
	S3						
150	T Cotton Spinning (Theory) ...	S. Jackson	...	...	7.15–9.15	...	...
151	T Cotton Spinning (Practical) ...	S. Jackson	...	7.15–9.15*	...	...	...
152	T Textile Engineering	F. Taylor	...	7.15–9.15*	...	...	...
153	T Textile Science	H. Dawson, G. O. Stephens	...	...	...	7–9.30	...
	COTTON MANUFACTURE (WEAVING).						
	S1 (National Certificate)						
154	T Mathematics	J. Preston	...	...	7.15–9.15*	...	...
155	T Textile Drawing	J. Preston	7.15–9.15	...	...	...	...
156	T Cotton Weaving (Practical) ...	H. Gorton	...	...	...	...	7.15–9.15*
157	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...

*Alternate weeks.

	S2							
158	T Cotton Weaving (Theory) ...	W. Dagger	...	...	...	...	7.15–9.15
159	T Cotton Weaving (Practical) ...	W. Jackson, C. J. Breakell	...	...	7.15–9.15*	...	...
160	T Mathematics	R. Chatburn	7.15–9.15*	...	...	...	...
161	T Textile Science	H. Dawson, G. O. Stephens	...	...	...	7–9.30	...
	S3							
162	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	...	7.15–9.15
163	T Cotton Weaving (Practical) ...	W. Jackson, C. J. Breakell	...	...	7.15–9.15*	...	...
164	T Textile Science	H. Dawson, G. O. Stephens	...	...	...	7–9.30	...
165	A Textile Design and Colour ...	F. Southworth	...	...	7—9*	...	...
	A1							
166	T Cotton Weaving (Theory) ...	N. Highfield	...	...	7.15–9.15	...	...
167	T Cotton Weaving (Practical) ...	N. Highfield	7.15–9.15*	...	...	...	...
168	T Textile Technology I. ...	D. Atkinson	7.15–9.15*	...	...	...	...
169	T Textile Engineering	F. Taylor	...	7.15–9.15	...	...	...
170	A Textile Design I.	W. T. Garnar	...	7—9	...	...	...
171	T Textile Chemistry I.	C. A. Hatton	...	7–9.30	...	...	...
	A2							
172	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	7.15–9.15	...	...
173	T Cotton Weaving (Practical) ...	W. Dagger	7.15–9.15*	...	...	...	...
174	T Textile Technology II.... ...	D. Atkinson	7.15–9.15*	...	...	...	...
175	T Textile Engineering	F. Taylor	...	7.15–9.15	...	...	...
176	A Textile Design II.	W. T. Garnar	...	7—9	...	...	...
177	T Textile Chemistry II.	C. A. Hatton	...	...	...	...	7–9.30

Textile Economics and Textile Engineering are taken in alternate years. Textile Engineering will be taken in 1938–39.

	SPECIAL COURSES. **1st Year.**						
178	T Cotton Spinning	... ...	...	...	...	...	7.15–9.15*
179	T Textile Chemistry I.	C. A. Hatton	...	7–9.30	...	...	...
180	T Textile Technology I. ...	D. Atkinson	7.15–9.15*	...	...	...	...

*Alternate weeks.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	2nd Year.						
181	T Textile Technology II. ...	D. Atkinson	7.15–9.15*	...	...	...	...
182	T Textile Microscopy	H. W. Edmunds	...	7.15–9.15	...	...	...
183	T Textile Chemistry II.	C. A. Hatton	...	...	...	...	7–9.30
	Special Classes.						
184	T Rayon Manufacture	H. Dawson	...	...	7–9.30	...	...
185	T Hosiery	Miss E. Beaton	...	...	...	7.15–9	...
186	T Adult Spinners I.	S. Jackson	7.15–9.0	...	...	...	...
187	T Adult Spinners II.	S. Jackson	...	...	7.15–9	...	...
188	T Practical Rayon Weaving ...	W. Jackson	...	7.15–9	...	...	...
	COMMERCIAL COURSES.						
	S1						
189	T Arithmetic	E. Singleton	7.15–8.15	...	...	...	...
190	T Arithmetic	E. Singleton	8.15–9.15	...	...	...	...
191	T Arithmetic	A. Frankish	7.15–8.15	...	...	...	...
192	T Arithmetic	A. Frankish	8.15–9.15	...	...	...	...
193	T Book-keeping	W. Webster	...	...	...	...	7.15–8.15
194	T Book-keeping	W. Webster	...	...	...	...	8.15–9.15
195	T Book-keeping	T. Bradshaw	...	...	7.15–8.15	...	...
196	T Book-keeping	T. Bradshaw	...	...	8.15–9.15	...	...
197	T Commerce	S. W. Williams	...	7.15–8.15	...	...	...
198	T Commerce	H. Newton	...	...	...	...	8.15–9.15
199	T English	H. Entwistle, Miss M. A. Morris, W. A. C. Clarke	...	8.15–9.15	...	...	...
200	T English	F. R. Snalam, A. Frankish	...	...	...	...	7.15–8.15
201	T Shorthand (More Adv. Theory)	F. V. Bradshaw	7.15–8.15	...	...	...	...
202	T Shorthand (Elementary) ...	F. V. Bradshaw	8.15–9.15	...	...	...	...
203	T Shorthand (Elementary) ...	F. M. Crawley	7.15–8.15	...	...	...	...
204	T Shorthand (More Adv. Theory)	F. M. Crawley	8.15–9.15	...	...	...	...
205	A Shorthand (50-60)	W. R. White...	...	...	...	7.15–9.15	6.15–7.15
206	T Shorthand (50-60)	Miss M. Nelson	...	...	...	7.15–9.15	7.15–8.15
207	T Typewriting	J. Hilton	...	6.15–7.15	...	...	...
208	T Typewriting	J. Hilton	...	7.15–8.15	...	...	...
209	T Typewriting	J. Hilton	...	8.15–9.15	...	...	...

COMMERCIAL COURSES.

S1—*continued.*

210	T French (Beginners)	J. Kettle	...	...	7.15–9.15	...	...
211	T French	J. Kettle	...	...	8.15–9.15	...	...
212	A Spanish	J. Kettle	8.15–9.15	...	...	...	...
213	A Latin	W. A. C. Clarke	...	...	...	...	7.15–8.15
214	T German (Beginners)	C. E. Robin	...	...	...	...	7.15–9.15
215	T German (Scientific and Technical	C. E. Robin	...	7.15–9.15	...	...	...
216	T Geography	H. C. Pye	7.15–8.15	...	...	...	...

S2

217	T Arithmetic	E. Singleton	...	...	...	...	7.15–8.15
218	A Book-keeping	H. A. Brown	...	...	...	7.15–9.15	...
219	T Book-keeping	W. Webster, F. Whitehead	...	...	7.15–9.15	...	...
220	T Commerce	S. W. Williams	...	8.15–9.15	...	...	...
221	T Commerce	H. Newton	...	...	...	...	7.15–8.15
222	T English	H. Entwistle	...	7.15–8.15	...	...	...
223	T English	F. R. Snalam, A. Frankish	...	...	...	...	8.15–9.15
224	T Shorthand (70 to 80 words) ...	W. Hanson	...	...	...	7.15–9.15	...
225	T Typewriting	J. Hilton	...	...	...	...	6.15–7.15
226	T Typewriting	J. Hilton	...	...	...	...	7.15–8.15
227	T Typewriting	J. Hilton	...	...	...	...	8 15–9.15
228	T French	T. C. Hayes	...	...	7.15–9.15	...	...
229	T Geography	H. C. Pye	8.15–9.15	...	...	...	...
230	A Spanish	J. Kettle	7.15–8.15	...	...	...	...
231	T German	H. H. Allen	...	...	...	...	7.15–9.15

S3

232	T Economics	W. Webster	7.15–9.15	...	...	...	...
233	T Book-keeping	T. Cunliffe	...	7.15–9.15	...	...	...
234	T Commerce	S. W. Williams	...	...	7.15–9.15	...	...
235	A Shorthand (from 80 words) ...	T. Ashworth, Miss D. Roberts	...	...	...	7.15–9.15	...
236	T English Language & Literature	W. A. C. Clarke	...	...	...	7.15–8.45	...
237	A French	H. H. Allen	7.15–9.15	...	...	...	...
238	T Mercantile Law	J. White	...	...	8.15–9.15	...	...
239	A German	H. H. Allen	...	7.15–9.15	...	...	...
240	T Cotton Spinning (Theory) ...	J. Mitchell	...	7.15–9.15	...	...	...
241	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...

In French, beginners take two consecutive periods of 60 minutes, and S1 students take the second period only.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday	Wednesday.	Thursday.	Friday.
	A1 and 2						
242	† Accounting and Auditing (A1)	N. Hindley	...	7.15–9.15	...	...	...
243	† Accounting and Auditing (A2)	N. Hindley	...	...	...	7.15–9.15	...
244	† Mercantile Law (A1)	J. White	...	...	8.15–9.15	...	...
245	† Mercantile Law (A2)	J. White	...	7.15–8.15	...	...	...
246	† Economics and Banking (A1)...	W. Webster	7.15–9.15	...	...	...	...
247	† Economics and Banking (A2)...	H. Entwistle	...	...	7.15–9.15	...	...
248	† French	F. W. Jackson	...	...	...	7.15–9.15	...
249	† Cotton Spinning (Theory) ...	J. Mitchell	...	7.15–9.15	...	...	...
250	† Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...
	RATING AND VALUATION OFFICERS COURSE.						
251	† Municipal Law	T. Houghton...	7.15–8.15	...	...	...	...
252	† Registration of Electors and Correspondence, Précis, etc.	J. D. H. Walmsley	8.15–9.15	...	...	...	...
253	† Book-keeping and Office Organisation, etc. ...	T. A. Moss	...	...	7.15–9.15	...	...
254	† Assessment, Rating, etc. ...	J. Nightingale	...	...	...	7.15–8.45	...
	CHEMISTRY. (National Certificate Course) **S1**						
255	† Mathematics	F. B. Landolt	7—9	...	...	...	...
256	† Physics	F. B. Landolt	...	7–9.30	...	...	...
257	† Inorganic Chemistry	C. C. Addison, W. Harrison	...	...	...	...	7–9.30
	S2						
258	† Physics (Theory and Practical)	H. W. Edmunds	...	...	7–9.30	...	...
259	† Organic Chemistry (Theory and Practical)	E. Taylor, C. C. Addison ...	... ...	7—8 8—9.30	...	...	...
260	† Inorganic Chemistry (Theory) and Practical)	C. C. Addison	...	...	...	7–9.30	...
	S3						
261	† Organic Chemistry (Theory and Practical) ...	C. C. Addison	...	7–9.30	...	...	...
262	† Inorganic Chemistry (Theory and Practical)	E. Taylor	...	...	7–9.30	...	...
263	† Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...

	A1							
264	T Organic Chemistry (Theory) ...	E. Taylor	7—8	...	...	...	...
265	T Organic Chemistry (Practical).	N. S. Capper	...	...	7-9.30	...	...
266	T Inorganic Chemistry (Theory)	E. Taylor	8—9	...	...	...	...
267	T Inorganic Chemistry (Practical)	W. G. Creasey	...	...	...	7-9.30	...
	A2							
268	T Organic Chemistry (Theory) ...	E. Taylor	7—8	...	...	...	...
269	T Organic Chemistry (Practical)	N. S. Capper	...	...	7-9.30	...	...
270	T Inorganic Chemistry (Theory)	E. Taylor	8—9	...	...	...	...
271	T Inorganic Chemistry (Practical)	W. G. Creasey	...	...	...	7-9.30	...

A1 and A2 Theory will be taken in alternate years. The A1 Course will be taken in 1938–39.

	PHARMACY. **(Preliminary Course).**						
272	T Biology	H. W. Edmunds	7—9	...	...	...	...
273	T Physics	F. B. Landolt	...	7-9.30	...	...	...
274	T Chemistry	C. C. Addison, W. Harrison	...	...	...	...	7-9.30
	(Revision Course).						
275	T Biology	H. W. Edmunds	7—9	...	...	...	...
276	T Physics	F. B. Landolt	...	...	...	...	7-9 30
277	T Inorganic Chemistry (Theory and Practical)	E. Taylor	...	...	7-9.30	...	...
	POST COURSE (Part 1.)						
278	T Physical Chemistry	W. G. Creasy	...	...	...	7-9.30	...
279	T Organic Chemistry	C. C. Addison	...	7-9.30	...	...	...
280	T Inorganic Chemistry (Practical)	N. S. Capper	...	...	7-9.30	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday
	INTER. B.Sc. AND 1ST YEAR A.I.C. COURSE.						
281	T Inorganic Chemistry	E. Taylor	...	...	7–9.30	...	...
282	T Pure Mathematics I.	G. O. Stephens	...	7—9	...	...	...
283	T Pure Mathematics II.	J. Slater	...	7—9	...	...	...
284	T Applied Mathematics	J. Slater	...	...	...	7—9	...
285	T Physics	F. B. Landolt	...	...	...	...	7–9.30
286	T Engineering Drawing	J. E. Taylor	7.15–9.15	...	...	...	...
	Alternative More Advanced Chemistry.						
287	T Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...
288	T Inorganic Chemistry	E. Taylor	8—9	...	...	...	...
289	T Practical Chemistry	N. S. Capper...	...	...	7–9.30	...	...
	B.Sc., A.I.C. COURSES and ADVANCED WORK (Practical)						
290	T Chemistry Theory	E. Taylor	...	8—9	...	...	...
291	T Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...
292	T Inorganic Chemistry	E. Taylor	7—9	...	...	...	...
293	T Organic Chemistry	N. S. Capper	...	...	7–9.30	...	...
294	T Physics (Practical) ... ... *	F. B. Landolt	...	...	...	...	7–9.30
	TYPOGRAPHY. 1st Year.						
295	A Composing	E. Jones	...	...	7.15–9.15	...	...
296	A Machines	J. Taylor	7.15–9.15	...	...	...	...
297	T English	F. R. Snalam	...	...	...	...	7.15–8.15
	2nd Year.						
298	A Composing	E. Jones	...	...	...	...	7.15–9.15
299	A Machines	J. Taylor	...	...	7.15–9.15	...	...
300	T English	H. Entwistle	...	7.15–8.15	...	...	...
	3rd and 4th Years.						
301	A Composing	E. Jones	...	7.15–9.15	...	...	...
302	A Machines	J. Taylor	...	...	...	7.15–9.15	...
303	A Commercial Art	A. Bann	...	...	7.15–9.15	...	...

* For Languages see pages 68 to 70.

	ENGINEERING, WORKSHOP.						
	S1						
304	T Calculations and Science ...	T. C. Nicholson	...	7.15–9.15	...	...	...
305	T Engineering Drawing	S. Laraway	7.15–9.15	...	...	...	...
306	T Engineering Workshop Processes	G. W. Robinson	...	...	7.15–9.15	...	7.15–9.15
	S2						
307	T Calculations and Science ...	D. F. F. Brewester	...	7.15–9.15	...	...	...
308	T Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...
309	T Engineering Workshop Processes	O. Jones	7.15–9.15	...	...	...	...
	S3						
310	T Engineering Workshop Processes	O. Jones	...	7.15–9.15	...	...	...
311	T Engineering Workshop Practice	O. Jones	7.15–9.15	...	...	...	...
312	T Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...
	MOTOR MECHANICS COURSE.						
	S1						
313	T Calculations and Science ...	J. Slater	...	...	...	...	7.15–9.15
314	T Motor Engineering	F. H. Clayton	...	...	7.15–9.15	...	...
315	T Engineering Drawing	S. Laraway	...	7.15–9.15	...	...	...
	S2						
316	T Calculations and Science ...	D. F. F. Brewester	...	7.15–9.15	...	...	...
317	T Engineering Workshop Processes and Practice ...	G. W. Robinson	...	...	7.15–9.15	...	...
318	T Motor Engineering	H. Hindley	...	...	...	7.15–9.15	...
	S3						
319	T Engineering Workshop Processes and Practice ...	O. Jones	...	7.15–9.15	...	...	...
320	T Motor Eng. (Mech. Equip.) ...	H. Hindley	...	...	...	...	7.15–9.15
321	T Motor Eng. (Elect. Equip.) ...	J. F. Parsonage	7.15–9.15	...	...	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	MOTOR BODY BUILDING.						
	S1						
322	T Technical Drawing	T. A. Wetton	7.15–9.15	...	...	...	...
323	T Body Building	T. A. Wetton	...	..	...	7.15–9.15	...
324	T Calculations and Science ...	T. C. Nicholson	...	...	...	...	7.15–9.15
	S2						
325	T Technical Drawing	T. A. Wetton	7.15–9.15	...	...	...	...
326	T Body Building	T. A. Wetton	...	...	...	7.15–9.15	...
327	T Calculations and Science ...	D. F. F. Brewcster	...	7.15–9.15	...	...	...
	ELECTRIC WELDING.						
328	T Electric Welding (I. and II.)...	S. H. Jones	...	7.15–9.15	...	...	...
329	T Electric Welding (I.) ...	S. H. Jones	7.15–9.15	...	...	...	...
330	T Electric Welding (II.)... ...	S. H. Jones	...	...	...	7.15–9.15	...
	SHEET AND PLATE METALWORK.						
	S1						
331	T Trade Processes and Materials	J. Royle	...	7–9.30	...	...	...
332	T Calculations and Drawing ...	C. V. Case	...	...	...	7–9.30	...
	S2						
333	T Trade Processes and Materials	J. Royle	...	...	7–9.30	...	...
334	T Calculations and Drawing ...	C. V. Case	...	7–9.30	...	...	...
	S3						
335	T Trade Processes and Materials	J. Royle	...	...	7—9.30	...	...
336	T Calculations and Drawing ...	C. V. Case	...	7—9.30	...	...	...
	ELECTRICAL INSTALLATION.						
	S1						
337	T Installation Rules, Theory and Calculations	J. Brennand	...	7.15–9.15	...	...	...
338	T Practical Work; Sketching and Drawing	J. Brennand	...	...	7.15–9.15	...	...
339	T Engineering Science	G. E. Hall	7.15–9.15	...	...	...	...

	S2							
340	T Installation Rules, Theory and Calculations	S. Garnett	...	...	7.15–9.15	...	...
341	T Practical Work ; Sketching and Drawing	S. Garnett	...	7.15–9.15	...	...	...
342	T Electrical Engineering Science	A. Woods	7.15–9.15	...	...	...	...
	S3							
343	T Installation Rules, Theory and Calculations	G. Pimley	7.15–9.15	...	...	...	...
344	T Practical Work, Sketching and Drawing	G. Pimley	...	...	...	...	7.15–9.15
345	T Mathematics	J. Bagot	...	7.15–9.15	...	...	...
	RADIO SERVICE WORK.							
	S1							
346	T Mathematics	R. H. Wignall	7.15–9.15	...	...	...	...
347	T Radio Theory	... ...	...	...	7.15–9.15	...	...
348	T Calculations and Practical work	... ...	...	...	...	...	7.15–9.15
	S2							
349	T Physics	F. B. Landolt	...	7.15–9.15	...	...	...
350	T Radio Theory	L. E. Birchall	...	...	7.15–9.15	...	...
351	T Calculations and Practical work	L. E. Birchall	...	...	...	7.15–9.15	...
	S3							
352	T Electrical Engineering Science	A. Woods	7.15–9.15	...	...	...	...
353	T Radio Theory	... ...	...	7.15–9.15	...	...	...
354	T Calculations and Practical work	... ...	...	...	7.15–9.15	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	PLUMBING.						
	S1						
355	† Plumbing (Theory)	F. Coupe	...	...	7.15–9.15	...	...
356	† Plumbing (Practical)	J. Pilkington	7.15–9.15	...	...	...	...
357	† Geometry and Calculations ...	J. N. Walker	...	7.15–9.15	...	...	...
	S2						
358	† Plumbing (Practical)	F. Coupe	...	...	...	...	7.15–9.15
359	† Plumbing (Theory)	F. Coupe	7.15–9.15	...	...	...	...
360	† Plumbing Science & Calculation	F. W. Steele	...	7.15–9.15	...	...	...
	S3						
361	† Plumbing (Practical)	J. Dixon	...	...	7.15–9.15	...	...
362	† Plumbing (Theory)	J. Dixon	7.0–8.30	...	...	...	...
363	† Plumbing (Science)	J. Dixon	8.30–9.30	...	...	...	...
364	† Building Construction	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
	A						
365	† Plumbing (Practical)	J. Dixon	...	...	7.15–9.15	...	...
366	† Plumbing (Theory)	J. Dixon	7.0–9.30	...	...	...	...
367	† Building Construction or ...	G. H. Broadbent	...	7.15–9.15	...	...	...
368	† Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
	GAS SUPPLY.						
	S1						
369	† Mathematics	T. Wilkinson...	...	...	...	7.15–9.15	...
370	† Engineering Drawing ...	F. Callow	...	7.15–9.15	...	...	...
371	† Engineering Science	F. W. Walker	7.15–9.15	...	...	...	...
	S2						
372	† Inorganic Chemistry	W. Harrison	...	...	...	...	7–9.30
373	† Mathematics	J. Bagot	...	...	...	7.15–9.15	...
374	† Engineering Drawing ...	F. Callow	...	...	7.15–9.15	...	...

	S3							
375	T Engineering Science	G. E. Hall	...	...	...	...	...	7.15–9.15
376	T Inorganic Chemistry	C. C. Addison	...	...	...	...	7–9.30	...
377	T Gas Supply	... ...	...	...	...	...	...	...
	CARPENTRY AND JOINERY.							
	S1							
378	T Carpentry and Joinery (Theory) ...	H. Fisher	7.15–9.15	...	...	...	...	...
379	T Carpentry and Joinery (Practical) ...	J. Smith	...	...	...	...	...	7.15–9.15
380	T Geometry and Calculations ...	J. N. Walker	...	7.15–9.15	...	...	...	...
	S2							
381	T Carpentry and Joinery (Theory) ...	H. Fisher	...	...	7.15–9.15	...	...	
382	T Carpentry and Joinery (Practical) ...	H. G. Yeadon	7.15–9.15	...	...	...	...	
383	T Science and Calculations ...	A. E. R. Bill	...	...	...	...	...	7.15–9.15
	S3							
384	T Carpentry and Joinery (Theory)	H. Allen	...	...	...	...	...	7.15–9.15
385	T Carpentry and Joinery (Practical)	H. G. Yeadon	...	7.15–9.15	...	...	...	...
386	T Building Construction ...	A. E. R. Margerison ...	...	...	...	...	7.15–9.15	...
	A							
387	T Carpentry and Joinery (Theory)	G. H. Broadbent	...	...	...	...	...	7.15–9.15
388	T Carpentry and Joinery (Practical)	H. G. Yeadon	...	7.15–9.15	...	...	...	...
389	T Geometry	J. N. Walker...	7.15–9.15	...	...	...	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	BRICKLAYERS.						
	S1						
390	T Building Construction ...	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
391	T Geometry	J. N. Walker	...	7.15–9.15	...	...	...
392	T Science and Calculations ...	A. E. R. Bill...	...	...	...	...	7.15–9.15
	S2						
393	T Building Construction... ...	G. H. Broadbent	...	7.15–9.15	...	...	...
394	T Geometry	J. N. Walker	...	...	...	...	7.15–9.15
395	T Brickwork and Masonry ...	H. Lonsdale	...	...	7.15–9.15	...	...
	S3						
396	T Building Construction ...	H. Walters	...	...	...	7.15–9.15	...
397	T Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
398	T Brickwork and Concreting ...	H. Lonsdale	...	...	7.15–9.15	...	...
	COTTON SPINNING.						
399	T Opening and Carding (Theory)	... ...	...	7.15–9.15	...	...	...
A 400	T Opening and Carding (Practical)	... ...	...	...	...	7.15–9.15*	...
401	T Roving Preparation (Theory)	... ...	...	...	...	...	7.15–9.15
B 402	T Roving Preparation (Practical)	... ...	...	...	...	7.15–9.15*	...
403	T Spinning (Theory)	S. Jackson	7.15–9.15	...	...	...	...
C 404	T Spinning (Practical)	S. Jackson	...	...	7.15–9.15*	...	...
405	T Trade Calculations and Science I. ...	J. Preston	...	...	7.15–9.15*	...	...
406	T ,, ,, ,, II. ...	R. Chatburn	7.15–9.15*	...	...	...	...

Students take A., **or** B. **or** C., **AND Trade Calculations and Science.**

	COTTON MANUFACTURE (WEAVING).							
	S1							
407	† Cotton Manufacture (Weaving) (Theory)	D. Atkinson	...	...	...	7.15–9.15	...
408	† Cotton Manufacture (Weaving) (Practical)	J. W. Blackhurst	...	...	...	...	7.15–9.15*
409	† Trade Calculations and Science	J. Preston	...	...	7.15–9.15*	...	...
	S2							
410	† Cotton Manufacture (Weaving) (Theory)	W. Dagger	...	...	...	...	7.15–9.15*
411	† Cotton Manufacture (Weaving) (Practical)	W. Jackson ... ... C. J. Breakell	...	...	7.15–9.15*	...	...
412	† Trade Calculations and Service	R. Chatburn	7.15–9.15				
	LABORATORY ARTS.							
413	† Metalwork	G. W. Robinson	...	...	7.15–9.15	...	...
414	† Woodwork	H. G. Yeadon	...	7.15–9.15	...	...	...
415	† Glass Blowing	H. Helm	7.15–9.15	...	...	...	...
	GYMNASIUM CLASSES.							
416	† Ladies	Misses Archer and Albin ...	8.15–9.15	7—8	8.15–9.15	7—8	8.15–9.15
417	† Men	F. Wilcock, A. Dunbill and T. Heaton	7—8	8.15–9.15	7—8	8.15–9.15	7—8

ART SCHOOL (AVENHAM INSTITUTE).

DAY.	ROOM.	TIMES OF CLASSES.	SUBJECTS.	TEACHERS.
Monday ...	11 and Museum	10.0–12.30	General Drawing, Animals, Nature Drawing	G. A. Clucas.
	11–12–2	2.0–3.30	Painting Still Life	W. Rathbone.
	10–2A	2.0–3.30	General Drawing, Illustration, Design	W. Rathbone
	1—10	7.0–7.30	Lecture, Form and Colour }	A. Bann
		7.0–7.30	Lecture, Form and Colour }	W. Rathbone.
			Dress Design	E. Rostron
	9–10	7.0–9.0	Drawing—Industrial and Commercial Art (Painting and Decorating, Advertising, etc.)	W. Rathbone, A. Bann and V. Johnston
	11–12	7.0–9.0	Drawing and Painting—General Art and Teachers' Course...	M. Duckett
	12	7.0–9.0	Painting Ornament, etc., 4th and 5th years, P. & D. ...	W. Shone
Tuesday ...	2–2A	10.0–12.30	Perspective, Etching	G. A. Clucas
	12	10.0–12.30	Design and Fabric Printing	W. Rathbone.
	12	10.0–12.30	Figure Drawing	W. Rathbone.
	12	2.0–3.30	Advanced Decoration and Figure Composition	W. Rathbone.
	10	2.0–3.30	Design and Crafts	M. Duckett
	9	3.30–4.0	Lecture, Form and Colour, 1st and 2nd year alternately ...	W. Rathbone and A. Bann.
	1 and 9	7.0–7.30	Lecture, Design and Colour }	G. A. Clucas.
		7.0–7.30	Lecture, Design and Colour }	W. Rathbone.
	1	7.0–9.0	Design—Industrial, etc.	M. Duckett
	9	7.0–9.0	Design, Industrial P. & D., 1st to 3rd years	G. A. Cluca and V. Johnson
	10	7.0–9.0	Textile Design, 4th and 5th years*	W. Garnar
	11	7.0–9.0	Design—Commercial Art	A. Bann and E. Barton

Day.	Room.	Times of Classes.	Subjects.	Teachers.
Wednesday...	9	10.0–12.30	Architectural Drawing, etc.	G. A. Clucas
	12	10.0–12.30	Still Life, Painting and General Drawing	W. Rathbone
	10	2.30–4.30	Lettering and Commercial Art (Theory and Practice) ...	A. Bann.
	11	2.30–4.30	Figure Drawing and Anatomy	W. Rathbone
	1	7.0–9.0	Commercial Art Course (Lettering and Lay-outs)	A. Bann and T. Blackburn.
	2	7.0–9.0	Drawing from Life	G. A. Clucas
	2a	7.0–9.0	Etching	G. A. Clucas
	8	7.0–7.30	Painting and Decorating (Theoretical), 2nd year*	F. W. Sharples
	8	7.30–9.0	Painting and Decorating (Practical), 2nd year*	F. W. Sharples
	9	7.0–9.0	Form and Colour (Junior Course)	E. Barton
	10	7.0–9.0	Textile Design, 3rd year*	F. Southworth
	11	7.0–9.0	Crafts (Embroidery), etc.	M. Duckett
	7	7.0–9.0	Modelling and Casting*	W. Rathbone
Thursday ...	11	10.0–12.30	General Knowledge, etc., Drawing	G. A. Clucas
	2	10.30–12.30	Drawing and Painting from life	W. Rathbone
	11	2.0–4.0	Object Drawing	A. Bann
	8	7.0–7.30	Painting and Decorating (Theoretical), 3rd and 4th years ...	R. E. Cusworth
	8	7.30–9.0	Painting and Decorating (Practical), 3rd and 4th years ...	R. E. Cusworth
	9	7.0–9.0	Junior Course (Design and Colour)	E. Barton
	10	7.0–9.0	Bookbinding	A. Bann
	11–12	7.0–9.0	Illustration	W. Rathbone.
	12	7.0–9.0	Anatomy	W. Rathbone
	11–12	7.0–9.0	Figure Drawing	T. Blackburn
	1	7.0–9.0	Schemes and Interior Decoration	W. Shone
Friday ...	12	10–12.30	Architectural Drawing	G. A. Clucas
	10	10–12.30	Architectural Design, Perspective	G. A. Clucas
	11	10–12.30	Illustration and History of Painting	W. Rathbone
	2	2.0–2.30	Drawing from Life	W. Rathbone
	1	2.30–4.0	Design, Crafts, etc. (Theory and Practice)	M. Duckett.
	10	7.0–7.30	Lecture, Architectural History*	G. A. Clucas
	10	7.30–9.0	Advanced Industrial Art*	G. A. Clucas
	1	7.0–9.0	Crafts—Various*	M. Duckett.
	9	7.0–9.0	English and Arithmetic, 1st and 2nd years Junior Art* ...	F. Allen.
	8	7.0–9.0	Painting and Decorating, 1st year	E. Robinson

* These Classes will terminate after the U.L.C.I. Examinations.

DAY JUNIOR TECHNICAL SCHOOL.—TIME TABLE.

Monday—	9.15—10.15	10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1A. ..	Maths. & Geometry	Science	History	Gymnasium	Workshop	
		10.15—10.45	10.45—12.15	1.45—2.45	2.45—4.45	
1B. ..	History	Gymnasium	Workshop	Maths. & Geometry	Science	
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2A. ..	Science	Gymnasium	English	Workshop	Maths. & Geometry	
	9.15—10.45	10.45—12.15	1.45—3.15	3.15/3.45	3.45—4.45	
2B. ..	Workshop	Maths. & Geometry	Science	Gymnasium	English	
Tuesday—	9.15—10.15	10.15—10.45	10.45—12.15	1.45—2.45	2.45—4.45	
1A. ..	English	Gymnasium	Technical Drawing	Maths. & Geometry	Workshop	
		10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1B. ..	Maths. & Geometry	Workshop	English	Gymnasium	Art	
		10.15—11.15	11.15—12.15	1.45—3.15	3.15—3.45	3.45—4.45
2A. ..	History	English	Maths. & Geometry	Applied Mechanics	Gymnasium	Geography
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2B. ..	Maths. & Geometry	Gymnasium	Geography	Art	Chemistry	
Wednesday—	9.15—10.15	10.15—12.15				
1A. ..	Maths. & Geometry	Science	2.0—4.15			
1B. ..	English	Workshop	Organised Games			
	9.15—10.45	10.45—12.15				
2A. ..	Science	Maths. & Geometry	Organised Games			
	9.15—10.15	10.15—11.15	11.15—12.15			
2B. ..	English	History	Maths. & Geometry			
Thursday—	9.15—10.15	10.15—12.15	1.45—3.15	3.15—4.45		
1A. ..	English	Workshop	Maths. & Geometry	Art		
		10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1B. ..	Maths. & Geometry	Science	Geography	Gymnasium	Technical Drawing	
		10.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45	
2A. ..	Maths. & Geometry	Gymnasium	Technical Drawing	Chemistry	Workshop	
	9.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45		
2B. ..	Technical Drawing	Applied Mechanics	Chemistry	Maths. & Geometry		
Friday—	9.15—10.15	10.15—10.45	10.45—12.15	1.45—2.45	2.45—3.45	3.45—4.45
1A. ..	Geography	Gymnasium	Technical Drawing	Maths. & Geometry	English	1A & 1B General Information
	9.15—10.45		10.45—12.15	1.45—2.45	2.45—3.45	
1B. ..	Maths. & Geometry		Technical Drawing	English	Maths. & Geometry	
	9.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45		
2A. ..	Maths. & Geometry	Workshop	Art	Technical Drawing		
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2B. ..	Science	Gymnasium	Maths. & Geometry	Workshop	Technical Drawing	

Day Junior Technical School.

TIME TABLE ANALYSIS (FIRST YEAR).

Subject.	Teachers.	Day and Time of Class.				
		Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Mathematics and Geometry	G. E. Hall	9.15–10.15 (A)	1.45–2.45 (A)	9.15–10.15 (A)	1.45–3.15 (A)	1.45–2.45 (A)
	C. C. Addison	1.45–2.45 (B)	9.15–10.15 (B)	...	9.15–10.15 (B)	9.15–10.45 (B) 2.45–3.45 (B)
Science	E. M. Pearson	10.15–12.15 (A) 2.45–4.45 (B)	... ...	10.15–12.15 (A) ...	10.15–12.15 (B) ...	... ...
Technical Drawing ...	E. M. Pearson ... ... J. E. Taylor	... ...	... 10.45–12.15 (A)	... ...	3.15–4.45 (B) ...	10.45–12.15 (A) 10.45–12.15 (B)
Art	G. A. Clucas	...	3.15–4.45 (B)	...	3.15–4.45 (A)	...
Workshop ...	J. H. Hulse	10.45–12.15 (B) 3.15–4.45 (A)	10.15–12.15 (B) 2.45–4.45 (A)	10.15–12.15 (B) ...	10.15–12.15 (A) ...	... ...
English	H. H. Allen ... ... J. Kettle	... ...	9.15–10.15 (A) 1.45–2.45 (B)	9.15–10.15 (B) ...	... 9.15–10.15 (A)	2.45–3.45 (A) 1.45–2.45 (B)
History ...	R. S. Cross	9.15–10.15 (B) 1.45–2.45 (A)	... ...	... ...	... ...	... ...
Geography ...	H. Newton	...	...	...	1.45–2.45 (B)	9.15–10.15 (A)
Organised Games	A. Woods	...	...	2.0–4.15	...	...
Gymnasium ...	J. Kettle	10.15–10.45 (B) 2.45–3.15 (A)	10.15–10.45 (A) 2.45–3.15 (B)	... ...	2.45–3.15 (B) ...	10.15–10.45 (A) ...
General Information ...	... ...	...	...	...	...	3.45–4.45 A. & B.

DAY JUNIOR TECHNICAL SCHOOL.

(SECOND YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS				
		Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Mathematics and Geometry	G. E. Hall	10.45–12.15 (B)	{ 9.15–10.45(B) 11.15–12.15(A)	10.45–12.15 (A)	3.15–4.45 (B)	9.15–10.45 (A)
	F. W. Walker	...	...	11.15–12.15 (B)	9.15–10.15 (A)	...
	C. C. Addison	3.15–4.45 (A)	...	...	...	11.15–12.15 (B)
Science	A. Woods	9.15–10.45 (A) 1.45–3.15 (B)	...	9.15–10.45 (A)	...	9.15–10.45 (B)
Applied Mechanics ...	F. W. Walker	...	1.45–3.15 (A)	...	10.45–12.15 (B)	...
Chemistry ...	C. C. Addison	...	3.15–4.45 (B)	...	1.45–3.15 (A)	...
Technical Drawing ...	J. S. Wrigley	...	...	...	10.45–12.15 (A)	3.15–4.45 (A)
	J. E. Taylor	...	...	...	9.15–10.45 (B)	3.15–4.45 (B)
Art	G. A. Clucas	...	1.45–3.15 (B)	...	...	1.45–3.15 (A)
Workshop ...	J. H. Hulse	9.15–10.45 (B) 1.45–3.15 (A)	... ...	... ...	1.45–3.15 (B) 3.15–4.45 (A)	10.45–12.15 (A) 1.45–3.15 (B)
English ...	H. H. Allen	11.15–12.15 (A)	10.15–11.15 (A)	...	...	...
	J. Kettle	3.45–4.45 (B)	...	9.15–10.15 (B)	...	...
History	R. S. Cross	...	9.15–10.15 (A)	10.15–11.15 (B)	...	...
Geography ...	H. Newton	...	11.15–12.15 (B)	...	...	...
		...	3.45–4.45 (A)			
Organised Games	A. Woods	...	...	2.0–4.15	...	...
Gymnasium ...	J. Kettle	10.45–11.15 (A) 3.15–3.45 (B)	10.45–11.15 (B) 3.15–3.45 (A)	...	10.15–10.45 (A)	10.45–11.15 (B)

Day Junior Commercial School.

TIME TABLE.

	9.15—10.15	10.15—11.0	Interval.	11.15—12.15	1.45—2.45	2.45—3.45	3.45—4.30
Monday—							
1A. ..	Shorthand	Mathematics	11.0–11.15	Arithmetic	Typewriting	Commerce	French
1B. ..	Geography	Arithmetic		English	French	Mathematics	Commerce
		10.15–11.15		11.30–12.15			
2A. ..	Geography	Typewriting	11.15–11.30	Gymnasium (B)	Art	Shorthand	Gymnasium (G)
2B. ..	French	Arithmetic		Geography (G)	Bookkeeping	Art	Bookkeeping (B)
Tuesday—	9.15–10.15	10.15–11.0		11.15–12.15	1.45–2.45	2.45–3.45	3.45–4.30
1A. ..	Shorthand	French	11.0–11.15	English	English	Science	Gymnasium (B)
1B. ..	English	Arithmetic		History	Science	Shorthand	Arithmetic (G)
2A. ..	Mathematics	English	11.0–11.15	French	Bookkeeping	English	Shorthand
2B. ..	French	Shorthand		Arithmetic	Commerce	Typewriting	English
Wednesday—	9.15—10.15	10.15—11.0		11.15—12.15	1.45—2.45	2.45—3.45	3.45—4.30
1A. ..	Typewriting	French	11.0–11.15	Commerce	Arithmetic	Geography	Gymnasium (G)
1B. ..	French	Typewriting		Geography	Mathematics	Shorthand	Shorthand (B)
2A. ..	History	Gymnasium (B)	11.0–11.15	Arithmetic	French	Commerce	Commerce
2B. ..	Geography	Bookkeeping (G)		French	English	Arithmetic	Shorthand
Thursday—	9.15—10.15	10.15—11.0		11.15—12.15	2.0—4.15		
1A. ..	History	French	11.0–11.15	Art	Games		
1B. ..	French	Arithmetic		Commerce	Games		
		10.15—11.15		11.30—12.15			
2A. ..	English	Arithmetic	11.15–11.30	Gymnasium (G)	Games		
2B. ..	Shorthand	Typewriting		Geography (B)	Games		
Friday—	9.15—10.15	10.15—11.15		11.30—12.15	1.45—2.45	2.45—3.30	3.30—4.30
1A. ..	Mathematics	Shorthand	11.15–11.30	Gymnasium (G)	English	Gymnasium (B)	Geography
1B. ..	Typewriting	English		Arithmetic (B)	Shorthand	Shorthand (G)	Art
		10.15—11.0		11.15—12.15		2.45—3.45	3.45—4.30
2A. ..	Arithmetic	Typewriting	11.0–11.15	French	Science	English	Shorthand
2B. ..	History	English		Mathematics	Commerce	Science	English

(B)—Boys. (G)—Girls.

DAY JUNIOR COMMERCIAL SCHOOL.

TIME TABLE ANALYSIS (FIRST YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday	Thursday.	Friday.
Arithmetic ...	R. S. Cross	10.15–11.0 (B) 11.15–12.15 (A)	10.15–11.0 (B) 3.45–4.30 (Girls)	1.45–2.45 (A)	10.15–11.0 (B)	11.30–12.15 (Boys)
Art	G. A. Clucas	...	...	...	11.15–12.15 (A)	3.30–4.30 (B)
Commerce ...	R. S. Cross	2.45–3.45 (A) 3.45–4.30 (B)	... ...	11.15–12.15 (A) ...	... 11.15–12.15 (B)	... ...
English	A. Ellison	...	9.15–10.15 (B) 1.45–2.45 (A)	... ...	... ...	... ...
	A. Frankish	11.15–12.15 (B)	11.15–12.15 (A)	...	...	10.15–11.15 (B) 1.45–2.45 (A)
French	A. Frankish	3.45–4.30 (A) 1.45–2.45 (B)	10.15–11.0 (A) ...	10.15–11.0 (A) 9.15–10.15 (B)	10.15–11.0 (A) 9.15–10.15 (B)	... ...
Geography ...	A. Frankish	... 9.15–10.15 (B)	... ...	2.45–3.45 (A) 11.15–12.15 (B)	... ...	3.30–4.30 (A) ...
History	R. S. Cross	...	11.15–12.15 (B)	...	9.15–10.15 (A)	...

Mathematics ...	A. Frankish	10.15–11.0 (A) 2.45–3.45 (B)	... ...	... 1.45–2.45 (B)	... ...	9.15–10.15 (A) ...
Shorthand ...	H. Newton	9.15–10.15 (A)	9.15–10.15 (A) 2.45–3.45 (B) ...	... 2.45–3.45 (B) 3.45–4.30 (Boys)	... ...	10.15–11.15 (A) 1.45–2.45 (B) 2.45–3.30 (Girls)
Typewriting ...	W. Webster	1.45–2.45 (A) ...	... ...	9.15–10.15 (A) 10.15–11.0 (B)	... ...	... 9.15–10.15 (B)
Science	H. W. Edmunds ...	... ...	2.45–3.45 (A) 1.45–2.45 (B)	... ...	... ...	... ...
Gymnasium ...	A. Ellison	...	...	3.45–4.30 (Girls)	...	11.30–12.15 (Girls)
	J. Kettle	...	3.45–4.30 (Boys)	...	...	2.45–3.30 (Boys)
Organised Games	A. Ellison	...	...	...	2.0–4.15 (Girls)	...
	A. Woods	...	...	...	2.0–4.15 (Boys)	...
Intervals ...	——	11.0–11.15	11.0–11.15	11.0–11.15	11.0–11.15	11.15–11.30

DAY JUNIOR COMMERCIAL SCHOOL.

SECOND YEAR.

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday	Thursday	Friday.
Arithmetic ...	A. Ellison	... 10.15–11.15 (B)	... 11.15–12.15 (B)	11.15–12.15 (A) 2.45–3.45 (B)	10.15–11.15 (A) ...	9.15–10.15 (A) ...
Art	G. A. Clucas	1.45–2.45 (A) 2.45–3.45 (B)	... ...	... ...	... ...	... ...
Commerce ...	R. S. Cross	... ...	... 1.45–2.45 (B)	2.45–3.45 (A) 3.45–4.30 (A)	... ...	... 1.45–2.45 (B)
English ...	A. Ellison	... ...	10.15–11.0 (A) 2.45–3.45 (A) 3.45–4.30 (B)	... ... 1.45–2.45 (B)	9.15–10.15 (A)	2.45–3.45 (A) 10.15–11.0 (B) 3.45–4-30 (B)
French	J. Kettle	... 9.15–10.15 (B)	11.15–12.15 (A) 9.15–10.15 (B)	1.45–2.45 (A) 11.15–12.15 (B)	... ...	11.15–12.15 (A) ...
Geography ...	A. Ellison ... ... A. Frankish	9.15–10.15 (A) 11.30–12.15 (Girls)	... ...	9.15–10.15 (B) ...	... 11.30–12.15 (Boys)	... ...
History	R. S. Cross	...	...	9.15–10.15 (A)	...	9.15–10.15 (B)
Mathematics ...	A. Frankish	...	9.15–10.15 (A)	...	...	11.15–12.15 (B)
Shorthand ...	W. Webster	2.45–3.45 (A) ...	3.45–4.30 (A) 10.15–11.0 (B)	... 3.45–4.30 (B)	... 9.15–10.15 (B)	3.45–4.30 (A) ...

Typewriting ...	W. Webster	10.15–11.15 (A) ...	... 2.45–3.45 (B)	... ...	... 10.15–11.15 (B)	10.15–11.0 (A) ...
Bookkeeping ...	H. Newton	1.45–2.45 (B) 3.45–4-30 (Boys)	1.45–2.45 (A) ...	... 10.15–11.0 (Girls)	... ...	... ...
Science	H. W. Edmunds ...	...	...	...	...	1.45–2.45 (A) 2.45–3.45 (B)
Gymnasium ...	A. Ellison	3.45–4.30 (Girls)	...	...	11.30–12.15 (Girls)	...
	J. Kettle	11.30–12.15 (Boys)	...	10.15–11.0 (Boys)	...	...
Organised Games	A. Ellison	...	...	...	2.0–4.15 (Girls)	...
	A. Woods	...	...	...	2.0–4.15 (Boys)	...
Intervals ...	——	11.15–11.30	11.0–11.15	11.0–11.15	11.15–11.30	11.0–11.15

NOTES.

NOTES.

CLASSES AFFILIATED TO MANCHESTER AND LIVERPOOL UNIVERSITIES.

These provide complete Courses of Instruction for the Joint Matriculation of the Northern Universities; the Intermediate B.Sc. and Intermediate B.Sc. (Tech.), Manchester; the Intermediate B.Sc., Liverpool; the Intermediate Examinations of the University of London; and the various Preliminary Professional Examinations, including Medical, Dental, and Pharmaceutical.

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All communications to be addressed to—

T. M. NAYLOR, Principal.

July, 1938.

Crozier & Co., Printers, North Road, Preston.

HARRIS PRESTON INSTITUTE

PROSPECTUS

SESSION - 1939-40



HARRIS INSTITUTE, PRESTON

TELEPHONE NUMBERS:
TECHNICAL COLLEGE 4016. AVENHAM INSTITUTE 3093.

THE INSTITUTE COMPRISES
THE TECHNICAL COLLEGE (CORPORATION STREET),
AND THE AVENHAM INSTITUTE.

PROSPECTUS
of
CLASSES

SESSION 1939-40.

A—

1. TECHNICAL DAY CLASSES	-	**Re-open Sept. 11**
2. JUNIOR DAY SCHOOLS *(Technical and Commercial)*	-	**„ „ 5**
3. EVENING CLASSES	- -	**„ „ 18**

B—

1. DAY ART CLASSES	- -	**Re-open Sept. 11**
2. EVENING ART CLASSES	-	**„ „ 18**

SPECIAL NOTICE.—Evening Students will be enrolled at the Technical College, Corporation Street, from 7 to 9 p.m. on Wednesday, Thursday and Friday evenings, September 13th, 14th and 15th, and may also enrol during the week commencing Monday, September 11th, between 9 a.m. and 5 p.m. (Saturday, 9 to 12).

Students who do not enrol on these dates will be charged an extra fee of 2/6. This will be strictly enforced.

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1939-40.

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Brief Historical Note.

"That . . . . lectures be delivered on such subjects and at such times as may be thought desirable and convenient."

WITH this enunciation of the means for attainment of its ideals, the future Harris Institute entered, in 1828, upon the first stage of its active existence. Its founders were men prominent in business and social life, who had met in response to a circular from Mr. Joseph Livesey inviting their co-operation. The text of that circular is appended to this note.

Under the zealous guidance of Dr. John Gilbertson, they undertook the equipping of rooms in Cannon Street to serve as a library and museum, and made such provision as they could for the apparatus and instruments necessary for the lectures. Thus, with an annual fee of 6/6, the "Institution for the Diffusion of Knowledge," opened its doors to high endeavour.

A Centre with aims somewhat more ambitious than those of the ordinary Mechanics' Institute seems to have been the purpose for which the founders were striving; and their foresight was justified by the fact that, after the second year, membership had reached a total of 400/500. Larger premises became necessary; and, through the liberality of Thos. German, sometime Mayor, the Avenham Institute was opened in 1849, five years after acquisition of the site.

Serious financial difficulties arising from time to time were surmounted by patient effort, and membership grew steadily. The School of Art was established in 1859, and that of Science in 1865. Among the names of many distinguished lecturers who addressed the Institution in these early days, it is interesting to recall those of Sir Isaac Pitman and Dean Stanley; while the Cambridge University Extension scheme, adopted in 1880, stimulated a further increase of studious activity.

The year 1881 witnessed a great change. Avenham Institute was taken over for future administration by the trustees of Mr. E. R. Harris, who had been a leading figure in the legal life of Preston and the county, and had bequeathed over £300,000 for the general benefit of the town. This new arrangement led, *inter alia*, to a scheme whereby the Harris Free Library became the recipient of over 7,000 volumes from the shelves at Avenham.

The first grant from the Preston Corporation to the Harris Institute came in 1896, and in the following year a great project was consummated by the opening of the Technical College. The affiliation of the Harris Institute to the universities of Manchester and Liverpool in 1901 constitutes another landmark in its history ; while the next decade saw the establishment of the two Junior Schools, Technical (1912) and Commercial (1915). Considerable extensions to the Technical College, even now overtaxed, were made in 1931.

Space forbids, unfortunately, the individual mention of countless benefactors, who, in the persons of private citizens or as public bodies or firms, have successively enriched the resources of the Harris Institute ; but to them, no less than to its original founders and sponsors, it owes the constant tribute of deep and grateful acknowledgment.

COPY OF ORIGINAL CIRCULAR.

Sir,

It having been ascertained that a strong feeling exists in favour of the establishment of an Institution in Preston, upon similar principles to the Mechanics' Institutes in different parts of the kingdom, it is thought advisable, to prevent any premature steps being taken, first to have a private meeting to deliberate upon the subject, and if it appear desirable to proceed, to make such preliminary arrangements as may appear necessary.

A meeting for the above purposes will be held This Evening (Thursday) in Mr. Smith's Large Room, No. 11 Cannon Street (over Mr. Templeton's School), at which your attendance is particularly desired.

I am,

Sir, your servant,

J. LIVESEY.

Preston, 11th Sept., 1828.

I. Wilcockson, Printer, Preston.

CALENDAR.

1939.		
September	5th.	Junior Technical and Junior Commercial Schools begin.
	6th.	Open Night.
	11th.	Council.
	11th.	Day Classes begin.
	13th.	Registration of Evening Students.
	14th.	Registration of Evening Students.
	15th.	Registration of Evening Students (Scholarship holders).
	18th.	Evening Classes begin.
November	6th.	Engineering and Building Committee.
	6th.	Textile Committee.
	6th.	Art, Science and Commerce Committee.
December	4th.	Council and Annual Meeting.
	15th.	Prize Distribution.
	20th.	Christmas Vacation begins (Day and Evening Classes).
1940.		
January	8th.	Evening Classes begin.
	8th.	Day Classes begin.
March	4th.	Council.
	21st.	Easter Vacation begins (Day and Evening Classes).
	28th.	Evening Classes begin.
April	2nd.	Day Classes begin.
May	4th.	Junior Technical and Junior Commercial Schools Entrance Examination.
	9th.	Whitsuntide Vacation begins.
	21st.	Day Classes begin.
June	3rd.	Council.
July	4th.	Junior Technical and Junior Commercial Schools' Sports.
	11th.	Senior Day Classes and Art Evening Classes close.
	11th.	Junior Technical and Junior Commercial Schools close.

THE LIBRARY.

Senior Students in all departments should note that the Technical College Library exists primarily for their benefit, and that a good selection of the latest publications in their various subjects may be consulted. Although it is not practicable to arrange the lending of books for outside reading, students are strongly urged to avail themselves of the valuable facilities for reference which are afforded within the College. The production of a comprehensive catalogue, with separate author- and subject-index has been completed ; and it will prove of use to those desirous of ascertaining the extent of the Library's resources in any particular subject.

SOCIAL AND ATHLETIC ACTIVITIES.

Various Social and Athletic Activities are held during the session, and notices are posted in the corridor giving the dates and times of the forthcoming events.

In connection with the Art Department, there is a Sketch Club, Students' Union and Dramatic Club, for details see page 58.

The Harris Institute Rugby Football Club, practice games and fixtures Saturday afternoons. Intending players should give their names at once to the Secretary. There is also a Hockey Club, and players are invited to join this.

The Institute possesses a Gymnasium which is fully equipped. For further information see pages 23, 45 and 79.

A social evening is allotted to each department when short plays and informal dances are held.

Students are invited to contribute to the Magazine, particulars of which will be posted up at the appropriate times.

Full particulars of these events are published on the notice board in the main corridor.

REFECTORY.

The Council has instituted a fully equipped Dining Room. Lunches, teas and light refreshments may be obtained from 10-30 a.m. to 7-15 p.m.

The Refectory is for the convenience of the students and staff, and all students may use the Refectory between the times stated.

The Refectory Superintendent, Mrs. McGowan, will arrange special teas, suppers, etc., as required.

REGULATIONS.

APPLICABLE TO ALL STUDENTS ATTENDING CLASSES AT THE HARRIS INSTITUTE.

Students are expected to attend punctually at the Classes for which they enrol.

All students are expected to take an examination at the end of the course in those subjects for which they enrolled at the opening of the Session.

Smoking within the School buildings is strictly prohibited ; and Students must not loiter about the corridors.

The Lecturers are authorised to report periodically through the Principal, on attendance, homework and conduct of each Student.

The Council shall have power in dealing with Students who are unsatisfactory in these or other respects, to remove their names from the Register without return of fee.

SCHOLARSHIPS AND PRIZES.

A limited number of Scholarships and Prizes will be awarded at the discretion of the Council.

Prizes are also awarded by the Preston Building Trades Employers' Association, the Preston and District Engineers and Ironfounders Employers' Association, the North Lancashire Master Cotton Spinners and Manufacturers' Association, the Preston Master Printers' Federation, and the Typographical Association, Preston.

Full particulars of Scholarships and Prizes may be obtained on application.

SUMMARY OF DAY, PART-TIME DAY AND EVENING COURSES.

DEPARTMENT.	DAY AND PART-TIME DAY.	EVENING.
ART	General principles of Art, History and Methods of Production, Drawing, Design, Colour Study, Figure Composition, Illustration, Painting, Sculpture, Commercial Art, Etching, etc. Industrial Art and Crafts. Architecture, Courses in Perspective, Architectural History and Drawing. Textile Design. Advanced Design and Decoration.	Designed chiefly to furnish suitable study and to further the interests of apprentices in trades and crafts where Art plays a more or less prominent part.
	Students prepared for examinations under the Board of Education; City and Guilds of London Institute; Union of Lancashire and Cheshire Institutes; and the National Society of Art Masters, etc. (See pages 52 to 58).	Students prepared for examinations under the Board of Education; City and Guilds of London Institute; Union of Lancashire and Cheshire Institutes; and the National Society of Art Masters, etc. (See pages 52 to 58, 80 and 81).
BUILDING	National Certificates of the Institute of Builders. Building Courses (Union of Lancashire and Cheshire Institutes) (COURSE NO. 7)	National Certificates of the Institute of Builders. Building Courses (Union of Lancashire and Cheshire Institutes)
	Intermediate A.R.I.B.A.	Builders' Quantities, Carpentry and Joinery, Plumbing, Domestic and Sanitary Engineering — For City and Guilds Certificates.
		Carpentry and Joinery, Plumbing, Bricklaying — Union of Lancashire and Cheshire Institute Trade Courses. (COURSES NOS. 12, 29, 30, 31 and 32).
		Lead Burning.
		Sheet Copper Work and Bronze Welding.

COMMERCE	Royal Society of Arts Certificates (COURSE NO. 5)	Union of Lancashire and Cheshire Institutes' Grouped Courses; Royal Society of Arts Certificates and Professional Examinations of all the leading Professional Associations and Institutions, covering their syllabuses in Arithmetic, Book-keeping, Commerce, English and Commercial Correspondence, Shorthand, Typewriting, French, Spanish, Latin, German and Geography. (COURSES NOS. 19 and 20). Advanced Union of Lancashire and Cheshire Institute Courses, including Accounting and Auditing, Mercantile Law, Economics and Banking. (COURSE NO. 21). For Languages see under Language Dept.
PRINTING		The classes in Typography prepare students for the City and Guilds of London Institute Examinations. (COURSE NO. 18).
SCIENCE	Chemistry, Physics, Botany, Mathematics and Zoology as required for :— Preliminary Scientific Examination, Part 1 Pharmacy and Dispensers' Examination. L.D.S. of the Universities of Manchester, Liverpool, Edinburgh and London The Conjoint Examination M.R.C.S.; L.R.C.P. (Lond.). Pre-Registration Examination of the University of Edinburgh. Inter B.Sc. Universities of Manchester, Liverpool and London. The Associateship of the Institute of Chemistry (A.I.C.) Biology and Chemistry for Nurserymen and Gardeners. (COURSES NOS. 1, 2, 3 and 4).	Science Degree of London University. Associateship of the Institute of Chemistry (A.I.C.). National Certificate in Chemistry. Higher National Certificate in Chemistry. Preliminary Scientific Examination of the Pharmaceutical Society. Laboratory Arts Course. (COURSES NOS. 15, 16, 17 and 35).

Department.	Day and Part-Time Day.	Evening.
ENGINEERING	Engineering Degree of London University. National Certificates in Mechanical Engineering. National Certificates in Electrical Engineering. A.M.Inst.C.E. Classes A.M.I.Mech.E. Classes (Course No. 6)	Engineering Degree of London University. National Certificates in Mechanical Engineering. National Certificates in Electrical Engineering. A.M.Inst. C.E. Classes. A.M.I.Mech.E. Classes. Engineering Workshop Course. Automobile Engineering. Motor Mechanics Course and Inst. Auto. Engineers Repair Certificate Course. Sheet and Plate Metal Trades Course. Gas Supply Course. Electric Welding. Electrical Installation. Radio Service. (Courses Nos. 10, 11, 22, 23, 24, 25, 26, 27 and 28).
LANGUAGES AND MATRICULATION	Northern Universities and University of London College of Preceptors and other Professional entrance examinations (Course No. 1)	Courses in French, German, Spanish, Latin, English, Geography, History, Science and Mathematics.
TEXTILE	National Certificates in Cotton Spinning or Weaving in Union of Lancashire and Cheshire Institutes and City and Guilds grouped courses. Associateship of the Textile Institute. (Course No. 8).	National Certificates in Cotton Spinning or Weaving in Union of Lancashire and Cheshire Institutes and City and Guilds Grouped courses. Associateship of the Textile Institute. Special Classes for Overlookers, Weavers, Spinners, in Hosiery, and in Rayon and Rayon Weaving. Courses Nos. 13, 14, 33 and 34.

JUNIOR COMMERCIAL ...	The Course extends over a period of two years, and prepares boys and girls for clerical posts. The following subjects are taken—Arithmetic, Art, Algebra, Accounts, Book-keeping, Commerce, Commercial Correspondence, Physical Training, English, French, Games, Geography, History, Office Routine, Mathematics, Science, Shorthand and Typewriting (See pages 46 to 50 and 85 to 89)	
JUNIOR TECHNICAL ...	The Course extends over a period of two years, and prepares boys entering Engineering, Building and other trades. The following subjects are taken—Mathematics, Engineering and Building Drawing, Geometry, Art, Science (including Applied Mechanics, Electricity, Magnetism, Heat, Chemistry), Metalwork, Woodwork, Geography, History, English, Physical Training and Organised Games (See pages 46 to 50 and 82 to 84)	

DAY CLASSES

TECHNICAL DAY CLASSES.

COURSES:

1. PROFESSIONAL ENTRANCE COURSE (Matriculation, etc.).
2. INTERMEDIATE B.Sc.
3. PRELIMINARY SCIENTIFIC—
   (*a*) Pharmacy.
   (*b*) Dental.
   (*c*) Dispensers.
4. ELEMENTARY BIOLOGY.
5. COMMERCIAL SUBJECTS.
6. ENGINEERING (Mechanical and Electrical).
7. BUILDING.
8. TEXTILE (Cotton Spinning and Weaving).
9. GYMNASIUM CLASSES.

Classes begin on Monday, September 11th, 1939.

Autumn Term :—11th September, 1939—19th December, 1939.
Spring Term :—8th January, 1940—20th March, 1940.
Summer Term : 2nd April, 1940—11th July, 1940.
(all dates inclusive).

ENROLMENT:

Students can enrol at the Technical College or Avenham Institute any day after September 5th, or on Wednesday, Thursday and Friday evenings, September 13th, 14th and 15th.

N.B.—An essential preliminary to enrolment in any Senior Day Course is the production of a satisfactory report or certificate, signed by an employer, headmaster or other person competent to vouch for the student's good character and general diligence.

TECHNICAL DAY CLASSES.

Course 1.—PROFESSIONAL ENTRANCE COURSE (Matriculation, etc.).

(Northern Universities, University of London and Professional Societies).

Intending Students should procure, from the Authorities concerned, a copy of the Regulations relating to the particular examination for which they propose to enter. As Northern Matriculation is no longer available, students who would normally have required it will be prepared on the lines of the syllabus for School Certificate B (External).

Time Table, see page 59.

Fees: £3 15s. 0d. per subject, or
£15 15s. 0d. for the full course.
Sports 5/-.

Course 2.—INTERMEDIATE B.Sc. (Science and Engineering).

(Northern Universities and University of London.)

NOTE.—The Institute is affiliated to the Universities of Manchester and Liverpool, and recognised as a privileged Institution under their Ordinances, to the extent that the attendance in the courses in Biology, Physics, Mathematics and Chemistry at the Institute is accepted as satisfying the attendance for the Intermediate B.Sc. Courses.

Time Table, see page 59.

Fees: £3 15s. 0d. per subject.
Sports 5/-.

Advanced Students who have passed Inter B.Sc. or other examination of equivalent standard can be afforded facilities to work for the B.Sc. (Lond.) or the A.I.C. The Institute is fully equipped for advanced work of this character, and is approved by London University for Engineering Degree Course Work and by the Institute of Chemistry for the training of candidates for the Associateship.

Fees: £3 3s. 0d. per day for the Session.

Course 3.—PRELIMINARY SCIENTIFIC.

(*a*) PHARMACY. PHARMACEUTICAL SOCIETY'S EXAMINATION, PART I.

The Institute is recognised by the Pharmaceutical Society for instruction in the subjects of Part I. Examination, viz. :—Chemistry, Physics and Biology.

SPECIAL NOTE.—The Pharmaceutical Society of Great Britian require that candidates must register with them as Pharmaceutical Students before beginning any portion of their curriculum of studies.

All Students must produce evidence of such registration.

Attendance at an approved course in Physics, Chemistry and Biology is necessary. Students must show satisfactory work both in written exercises and in practical work before the certificate of entry to the examination can be signed.

Time Table, see page 60 and under.

Fees £10 10s. 0d. for the course, or,
£3 15s. 0d. per subject. Sports 5/–.

(*b*) FIRST EXAMINATION FOR MEDICAL DEGREES; candidates require Chemistry, Physics and Biology.

Time Table, see page 60 and under.

Fees : £10 10s. 0d. for the course, or
£3 15s. 0d. per subject.
Sports 5/-.

(*c*) DENTAL L.D.S., PART I. (Conjoint. London, Manchester, Liverpool and Edinburgh); candidates require Chemistry and Physics in their first examination but are advised to take the Biology of the Course in preparation for their later work.

Time Table, see page 60 and under.

Fees : £3 15s. 0d. per subject. Sports 5/-.

(*d*) DISPENSERS' EXAMINATION ; candidates require Chemistry.

Time Table, see page 60 and under.

Fee : £3 15s. 0d. Sports 5/-.

TIMES OF CLASSES.

	9.30—10.30	10.30—11.30	11.30—12.30	2—3	3—4.30
Monday ...	Biology Lecture	Biology Practical		Organic Chemistry Lecture	Chemistry Practical
Tuesday ...	Chemistry Lecture	Chemistry Practical		Physics Optics and Sound Lecture	Practical
Wednesday ...	Physics Heat & General Physics Lecture & Practical			Chemistry Lecture	Chemistry Practical
Thursday ...	Biology Lecture	Biology Practical		Chemistry Lecture	Chemistry Practical
Friday ...	Biology Lecture	Biology Practical		Physics Magnetism and Electricity Lecture	Practica

Course 4.—ELEMENTARY BIOLOGY, SCIENCE and SURVEYING.

A course for Park Apprentices and Nurserymen : for those wishing to study the scientific basis of horticulture.

It consists of a two-year course in elementary biology and science and a short practical course in surveying.

This and subsequent courses are intended to prepare for the Diploma of Park Administration and for the certificate of the R.H.S.

Time Table, see page 61.

Fee, 10/6 for bona fide gardeners.

Course 5.—COMMERCIAL SUBJECTS.

Time Table, see page 61.

Fees: £1 per subject per term, or £2 10s. per term for the course. Sports 2/6.

Course 6.—ENGINEERING (Part Time Day).

(National Certificate Courses in Mechanical and Electrical Engineering).

NOTE.—In the first year, Mechanical and Electrical Students will take the same course, and all Students should attend on one evening per week.

For general regulations and conditions of admission, see under Evening Classes, pages 28 to 32.

Time Table, see pages 61, 62.

Fee : £2 2s. od. per session.

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering (Mechanical and Electrical).

Time Table, see page 59.

Students wishing to proceed to a degree must first pass the Matriculation examination, and should consult the Head of the Engineering Department.

Course 7.—BUILDING (Part Time Day).

(National Certificate Course.)

Time Table, see page 63.

Fee £1 1s. od. per Session.

MOTOR BODY BUILDING (Part Time Day).

Time Table, see page 63.

Fee : £2 2s. per session.

INTERMEDIATE R.I.B.A.

Time Table, see page 63.

Fee : £2 2s. od. per session.

Course 8.—TEXTILE (Part Time Day).

A part-time course in Cotton Spinning, Weaving and Designing, suitable for Students who desire a good general knowledge of the principles and processes involved in the making and selling of cotton and rayon fabrics.

The classes shown in the Time Table are held in the mornings of each day, but arrangements, where necessary, may be made for tuition in the ancillary subjects in afternoon or evening classes.

Time Table, see page 63.

Fees : £1 1s. 0d. per morning for the session.
£4 4s. 0d. for the full course.
Sports 5/-.

Course 9.—GYMNASIUM.

A course of instruction will be given on Saturday mornings if a sufficient number of Students enrol.

Fee : 5/- per session (2/6 if attending other classes).

For Gymnasium classes held during the evening session see page 45 or 79.

NOTE.—The fees stated for the various courses do not apply to Students residing in County Boroughs other than Preston.

Such Students should enquire at the Office before enrolling to ascertain the fees of their courses. The Lancashire County Council Capitation Scale will be applied.

WOMEN DAY STUDENTS.

All women students, whether entering for the first time or not, are required to report to their Tutor-in-charge, Miss R. S. Cross, at 3 p.m., on Tuesday, September 19th, 1939.

Those who may enrol after the above date **must** see Miss Cross on the first Thursday afternoon subsequent to their enrolment ; and this time will be kept free each week throughout the Session in order to afford an opportunity for such further interviews as may be necessitated by circumstances of conduct or by other eventualities.

EVENING CLASSES

EVENING CLASSES.

SENIOR AND ADVANCED TECHNICAL AND COMMERCIAL COURSES.

These Courses proceed by progressive stages thus :—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

TECHNICAL COURSES.

10.—MECHANICAL ENGINEERING (National Certificate).
11.—ELECTRICAL ENGINEERING (National Certificate).
12.—BUILDING (National Certificate).
13.—COTTON SPINNING (National Certificate).
14.—COTTON MANUFACTURE (WEAVING) (National Certificate).
15.—PURE AND APPLIED CHEMISTRY (National Certificate).
16.—SCIENCE DEGREE and A.I.C. COURSES.
17.—PHARMACY.
18.—TYPOGRAPHY.

COMMERCIAL COURSES.

19.—GENERAL COMMERCIAL.
20.—SENIOR CLERICAL COURSE.
21.—ADVANCED COMMERCIAL.

LANGUAGE COURSES.

See pages 40 and 41.

TRADE COURSES.

The following Courses are held :—

22.—ENGINEERING WORKSHOP PRACTICE.
23.—MOTOR MECHANICS and I.A.E. REPAIR CERTIFICATE.
24.—MOTOR BODY BUILDING.
25.—ELECTRIC WELDING.
26.—SHEET AND PLATE METALWORK.
27.—ELECTRICAL INSTALLATION WORK.
28.—RADIO SERVICE WORK.
29.—CARPENTRY AND JOINERY.
30.—PLUMBING
31.—BRICKLAYERS.
32.—LEAD BURNING, SHEET COPPER WORK AND BRONZE WELDING.
33.—COTTON SPINNING.
34.—COTTON MANUFACTURE (WEAVING).
35.—LABORATORY ARTS.

MISCELLANEOUS, SCIENCE, LANGUAGES, Etc.

Physics, Chemistry, Mathematics, Latin English, French, German, Spanish, Economics, Geography. Gymnasium Classes (see pages 45 and 79).

ENROLMENT:

Students will be enrolled at the Technical College on Wednesday, Thursday and Friday evenings, September 13th, 14th and 15th, from 7 to 9 p.m., and may enrol during the weeks commencing September 4th and 11th, between 9 a.m. and 5 p.m. (Saturday, 9—12).

Classes begin on Monday, September 18th, 1939.

VACATIONS:

The College will be closed for the Christmas vacation from December 20th, 1939, to January 6th, 1940, and for the Easter vacation from March 21st to March 27th, 1940.

The dates in each case are inclusive.



EVENING CLASSES.

GENERAL REGULATIONS.

CONDITIONS OF ADMISSION.

Before admission to a **Senior Course** a Student must have passed the 2nd year of the Preparatory Technical or Commercial Course (conducted by a Local Education Authority) in the Junior Evening Institutes or have reached an equivalent educational standard.

Before admission to a **Trade Course** a Student must have passed the 1st year of the Preparatory Technical Course (held in the Junior Evening Institutes), or have reached an equivalent educational standard.

Exceptions to the above conditions may be made only where Students are over 16 years of age, in which cases such Students must satisfy the Principal of the Institute that they are able to benefit by the classes to which they seek admission.

Students under 16 years of age who fail to satisfy the conditions of admission should attend the **Evening Junior Courses** (Technical or Commercial), conducted by the **Preston Education Committee in Junior Evening Institutes.** These Junior Courses link up the work of the Elementary School with the Evening Classes of the Harris Institute.

Full particulars may be obtained from THE DIRECTOR OF EDUCATION, Education Offices, Lancaster Road, Preston.

Scholars leaving the Elementary Day Schools should join a Junior Evening Institute immediately, in order to qualify for admission to the Harris Institute as soon as possible.

The Refectory is open to all Students from 10-30 a.m. to 7-15 p.m. Special lunches, teas or suppers may be had by arrangement with the Refectory Superintendent.

PROMOTION TO HIGHER YEARS.

To qualify for certificates and to pass on to the higher years of a course it is necessary that Students should :—

(*a*) Reach a certain standard of attainments, tested by examinations, held at the end of the Session, and

(*b*) Have made satisfactory progress during the Session, based on records of attendance, homework, classwork, etc.

FEES FOR SESSION.

All fees are payable in advance, and are not returnable.

	s.	d.
1st Year Course S1	12	6
2nd Year Course S2	15	0
3rd Year Course S3	17	6
4th Year Course A1	20	0
5th Year Course A2	20	0
Non-Course Students	17s. 6d. per subject.	

* If Typewriting is included in a Commercial Course, an additional fee of 5s. will be charged.

Students who do not enrol on the dates given will be charged an additional fee of 2s. 6d. This rule will be strictly enforced. The Council reserve the right to discontinue any Class in the event of a small number joining.

Students who desire to take the Examinations of the Union of Lancashire and Cheshire Institutes, or the City and Guilds of London Institute may be called upon to pay the whole or a portion of the Examination Fees.

NOTE.—The above fees do not apply to Students residing in County Boroughs other than Preston.

Such Students should enquire at the Office before enrolling to ascertain the fees of their courses. The Lancashire County Council Capitation Scale will be applied.

Applications for the remission of fees in cases of unemployment or other causes should be made to the Principal before enrolment.

NATIONAL CERTIFICATE COURSES.

National Certificate Courses are arranged in the following :—

Mechanical Engineering,
Electrical Engineering,
Pure and Applied Chemistry.
Building.
Textile.

Certificates are awarded at the end of

(*a*) A Three Years' Course (Senior).
(*b*) A further Two Years' Course (Advanced).

The Certificates in each case are awarded by the Board of Education in conjunction with one of the following Professional Institutions :—

(*a*) Mechanical Engineering : Institution of Mechanical Engineers.
(*b*) Electrical Engineering : Institution of Electrical Engineers.
(*c*) Pure and Applied Chemistry : Institute of Chemistry.
(*d*) Building : Institute of Builders.
(*e*) Textile : Textile Institute.

CONDITIONS OF AWARD OF CERTIFICATE.

In order to obtain a certificate a candidate must make not less than 70 per cent. of the possible attendances in each year of the course, and must obtain—

(1) Not less than 40 per cent. of the possible marks in EACH subject in the examination held at the end of each year.
(2) Not less than 40 per cent. of the possible marks obtainable in EACH year for homework, class work, laboratory work, etc., taken separately, in EACH subject for which such marks are to be awarded.
(3) Not less than 50 per cent. of the grand total of marks obtainable in EACH year. Of this total the possible marks in the examinations constitute 70 per cent., and the remaining 30 per cent. will be the possible marks for home work, class work, laboratory work, etc., in each year.

A "Distinction" may be awarded to any candidate qualified to receive a certificate who, in the opinion of the examiners, has shown special merit in the Final Examination and his certificate may be specially endorsed with the name or names of the subjects in which he has thus distinguished himself.

Fee to be paid by each Student entering the Final Examination, Five Shillings.

ENGINEERING DEPARTMENT.

Course 10.—MECHANICAL ENGINEERING.

NATIONAL CERTIFICATE COURSES (see page 64).

AWARD OF LOWER AND HIGHER CERTIFICATES.

The Institution of Mechanical Engineers, in conjunction with the Board of Education, has approved of the grouped courses of instruction for the award of certificates at the end of—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

ADVANCED COURSE.

Students must have passed the Senior Course or produce evidence of equivalent attainments.

After obtaining the Higher National Certificate, students wishing to qualify for Associate Membership of the Institution of Mechanical Engineers should take the A3 Course (See page 64).

TRADE COURSES, see pages 41 to 44 and 73 to 79.

Course 11.—ELECTRICAL ENGINEERING.

NATIONAL CERTIFICATE COURSES, see page 65.

The Institution of Electrical Engineers, in conjunction with the Board of Education, has approved of the grouped courses of instruction for the award of certificates at the end of—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

ADVANCED COURSE.

Students must have passed the Senior Course or produce evidence of equivalent attainments.

Electrical Students are expected to sit at the Examinations held by the Union of Lancashire and Cheshire Institutes in the subjects of the course.

Time Table : Mechanical and Electrical (see pages 64 and 65).

See Course 6 for Part Time Day Classes in Mechanical and Electrical Engineering.

NOTE.—Holders of the National Certificates in Mechanical or Electrical Engineering, who become candidates for Election as Students, Graduates, or Associate Members of the Institutions of

Mechanical or Electrical Engineers, and are able to satisfy the Council of their eligibility under the by-laws for one of these classes in respect of occupation and practical training, will be exempted from certain subjects in the Examinations for Election as Students and Associate Members.

Particulars relating to these exemptions may be obtained from the Head of the Department.

Students who desire to sit for the Final Examination in Electrical Engineering Practice, City and Guilds of London Institute, are now allowed to take Part I., consisting of a paper on Advanced Electrical Technology at the end of the First Year of the Advanced Course. A Certificate will not be awarded for success in Part I. only, but candidates will be notified of their success or failure in that Part.

If a candidate enters for Part I. and one section of Part II. in the same year, failure in Part I. will carry with it failure in the section of Part II. The class of Certificate awarded to a candidate successful in Part I. and one section of Part II. will be determined upon the results obtained in Part II.

For TRADE COURSES, see pages 41 to 44 and 73 to 79.

ENGINEERING DEGREE COURSE.

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering (Mechanical and Electrical).

Students wishing to proceed to a Degree must first pass the Matriculation examination and should consult the Head of the Engineering Department.

BUILDING DEPARTMENT.

Course 12.—BUILDING.

NATIONAL CERTIFICATE COURSES (see pages 65 and 66).

The Institute of Builders, in conjunction with the Board of Education, award an Ordinary Certificate on the satisfactory completion of a Three Years' Senior Course, and a Higher Certificate after a further Two Years' Advanced Course.

The conditions governing the award of National Certificates are given on page 30.

Senior Course (Ordinary Certificate).

1st and 2nd Years, see pages 65 and 66.

3rd Year. Building Construction and at least two of the following :—

Building Science,
Building Geometry,
Building Mathematics,
Builders' Quantities, or
Builders' Book-keeping.

Students who are not candidates for a National Certificate may in the third year select three subjects given in the Third Year Course, see page 66. Building Construction must be taken.

Advanced Course (Higher Certificate).

1st Year :—Building construction (A) or (B) and

Two other subjects, of which not more than one may be from Group 3, see page 66.

2nd Year :—Building Construction (A) or (B) whichever was not taken in the 1st Year, and two other subjects set out for the Advanced Course, not taken in the 1st Year ; these three subjects being selected in accordance with the scheme for the 1st Year, see page 66.

NOTE.—Builders Quantities may not be offered in the 2nd Year.

TRADE COURSES, see pages 41 to 44 and 73 to 79.

TEXTILE DEPARTMENT.

National Certificate Courses.

The Textile Institute, in conjunction with the Board of Education, award an Ordinary National Certificate on the satisfactory completion of a Three Years' Senior Course and a Higher National Certificate after a further Two Years' Advanced Course.

The conditions governing the award of National Certificates are given on page 30.

Students may take either the Cotton Spinning or the Cotton Weaving Course.

Senior Students are expected to sit at the examinations conducted by the Union of Lancashire and Cheshire Institutes.

Advanced Students take the examinations of the City and Guilds of London Institute and should obtain a Full Technological Certificate.

Students who hold the Full Technological Certificate of the City and Guilds of London Institute in either Cotton Spinning or Cotton Weaving are advised to take the Special Course, with a view to becoming Associates of the Textile Institute.

Course 13.—COTTON SPINNING.

Time Table, page 67.

Course 14.—COTTON MANUFACTURE (Weaving).

Time Table, pages 67 and 68.

For the full Technological Certificate of the City and Guilds of London Institute in Cotton Manufacture (Weaving), the candidates must pass examinations in :—

Cotton Manufacture (Weaving) } In the fourth
Textile Technology } and fifth years.

Also :—

Textile Economics and Textile Engineering.
or Textile Design I. and II.
or Textile Chemistry I. and II.

Special Classes suitable for Overlookers, Weavers, Spinners and Knitters are held also in the Manufacture of Rayon, and in Rayon Weaving.

See page 68.

TRADE COURSES, see pages 41 to 44 and 73 to 79.

SCIENCE DEPARTMENT.

Classes are arranged for Students desiring a training in Science and scientific methods. The Course of study recommended will depend on the aims of the Student.

Course 15.—PURE AND APPLIED CHEMISTRY.

NATIONAL CERTIFICATE COURSES.

The Courses arranged for the National Certificate in Chemistry and for the Higher National Certificate suit the requirements of those who desire training for a works' position. These are known

as the National Certificate Courses. Certificates are awarded by the Institute of Chemistry in conjunction with the Board of Education. The Ordinary Certificate is given on the satisfactory completion of a Three Years' Senior Course, and a Higher Certificate after a further two years' Advanced Course. Students who have obtained a Matriculation or School Certificate in the necessary subjects are excused the 1st year course. In all cases where students attend these Courses they are expected to take the appropriate examinations at the end of each session.

Course 16.—Degree and A.I.C. COURSES.

Time Table, page 72.

Students who desire a professional qualification in Science may prepare for a degree of B.Sc. (London), or for the Associateship of the Institute of Chemistry (A.I.C.). Before any Student is admitted to such a Course of study he must satisfy the Head of the Department that he has passed the necessary preliminary examination. For the B.Sc. (London) Course the Student should have matriculated at that University or have obtained exemption acceptable to that University. For the A.I.C. he must have matriculated or obtained the School Certificate and must register as a Student with the Institute of Chemistry. The Harris Institute is recognised by the Institute of Chemistry for the training of A.I.C. candidates, and any Students who have matriculated are advised to work for the Associateship. In either case the first Course is that for the Inter B.Sc., and 1st Year A.I.C. (page 72). Students for the Final B.Sc. and the A.I.C. attend the classes of the Advanced National Certificate Courses, A1 and A2, and for further advanced instruction.

The laboratories of the department are well equipped and advanced Students may make use of them for special work by arrangement with the Head of Department.

Course 17.—PHARMACY.

Students intending to prepare for the preliminary scientific examination of the Pharmaceutical Society should have registered as a student with that Society before joining the classes. The course of study extends over three years. Students must attend for 200 hours in Chemistry, 120 hours in Physics and 120 hours in Botany, and show satisfactory work both in written exercises and in practical work before the certificate of entry to the examination will be signed.

Students who passed the examination required for registration after October, 1935, must take a full-time day course. Such students who have not studied chemistry, physics and biology previously are advised to take the preliminary evening Pharmacy Course before entering the day courses.

The Revision Pharmacy Course is suitable for students who have taken a full time day course and require revision classes for the Part I. examination.

Time Table, page 71.

Pharmacy Students who have successfully taken the Part 1 examination and who wish to extend their knowledge of Chemistry in preparation for the Part 2 Course are advised to attend the special Post Part 1 Pharmacy Course.

See page 71.

PRINTING DEPARTMENT.

Course 18.—TYPOGRAPHY.

The Classes in Typography prepare students for the City and Guilds of London Institute Examinations.

The full Course comprises instruction on three evenings per week for four years. The subjects to be taken are as follows :—

1st and 2nd years. Composing, Machines and English.
Final Course. Composing, Machines and Commercial Art.
Full Technological Course.—Composing, Machines and Commercial Art.

Time Table, page 72.

COMMERCIAL DEPARTMENT.

Course 19.—SENIOR GENERAL COURSE.
Course 20.—SENIOR CLERICAL COURSE.
Course 21.—ADVANCED COURSES.

SENIOR COURSES (19 and 20).

The First and Second Years of Course 19 consists of **four** subjects, and for Course 20, of **three** subjects. Third Year Course consists of three subjects.

In each Course (except the special ones specified later, which do not qualify for a Grouped Course Certificate), one or more subjects are obligatory ; others are generally optional.

From the latter subjects students may select the required number to make up their Course.

Before selecting a Course, students should **consult both the Time Table printed** (on pages 68 to 70), **and the tutors** who will be present to enrol on September 13th, 14th and 15th, 1939.

A student taking a course may, so far as his attainments and the Time Table permit, sit in a class and enter for an examination of a higher year than the remaining subjects of his course. Transfers from one class to another are not permitted after the first two weeks of the session. The detailed syllabuses of examinations in the subjects may be found complete in the Prospectus of the Lancashire and Cheshire Institutes.

Students are expected to take the Examinations of the Union of Lancashire and Cheshire Institutes.

ADVANCED COURSES.

This Course is intended to assist in preparing for the Professional, Secretarial and Accountancy Examinations. (See Course 21).

SENIOR COURSE (19).

General Course. (Four Subjects) :—

FIRST YEAR (S1).

OBLIGATORY : Commerce.

OPTIONAL : **Three** of the following Subjects :—

Commercial Arithmetic.
English.
Geography.
Book-keeping.
A Foreign Language (French, German or Spanish).
Cotton Spinning, or
Cotton Weaving.

General Course. (Four Subjects) :—

SECOND YEAR (S2).

OBLIGATORY : Commerce.

OPTIONAL : **Three** of the following Subjects :— *

Commercial Arithmetic.
English.
Geography.
Book-keeping.
A Foreign Language (French, German or Spanish).
Cotton Spinning or
Cotton Weaving.

* (A first year subject may be taken provided it has not been offered before).

General Course. (Three Subjects) :—

THIRD YEAR (S3).

OBLIGATORY : Commerce.

OPTIONAL : Any **two** of the following :—

Book-keeping.
Economics.
English Language and Literature.
Mercantile Law.
A Foreign Language (French or German).
Cotton Spinning, or
Cotton Weaving.

SENIOR COURSE (20).

Clerical Course A. (Three Subjects) :—

FIRST YEAR (S1).

(1) Shorthand (Grade I. or Grade II.).
or
Typewriting (Grade I. or Grade II.).

(2) Arithmetic
or
Book-keeping.

(3) English
or
Foreign Language (French, German, Spanish—Grade III.).

Clerical Course A. (Three Subjects) :—

SECOND YEAR (S2).

(1) Shorthand (Grade II. or III.).
or
Typewriting (Grade II. or III.).

(2–3) **TWO** of the following subjects :—
Commerce (1st year).
Book-keeping (1st or 2nd year).*
Arithmetic (1st or 2nd year).*
English **or** Foreign Language (French or German, Grade IV.).

Clerical Course B. (Three Subjects) :—

FIRST YEAR (S1).

(1) Shorthand (Grade I. or Grade II.).
(2) Typewriting (Grade I. or Grade II).
(3) English
or
Foreign Language (French, German, Spanish.—Grade III.).

Clerical Course B. (Three Subjects) :—

SECOND YEAR (S2.)

(1) Shorthand (Grade II.—80 words, or Grade III.).
(2) Typewriting (Grade II. or III).
(3) **ONE** of the following subjects :—
Book-keeping (1st year).
Commerce (1st year).
English.
Foreign Language (French or German, Grade IV.).

Shorthand.

In all grades the dictation tests will be of five minutes' duration.

Grade I. at 50 and 60 words per minute.
Grade II. at 70 and 80 words per minute, and
Grade III. at 90, 100, 120 and 140 words per minute

* If a subject chosen for the Second Year Course has been taken in the first year, then the next higher grade must be taken.

Students who have no knowledge of Shorthand will find it advisable during the first session to work for an internal examination. They should consult their tutors on the matter. The more advanced theory classes consist of :—Revision, Theory and Speed to 60 words per minute.

The Shorthand Theory Class for **beginners** does not prepare for the Examinations of the U.L.C.I. It is necessary for Group Course Candidates who wish to secure Scholarships that a speed examination be taken.

In Typewriting, students must consult the tutor on enrolment night as to which hour is available.

ADVANCED COMMERCIAL COURSES.

Course 21.

Three subjects, **one** at least to be chosen from Group A.

GROUP A.	GROUP B.
Accounting and Auditing.	Mercantile Law.
Economics.	A second Foreign Language.
A Foreign Language.	Banking and Currency.

Time Table, page 70.

LANGUAGES DEPARTMENT.

GENERAL AND COMMERCIAL CLASSES.

These classes are designed to meet the requirements of those who select a Language as part of a course for the U.L.C.I., R.S.A., or other external examinations, and also to furnish a suitable medium of instruction for those who are not necessarily aiming at any particular examination but who desire to maintain and increase their familiarity with some foreign language for its own sake.

Time Table on pages 68 to 70.

SCIENTIFIC AND TECHNICAL.

Students in the Scientific and Engineering Departments, especially those in the more advanced sections who may look forward to opportunities for research, are reminded that a foreign language, especially German, may ultimately prove of great value in extending the scope of their work.

Time Tables on pages 69 and 70.

Students, before joining Language Classes, should consult the Head of the Department.

N.B.—PART TIME DAY CLASSES IN COMMERCIAL SUBJECTS.

Part Time Day Classes have been formed for persons over 16 years of age desirous of instruction in any of the following subjects :

TYPEWRITING, SHORTHAND, COMMERCE, BOOK-KEEPING, ECONOMICS, AND COMMERCIAL CORRESPONDENCE.

See Course 5.—For Time Table see page 61.

TRADE COURSES.

Course 22.—ENGINEERING WORKSHOP PRACTICE.

Applicants for these classes must have attended a preliminary Technical Evening Course or be otherwise qualified.

This is a Three Years' Course, suitable for fitters, turners and machinists. For times of classes and subjects to be taken, see page 73. Students entering for this course are expected to sit for the examination set by the Union of Lancashire and Cheshire Institutes. The examinations take place about April, at the end of each year's course.

Course 23.—MOTOR MECHANICS COURSE.

This is a three years' Course, preparing Students for the examinations of the Union of Lancashire and Cheshire Institutes, or the examinations of the City and Guilds of London Institute.

The aim of the Course is to give sufficient knowledge of principles and their application to the construction and operation of motor vehicles, to enable the mechanic to deal with repairs, adjustments and general servicing.

See page 73 for times of classes.

Course 24.—MOTOR BODY BUILDING.

Students are prepared for the examinations of the City and Guilds of London Institute.

For Time Table see page 74.

For day classes in Motor Body Building, see pages 22 and 63.

Course 25.—ELECTRIC WELDING.

Students are prepared for the examinations of the City and Guilds of London Institute.

For Time Table, see page 74.

A Special Course is arranged for Motor Body Builders. See page 74.

Course 26.—SHEET AND PLATE METALWORK.

Students are prepared for the examinations of the Union of Lancashire and Cheshire Institutes and the examinations of the City and Guilds of London Institute.

For Time Table, see page 74.

Course 27.—ELECTRICAL INSTALLATION WORK.

The scheme of work and of certification in Electrical Installation Work is that recommended by the City and Guilds of London Institute, in conjunction with the Board of Education, and approved by the Electrical Contractors' Association. The course is intended for those who have attended a preliminary Technical Evening Course, or are otherwise qualified. It is designed to cover three years, at the end of which the student should have reached the standard of a journeyman.

In the final year of the course the examination will be set and marked by the City and Guilds of London Institute for the purpose of the award of the Electricians' Interim Certificate. An apprentice or learner employed by an Electrical Installation Contractor, or a candidate otherwise engaged in electrical installation work, who has obtained the Electrician's Interim Certificate and who is desirous of obtaining the Electrician's Certificate, must forward to the City and Guilds of London Institute a statement of his practical training and work. If approved, he will be awarded the Electrician's Certificate. For times of classes and subjects to be taken, see pages 74 and 75.

Course 28.—RADIO SERVICE WORK.

This scheme of work has been devised by the advisory committee on Radio Service Work of the City and Guilds of London Institute, including the Radio Manufacturers' and Wireless Retailers' Associations to meet the present need for the training and certification of men engaged in Radio Service Work, and is intended for students actually engaged in the industry who will only be able to attend part-time courses.

It is designed to cover three years. In the final year the examination will be set and marked by the City and Guilds of London Institute and failure to obtain 50 per cent. of the possible marks for practical work will carry with it failure in the examination as a whole.

For Time Table, see page 75.

Course 29.—CARPENTRY AND JOINERY.

For Time Table, see page 77.

Course 30.—PLUMBING.

For Time Table, see page 76.

Course 31.—BRICKLAYERS.

For Time Table, see page 78.

Applicants for the above courses must have attended a preliminary Technical Evening Course, or produce evidence of attainments equivalent to the preliminary Technical Evening Course. For times of classes and subjects taken, see page 78. Students taking these courses are expected to sit for the College examination for the first and second years of the course, and for the third year of the course to sit for the Union of Lancashire and Cheshire Institutes Examination.

Carpentry and Joinery students may after completing the third year proceed to prepare for the final examination in Carpentry and Joinery of the City and Guilds of London Institute, or for the Senior National Certificate in Building by entering the first year of the National Certificate Course.

Plumbing students, after the third year, may proceed to prepare for the final examination in Plumber's work of the City and Guilds of London Institute.

Course 32.—LEAD BURNING, SHEET COPPER WORK AND BRONZE WELDING.

For Time Table see page 76.

TRADE COURSES FOR TEXTILES. (Courses 33 and 34).

A three years' course is arranged in Cotton Spinning and in Cotton Weaving. These Trade Courses are for students who have attended a preliminary Technical Evening Course, or are otherwise qualified. They are arranged for attendance on two evenings per week, and are specially suited for practical men. Successful students may follow up their studies in the National Certificate Courses and work for the Full Technological Certificate of the City and Guilds of London Institute.

Course 33.—COTTON SPINNING.

The main subject of Cotton Spinning is divided into three sections, viz.: Opening and Carding, Roving Preparation and Spinning. Students may take these in any order, choosing the most suitable to their requirements.

In addition, all sections will attend the class in Trade Calculations and Science which is held on alternate weeks.

Time Table page 78.

Course 34.—COTTON MANUFACTURING (WEAVING).

The main subject of Cotton Weaving is taken in three years of progressive study, commencing with simpler cloths and mechanisms, and leading to more complex work.

Students will also attend the class in Trade Calculations and Science.

Time Table page 79.

Course 35.—LABORATORY ARTS.

A short course in woodwork, metalwork and glass blowing, which should be suitable for the training of laboratory assistants.

For Time Table, see page 79.

MISCELLANEOUS CLASSES AND SPECIAL COURSES.

The following classes are here indicated separately for the benefit of students who desire to take up the study of certain subjects for the Professional Entrance Examinations, and to assist students of an advanced grade to a higher standard of attainments.

A course consists of any three of the following subjects :—

Subject.	Class No.
Arithmetic	... 229, 230.
Book-keeping	... 244.
Chemistry	... 263.
English Language and Literature...	247.
French	... 223, 239, 248 and 258.
German	... 226 and 242.
Latin	... 225.
Mathematics	... 261.
Physics	... 262.
Spanish	... 224, 241.
Geography	... 228, 240.
Shorthand	... 246.

An Internal Examination will be held in those subjects not otherwise provided for, and certificates will be given.

Gymnasium Classes will be held as follows :—

MON.	TUES.	WED.	THUR.	FRI.	SAT.
*7—8	†7—8	*7—8	†7—8	*7—8	*9-45—10-45
†8-15—9-15	*8-15—9-15	†8-15—9-15	*8-15—9-15	†8-15—9-15	†11—12

Classes for Men are indicated by a *.
Classes for Women are indicated by a †.

Fees : 5/– per session and 2/6 per session for students taking other classes in the institute.

JUNIOR COURSES.

(FULL TIME DAY).

COURSES:

JUNIOR TECHNICAL.
JUNIOR COMMERCIAL.

Classes begin on Tuesday, September 5th, 1939.
Autumn Term :—5th September, 1939—19th December, 1939.
Spting Term :—9th January, 1940—20th March, 1940.
Summer Term :—2nd April, 1940—11th July, 1940.

(All dates inclusive).

FEE : £3 0s. 0d. per Session, or £1 per term.
TIME TABLES, see pages 83 to 89.

DAY JUNIOR SCHOOLS.

CONDITIONS OF ENTRY, Etc.

(1) Day Junior Technical School.
(2) Day Commercial School.

ENTRANCE AND SCHOLARSHIP EXAMINATIONS.

Each boy or girl admitted must not be less than 13 years old at the date of admission, and must pass the School Entrance Examination.

The Entrance Examination will be held on Saturday, the 4th May, 1940, at the Technical College.

Entries must be made on a form which can be obtained from the Technical College and forwarded to the Principal, Harris Institute, Corporation Street, on or before the 6th April, 1940.

Fee : £3 for Session, September to July. This may be paid by three instalments of £1.

Parents or Guardians will be required to sign an agreement form undertaking that the pupil attends regularly for two years, or in default pay the sum of £3 3s. 0d.

The Council of the Harris Institute offer a limited number of Scholarships (providing free tuition only) to boys and girls not less than 13 years of age on October 1st, 1940, and who for two years

prior to the date of the examination have been in regular attendance at a Day School within seven miles of the Preston Town Hall.

The Preston Local Education Committee award a number of Free Admissions to the School, and Book allowances are given to Candidates residing in the County Borough of Preston.

The Lancashire County Council also award a limited number of Exhibitions on the result of this Entrance Examination (open to candidates residing in the Administrative County) subject to certain conditions. The Exhibitions provide free tuition, travelling expenses, and allowance for books and maintenance. Full particulars as to these Exhibitions may be obtained from the Director of Education, County Offices, Preston.

Leaving Certificates are given to all who satisfactorily conclude their period of training, and a certain number of free Scholarships to Evening Classes are granted to those whose attainments and conduct in the Day School have merited it.

The School Uniform is as follows :—

Girls.—Navy Tunic and Girdle, Navy Knickers, White Blouse, with polo collar and long sleeves in winter and short sleeves in summer ; School Tie, Velour Hat in winter, Straw Hats with School Band in Summer, Black Stockings, Black Footwear, Navy Coat ; School Blazer.

Boys.—School Cap, Tie, and School Blazer.

The above should be purchased from the School Outfitters on the presentation of the Regulation Form, which may be obtained at the College Office.

Every endeavour is made at the end of the course to assist worthy students to obtain suitable posts. Many employers apply to the School for employees and apprentices.

DAY JUNIOR TECHNICAL SCHOOL.

The aim of the School is to provide a suitable education for boys who desire to enter Engineering, Building and other trades.

The curriculum is planned with the object of providing for the continuance of a general education, together with an education in all subjects which are necessary to boys about to enter industrial occupations.

The students are brought into close contact with their future occupation through teachers who have had experience in industry.

The students also have access to the Engineering laboratories and textile sheds, where they become acquainted with machinery and equipment which helps towards a thorough understanding of the application of scientific principles to industry.

The course of instruction extends over a period of two years, and the subjects taught include the following :—Mathematics, Engineering and Building Drawing, Geometry, Art, Science (including Applied Mechanics, Electricity, Magnetism, Heat and Chemistry) Metalwork, Woodwork, Geography, History, English, Physical Training and Organised Games.

DAY JUNIOR TECHNICAL SCHOOL.—ENTRANCE EXAMINATION.

Syllabuses.

Accuracy is of great importance. A thorough knowledge of the following will be required :—

Mathematics.

The fundamental rules. Vulgar and decimal fractions. Percentages and averages. Ratio, proportion, simple interest and simple profit and loss. Elementary mensuration, rectangles and triangles. Circumference and area of circle. Surface and volume of simple solids,—prism and cylinder (weights of simple solids, given weight per unit volume). Elementary algebra. Use of symbols. Addition, subtraction, multiplication and division.

English.

(1) An essay. (2) Condensation and expansion of passages. (3) The parts of speech and elementary parsing. (4) Easy analysis of sentences. (5) The use of words in sentences to illustrate their meaning. (6) Simple letters. (7) Correction of common grammatical errors. (8) A general knowledge of good literature suitable for children.

Candidates may also be given an opportunity in this section of showing their acquaintance with present-day affairs

A reasonable proficiency in spelling is expected ; and gross errors in the simpler, everyday words will be suitably penalised.

DAY JUNIOR COMMERCIAL SCHOOL.

The Course extends over a period of two years, and prepares boys and girls for clerical posts. The following subjects are taken: Arithmetic, Algebra, Accounts, Book-keeping, Commerce, Commercial Correspondence, Drawing, Physical Training, English, French, Games, Geography, History, Office Routine, Mathematics, Science, Shorthand and Typewriting.

DAY JUNIOR COMMERCIAL SCHOOL.—ENTRANCE EXAMINATION.

SYLLABUSES.

Accuracy is of great importance. A thorough knowledge of the following will be required :—

Arithmetic.

Simple rules, including the use of brackets. Money tables—Ordinary weights and measures (excluding Troy weight and Apothecaries weight). Reduction of money. The simple rules as applied to weights and measures. Simple vulgar fractions. Terminating decimals. Practice. Proportion by unitary method. Easy percentages. Simple interest. The Metric System. Areas.

English.

The syllabus is as prescribed for Junior Technical Entrance.

JUNIOR LIBRARY.

The Junior Library is reserved exclusively for the use of pupils in the two Junior Schools, and any of the books may be borrowed for home reading. There is a wide selection of good fiction, together with miscellaneous works on a variety of interesting subjects; and pupils are advised to take full advantage of the opportunities which their own Library offers them.

[ART SCHOOL]

ART SCHOOL.

OBJECTS OF THE SCHOOL.

The objects of the School are :—

(1) To give instruction in Art to those engaged in trades and professions in which the power of drawing and a knowledge of design are essential or helpful.

(2) To train those wishing to qualify to become teachers of Art in Secondary Schools, or in Schools of Art.

(3) To provide facilities to those desiring to study Art as a branch of general education, or as an accomplishment.

(4) To train those who are desirious of taking up Art as a career, and who intend to specialise as painters, sculptors, illustrators, designers, etc.

(5) To meet the requirements of those engaged in various industrial occupations.

(6) Junior Courses. To prepare young students between the ages of 14 and 16, in order that they may specialise later on, in any of the above courses.

The School is open for three terms, viz. :—

11th September, 1939 to 19th December, 1939.

8th January, 1940 to 20th March, 1940.

2nd April, 1940 to 11th July, 1940.

FEES FOR SESSION (payable in advance).

Full Time Day Students	£3 3 0 (Games fee 5/-)
Students attending one day per week for Single Subjects	2 2 0
Ditto per term	0 17 6
Special Classes for Crafts (Tuesday afternoons)	1 1 0
Evening Classes	see page 29
Summer Courses (one day per week) ...	0 17 6
Summer Evening Classes	0 7 6

Classes begin on Monday, September 11th, 1939.

General Information.

The Courses suggested below are recommended to ensure comprehensive training for definite careers, but are purposely arranged to be sufficiently elastic to meet individual requirements.

DAY CLASSES.

(1) FULL-TIME COURSES, including general principles of Art, History and Methods of Production, Drawing, Design, Colour Study, Figure Composition, Illustration, Painting, Sculpture, Commercial Art, &c.; Graded Schemes to equip Students for the Board of Education examinations in Drawing, Painting, Industrial Design, etc. Preparation for Local Art Scholarships and Exhibitions.

(2) PART-TIME COURSES arranged mainly for the study of Industrial Art and training in single subjects.

(3) CRAFT COURSES AND CLASSES. Carving in Wood and Plaster, Writing and Illuminating, Dress Design, Embroidery, Leather Work, Wood Decoration, Etching, Aquatint, Wood and Lino Cuts, Fabric Printing, etc. Advanced Decoration (see Evening).

(4) ARCHITECTURE. Facilities to enable Architectural Students to prepare for R.I.B.A. examinations.

The Course includes Preparation of Testimonies, Perspective, Architectural Design, History of Architecture, Structural Mechanics, Building Construction.

For Time Table, see pages 55, 80 and 81.

EVENING CLASSES.

Designed chiefly to furnish suitable study and to further the interests of apprentices in trades and crafts where Art plays a more or less prominent part, to offer opportunities for extended study after qualifying, to render possible the achievement of a desire to practice some branch of Art as a career, and to encourage many forms of artistic appreciation.

ADVANCED COLOUR STUDY AND PAINTING. Practice in oil and watercolour for Still Life, Portraiture and Composition.

GENERAL ART. This course endeavours to meet the needs of occupations where artistic training, though required, demands freer interpretation, and more individual treatment. In many cases such subjects as colour and figure study, architectural or modelling knowledge, illustration or lettering may predominate and be supplimented by the type of design or other specialised subjects applicable to the need.

INDUSTRIAL ART AND CRAFTS. The aim in these Courses is to secure efficient training for apprentices in trades and crafts. They cover the syllabuses of various Examining Authorities. (See Examinations, pages 56 and 57).

Full Grouped Courses of three evenings per week, include Study in Drawing and lettering, Nature and Colour, Methods of Production and Technical Problems, Knowledge of Tools and Materials, Estimating, etc., History and Styles of Architecture, Heraldry, Original Design, embodying modern requirements. Practical work.

The following is a list of the chief subjects which may be undertaken as definite Courses or practiced on the craft side alone :—

Dress Design, including costume history, making and drafting.

Painting and Decorating, including preparation of schemes of Interior Decoration. Embroidery, Leather-work, Bookbinding, Wood Decoration, Etching, etc., Lino Cuts, Writing and Illuminating, Wood and Plaster Carving, Modelling and Casting (Demonstrations at arranged periods), Soft Toy Making.

Summer Courses in most crafts will be held from Easter to July.

COMMERCIAL ART. Treatments for the Press, Layouts, Posters and Show Cards, etc.

ILLUSTRATION. Including study of figure and accessories, composition, etc.

TEACHERS. Study for the National Society of Art Masters' Exams., Colour, Design, Illustration, etc. Further study in various subjects and crafts.

ARCHITECTURE. Courses in Perspective, Architectural History and Drawing.

PROFESSIONAL. The Art School is open for further study and practice to Architects, Sculptors and Artists. In connection with this, advantage is usually taken of advanced work in Life Painting, Sculpture and Crafts.

TEXTILE DESIGN. Held in conjunction with Technical Weaving Courses.

ADVANCED DESIGN AND DECORATION. The application of previous courses to more ambitious work—Theatrical Settings, Costume, Interior Decoration, Lighting and Building-up, Relief Decoration, Details to scale and full size, Figure Composition, Intended for qualified Students.

LECTURES. Day and Evening lectures have been arranged with relation to Industrial and Commercial Art. These will deal definitely with practical problems in Colour and Design, Principles of Art, Historic Art, etc.

A Series of monthly lectures by specialists will be given (see separate detailed lists and time tables). All students are advised to attend.

WORK. All completed studies are to be handed in to the Teachers, to be available for inspection and criticism. They will be retained until the end of the session, when they will be returned unless required for the School's Exhibition.

DAY AND EVENING CLASSES.—TIME TABLE (see also pages 80 & 81).

	MORNING, 10-0—12-30.	AFTERNOON, 2-0—4-0.	EVENING, 7-0—9-0.
Monday	Drawing Ornament Animals Nature Drawing	Still Life Painting Design Posters Illustration Dress Design	General Drawing Course Nature Study Drawing (Indust. Commercial and Craft) Elem. Teachers' Class Design Painting Dress Design Crafts
Tuesday	Drawing, Antique Fabric Printing Design Perspective Etching	Drawing (Elem. & Advanced) Antique Decoration (Advanced) Crafts (various)	*Textile Art (4th and 5th years). Design, Industrial and Crafts Design (Commercial Art) Decoration (Advanced)
Wednesday	General Drawing Design Nature Drawing Architectural Drawing Still Life Painting Dress Design	Still Life Drawing from the Antique Nature Study Lettering	Junior Course, Form and Colour Crafts, Theory Perspective or Anatomy Drawing from Life Etching *Painting and Decorating (2nd year) *Textile Design (3rd year) Commercial Art *Modelling and Casting
Thursday	Theory of Art Drawing and Painting Still Life Etching	Games Practice Object Drawing Memory Drawing Painting and Decorating	Junior Course, Design and Colour Illustration Antique Interior Decoration Teachers' Class *Bookbinding *Painting and Decorating (3rd and 4th years) Drawing from life
Friday	Architecture Design Illustration Posters History of Painting	Leather Work } Theory Embroidery } &Prac. General Drawing—Objects and Interiors Dress Design Design Drawing and Painting from Life Anatomy Fabric Printing	Crafts (Industrial Art) Architectural History *English (1st and 2nd years) Painting and Decorating (1st, 3rd and 4th years)

* These classes will terminate after the U.L.C.I. Examinations.

During the Summer term an out-of-door Sketching Class will be held on Monday, Tuesday and Friday afternoons also Wednesday mornings.

Short Summer Courses in various Crafts—Mondays and Wednesdays.

Special lectures relating to outdoor sketching and on painting will be arranged for the summer term.

EXAMINATIONS IN ART.

Internal.

Grouped Examinations will be held at the end of each term, comprising the subjects of the various Courses.

The Board of Education will hold Examinations in the following subjects of Art :—

(*a*) Drawing.
(*b*) Painting.
(*c*) Modelling.
(*d*) Pictorial Design for Reproduction in black and white or colour.
(*e*) Industrial Design for (i.) Handicrafts and (ii.) Manufactures.

1. The Examination in Drawing will be of a standard suitable for candidates who, after a good general education, including some preliminary instruction in Drawing, up to the age of 16 or later, have devoted themselves to serious and continuous study of Drawing for, as a rule, not less than two years.

2. The Examinations in Painting, Modelling, and Pictorial Design will be of such a standard as could be attained, according to the capacity of the candidate, by two or more years of serious and continuous specialised study after passing the Examination in Drawing.

3. Examinations in Industrial Design will be of such a standard as could be attained through regular attendance at Evening or other Part Time Classes in the intervals of employment for a period of four years after the age of 16.

4. Candidates will not be admitted to the Examinations in Painting, Modelling, or Pictorial Design, unless they have previously passed the Examination in Drawing.

City and Guilds of London Institute.

Students are prepared for these Examinations in the following subjects :—Painting and Decorating, Embroidery, Design and Colour for Textiles.

National Society of Art Masters.

A series of Examinations in Drawing arranged for Teachers in Elementary Schools.

UNION OF LANCASHIRE AND CHESHIRE INSTITUTES.

Students are prepared for the Examinations arranged by the U.L.C.I. Authority in the following subjects:—Junior Industrial Art, Painting and Decorating, Architecture, Embroidery, Leatherwork, Woodcarving, Textile Design, etc.

SCHOLARSHIPS.

Harris Art Scholarship.

One Scholarship, of the value of £7 10s. 0d. per annum, tenable for three years, will be awarded annually.

The Scholarship will be open to all Students of the School of Art, who have attended for not less than one year immediately preceding the award, and will be tenable at the Harris Institute.

The Scholarship will be awarded on the results of the annual examinations, in conjunction with the Student's work of the session.

Should one or more of these Scholarships fall vacant before the full period of three years, two or three (as the case may be), will be given instead of one, in the year when they lapse.

Free Studentships.

Free Studentships to the Day Classes are offered to Students of the School (Day or Evening), who are studying with a view to becoming designers, craft workers, or teachers.

Method of award, the same as for the Harris Art Scholarship.

Free Studentships to the Evening Classes are offered to students taking definite courses, and will be awarded on the result of marks given for homework, attendance, and internal examinations.

Special Scholarships are awarded to Students who have left or are about to leave Elementary Schools, who intend to follow occupations requiring an Art Training.

PRIZES : "STEELE" BEQUEST.

Three Prizes (one Day and two Evening) of £4 each are offered for the best work done by Students each Session.

SOCIAL AND ATHLETIC ACTIVITIES.

A Sketch Club is organised by the Staff and Students for the purpose of encouraging individual effort. Monthly competitions are arranged during the Session, and a series of subjects are set for the long vacation.

All Students are eligible. Further information and particulars may be obtained from members of the Staff.

A Dramatic Club is being formed and Social evenings will be arranged, when there will be informal dances, musical items, and short plays, etc.

Excursions to Art Galleries, Exhibitions, Works, etc., will also be arranged during the session.

A Rugby Football Club has been formed, and intending players should report at once to the Secretary. Hockey is also played.

Notices of the various activities, giving times and dates will be placed on the notice board in the corridor.

Also see pages 9 and 10.

The Gymnasium is open at the recognised times to Students on payment of the sports fee. See pages 45 or 79.

REFECTORY.

There is a fully equipped Dining Room at the Technical College. Lunches, teas and light refreshment may be obtained from 10-30 a.m. to 7-15 p.m.

The Refectory is for the convenience of the students and staff and all students may use the Refectory between the times stated.



HARRIS INSTITUTE, PRESTON.

TIME TABLE OF CLASSES. SESSION 1939-40.

T—*Technical College.* A—*Avenham Institute.*

TECHNICAL DAY CLASSES.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	PROFESSIONAL ENTRANCE, Etc.						
1	T English	H. H. Allen	10.15–11.15	...	...	2—3	1.45–2.45
2	T History	H. H. Allen	...	...	...	9.15–10.15	...
3	T French	H. H. Allen	2—3	2—3	...	...	11.15–12.15
4	T Latin	H. H. Allen	...	11.15–12.15	...	3—4	...
5	T Mathematics	F. B. Landolt	11.30–12.30	9.30–11	...	...	9.30–11
6	T Physics	F. B. Landolt	3—4	11–12.30	...	3—4	...
7	T Chemistry	C. C. Addison	...	...	9.15–11.15	10.30–12.30	...
8	T Geography	... ...	...	...	11.30–12.30	10.15–11.15	...
9	T Biology*	H. W. Edmunds	...	...	11.30–12.30	...	...
	* Practical at times to be arranged.						
	INTER-B.Sc. (Science and Engineering.)						
10	T Pure Mathematics	F. B. Landolt	11.30–12.30	...	...	9.30–10.30	...
11	T Applied Mathematics	J. S. Wrigley	...	...	9.30–12	...	...
12	T Heat and General Physics ...	F. B. Landolt	...	...	9.30–12.30	...	...
13	T Magnetism and Electricity ...	F. B. Landolt	...	...	...	...	2–4.30
14	T Sound and Optics	F. B. Landolt	...	2–4.30	...	...	...
15	T Engineering Drawing ...	G. E. Hall	3—5	...	...	...	...
16	T Chemistry	E. Taylor	...	9.30–12.30	2–4.30	2–4.30	...
17	T Geology...	H. W. Edmunds	...	...	...	...	...
18	T Biology	H. W. Edmunds	9.30–12.30	...	...	9.30–12.30	9.30–12.30
19	T German	C. E. Robin	...	7.15–9.15	...	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	FINAL B.Sc. (Science and Engineering.)						
20	T Chemistry (Theory)	E. Taylor	7—9	8—9	...	9.30–10.30	...
21	T Chemistry, Inorg. (Practical)	E. Taylor	7—9	...	...		
22	T Chemistry, Org. (Practical) ...	W. G. Creasy	...	...	7—9.30	10.30–12.30	...
23	T Physical Chemistry	W. G. Creasy, A. N. Edmondson	...	...	...	2—5	
24	T Physics	... ...	...	...	...	7—9.30	...
25	T Strength of Materials	J. E. Taylor	...	...	2—4.30	...	7—9.30
26	T Theory of Structures	E. M. Pearson	...	10—12.30	...	...	7.15–9.15
27	T Theory of Machines	J. S. Wrigley	...	...	9.30–12.0	...	...
28	T Applied Heat and Thermo-dynamics	J. S. Wrigley	...	7.15–9.15	2—4.30	...	...
29	T Mechanics of Fluids	J. E. Taylor	7.15–9.15	...	...	...	...
30	T Applied Electricity	A. Woods	...	...	...	9.30–12.0	...
31	T Mathematics	J. Slater	...	7.0—9.0	...	7.15–9.15	...
32	T Engineering Tutorial	J. S. Wrigley	...	...	...	...	2—4.30
	PRELIMINARY SCIENTIFIC : Pharmacy, Dental, Medical, Dispensing.						
33	T Chemistry, Org. (Theory) ...	E. Taylor	2—3	...	...	...	...
34	T Chemistry, Inorg. (Theory) ...	E. Taylor	...	9.30–10.30	2—3	2—3	...
35	T Chemistry, (Practical)... ...	E. Taylor	3–4.30	10.30–12.30	3–4.30	3–4.30	...
36	T Physics (Theory)	F. B. Landolt	...	2—3	9.30–10.30	...	2—3
37	T Physics (Practical)	F. B. Landolt	...	3–4.30	10.30–12.30	...	3–4.30
38	T Biology (Theory)	H. W. Edmunds	9.30–10.30	...	...	9.30–10.30	9.30–10.30
39	T Biology (Practical)	H. W. Edmunds	10.30–12.30	...	...	10.30–12.30	10.30–12.30

	SCIENCE FOR HORTICULTURE.							
40	T Biology	H. W. Edmunds	...	2.30—5 (Sept. to March).	...	...	...
41	T Chemistry	E. Taylor					
42	T Park Management	A. V. Pearson	...	7.15–8.15	...	...	...
43	T Surveying	J. S. Wrigley	...	2.30–5	...	...	...
44	T Mathematics	J. E. Taylor	...	2.30–4.30 (April to July)	...	...	...
	PART TIME DAY COMMERCIAL CLASSES.							
45	T Typewriting	D. Roberts	9.30–10.15	10.15–11.15	11.15–12.15	11.15–12.15	11.15–12.15
46	T Shorthand	D. Roberts	11.15–12.15	9.30–10.15	10.15–11.15	10.15–11.15	9.30–10.15
47	T Bookkeeping	W. Webster	10.15–11.15	11.15–12.15	...	...	...
48	T Commerce	... ...	...	...	9.30–10.15	...	...
49	T Commercial Correspondence ...	R. S. Cross	...	...	...	...	10.15–11.15
50	T Economics	... ...	...	...	...	9.30–10.15	...
	PART TIME DAY ENGINEERING. (National Certificate Course) **S1**							
51	T Mathematics	A. Woods	11.30-12.30 and 4–5	...	...	...	...
52	T Engineering Science	J. E. Taylor	2—4	...	...	...	...
53	T Engineering Drawing ...	J. S. Wrigley	9.30–11.30	...	...	...	...
54	T Motor Engineering		...	...	7.15–9.15	...	...
	S2							
55	T Mathematics ... (A) ...	F. W. Walker	11.30–12.30 and 2—3	...	...	...	...
56	T ,, ... (B) ...	F. W. Walker	9.30–11.30	...	...	...	...
57	T Mechanics and ... (A) ...	F. W. Walker	3—5	...	...	...	...
58	T Heat Engines ... (B) ...	J. S. Wrigley	11.30–12.30 and 2—3	...	...	...	...
59	T Engineering Drawing (A) ...	J. E. Taylor	9.30–11.30	...	...	...	...
60	T Do. (B) ...	G. E. Hall	3—5	...	...	...	...
61	T Electrical Engineering Science.	A. Woods	7.15–9.15	...	...	...	...
62	T Motor Engineering	H. Hindley	...	...	...	7.15–9.15	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday
	S2. (Electrical)						
63	† Mathematics	F. W. Walker, A. Woods ...	2—3	...	...	4—5	...
64	† Mechanical Engineering Science	F. W. Walker	3—5	...	...	...	...
65	† Electrical Engineering Science	A. Woods	...	...	...	2—4	...
	MECHANICAL ENGINEERING.						
	S3						
66	† Mathematics	A. Jackson	...	...	...	7.15–9.15	...
67	† Mechanics	F. W. Walker	...	...	2–4.30	...	...
68	† Heat Engines	F. W. Walker	...	...	9.30–12	...	...
	A1						
69	† Strength of Materials	J. E. Taylor	...	...	2–4.30	...	...
70	† Theory of Machines	J. S. Wrigley	...	...	9.30–12	...	...
71	† Mathematics	J. S. Wrigley	7.15–9.15	...	...	...	...
	A2						
72	† Elec. Eng. for Mech. Engrs. ...	L. E. Birchall	...	...	...	7.15–9.15	...
73	† Machine Design	J. E. Taylor	...	...	9.30–12	...	...
74	† Heat Engines	J. S. Wrigley	...	...	2–4.30	...	...
	A3 1st and 2nd Terms*						
75	† Economics	... ...	...	...	...	9.15–10.15	...
76	† Chemistry	C. C. Addison	...	...	...	10.15–12.30	...
77	† Physics	F. B. Landolt	...	...	...	2—4.30	...
78	† Chemistry (General)	C. C. Addison	...	...	...	...	7–8
79	† Chemistry and Physics ...	C. C. Addison	...	...	...	...	8—9
80	† Workshop Organisation and Management	... ...	...	...	7.15–9.15	...	...
81	† German	C. E. Robin	...	7.15–9.15	...	...	...
82	† English Language and Literature	H. H. Allen	...	...	...	7.15–9.15	...

*3rd Term.—Advanced Engineering Laboratory.

	TEXTILE CLASSES.							
83	T Textile Testing (Theory) ...	D. Atkinson	...	...	...	...	9.30–10.45	...
84	T Textile Testing (Practical) ...	D. Atkinson	...	...	...	...	10.45–12.0	...
85	T Weaving Mechanism	D. Atkinson	9.30–10.45	...	...	...	...	...
86	T Weaving (Practical)	W. Dagger	10.45–12.0	...	...	...	...	10.45–12.0
87	T Weaving Calculations	D. Atkinson	...	...	9.30–10.45	...	...	...
88	T Cloth Dissection, Analysis ...	D. Atkinson	...	...	10.45–12.0	...	...	...
89	T Fabric Structure	D. Atkinson	...	9.30–10.45	...	...	...	...
90	T Practical Designing	D. Atkinson	...	10.45–12.0	...	...	...	...
91	T Yarn Preparation	D. Atkinson	...	...	...	...	...	9.30–10.45
	PART TIME DAY BUILDING. (National Certificate Course) **S1**							
92	T Building Science	E. M. Pearson	...	2—4	...	...	...	
93	T Mathematics	J. E. Taylor	...	9.30–10.30	...	...	...	
94	T Geometry	J. D. Jones	...	10.30–12.30	...	...	...	
95	T Building Construction ...	E. M. Pearson	...	4—5	...	...	...	
96	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...	
	PART TIME DAY MOTOR BODY BUILDING.							
97	T Mathematics	J. E. Taylor	...	9.30–10.30	...	...	...	
98	T Geometry	J. D. Jones	...	10.30–12.30	...	...	...	
99	T Science	E. M. Pearson	...	2.0—4.0	...	...	...	
100	T Mathematics	J. D. Jones	...	4.0—5.0	...	...	...	
101	T Technical Drawing	T. A. Wetton	7.15–9.15	...	...	...	...	
102	T Body Building	T. A. Wetton	...	...	...	7.15–9.15	...	
	INTERMEDIATE R.I.B.A.							
103	T Structural Mechanics	E. M. Pearson	...	10–12.30	...	...	...	
104	A Architecture and Design ...	G. A. Clucas	...	...	10–12.30	...	10–12.30	
105	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...	
106	A Architectural History ...	G. A. Clucas	...	...	...	...	7—9	

Evening Classes.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	MECHANICAL ENGINEERING. (National Certificate Course)						
	S1						
107	† Mathematics	R. H. Wignall	...	...	...	7.15–9.15	...
108	† Engineering Drawing	F. Callow	...	...	...	...	7.15–9.15
109	† Engineering Science	F. W. Walker	...	7.15–9.15	...	...	...
	S2						
110	† Mathematics	J. Bagot	...	...	...	7.15–9.15	...
111	† Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...
112	† Mechanics and Heat Engines...	G. E. Hall	...	...	...	...	7.15–9 15
	S3						
113	† Mathematics	G. E. Hall	...	7.15–9.15	...	...	...
114	† Mechanics	F. W. Walker	...	...	7.15–9.15	...	...
115	† Heat Engines	F. W. Walker	...	...	...	7.15–9.15	...
	A1						
116	† Mathematics	J. S. Wrigley	7.15–9.15	...	...	...	...
117	† Theory of Machines	J. S. Wrigley	...	...	7.15–9.15	...	...
118	† Strength of Materials	J. E. Taylor	..	...	...	...	7.15–9.15
	A2						
119	† Heat Engines	J. S. Wrigley	...	7.15–9.15	...	...	...
120	† Machine Design	J. E. Taylor	7.15–9.15	...	...	...	...
121	† Electrical Engineering for Mechanical Engineers	L. E. Birchall	...	...	...	7.15–9.15	...
	A3						
122	† Workshop Organisation and Management	... ...	...	...	7.15–9.15	...	...
123	† Chemistry (General)	C. C. Addison	...	...	...	...	7—8
124	† Chemistry and Physics ...	C. C. Addison	...	...	...	...	8—9
125	† English (S_3)	H. H. Allen	...	...	...	7.15–9.15	...
126	† German	C. E. Robin	...	7.15–9.15	...	...	...

	ELECTRICAL ENGINEERING (National Certificate Course)							
	S1							
127	T Mathematics	T. Wilkinson...	7.15–9.15	...	...	...	...	
128	T Engineering Drawing	F. Callow	...	7.15–9.15	...	...	...	
129	T Engineering Science	J. H. Hulse	...	...	...	7.15–9.15	...	
	S2							
130	T Mathematics	J. Bagot	...	7.15–9.15	...	...	...	
131	T Mechanical Engineering Science	F. L. Broughton	...	...	...	7.15–9.15	...	
132	T Electrical Engineering Science	G. R. Maxwell	7.15–9.15	...	...	...	...	
	S3							
133	T Mathematics	A. Jackson	...	...	...	7.15–9.15	...	
134	T Electro-Technics	A. Woods	...	7.15–9.15	...	...	...	
135	T Electrical Laboratory	A. Woods	...	...	...	...	7.15–9.15	
	A1							
136	T Mathematics	J. E. Taylor	...	...	...	7.15–9.15	...	
137	T Electrical Technology, Sect. I.	L. E. Birchall	...	...	7.15–9.15	...	...	
138	T Electrical Technology, Sect. II.	L. E. Birchall	7.15–9.15	...	...	...	...	
	A2							
139	T Generation and Transmission of Electrical Energy ...	G. H. Pimley	...	7.15–9.15	...	...	...	
140	T Distribution and Utilization of Electrical Energy ...	G. H. Pimley	...	...	7.15–9.15	...	...	
141	T Heat Engines	F. W. Walker	...	...	...	7.15–9.15	...	
	BUILDING.							
	S1							
142	T Building Science	W. Taylor	...	7.15–9.15	...	...	...	
143	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...	
144	T Geometry	J. N. Walker	...	...	...	...	7.15–9.15	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	S2						
145	T Mathematics	W. Taylor	7.15–9.15	...	...	...	...
146	T Building Construction ...	G. H. Broadbent	...	7.15–9.15	...	...	...
147	T Building Science	J. Holt	...	...	...	7.15–9.15	...
	S3						
148	T Building Construction ...	H. Walters	...	...	...	7.15–9.15	...
149	T Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
150	T Geometry	J. N. Walker	7.15–9.15	...	...	...	...
151	T Brickwork and Concreting ...	H. Lonsdale	...	...	7.15–9.15	...	...
152	T Carpentry and Joinery ...	H. Allen	...	...	...	...	7.15–9.15
153	T Mathematics	G. E. Hall	...	7.15–9 15	...	...	...
154	T Building Science	E. M. Pearson	...	...	7.15–9.15	...	...
	A1 and A2						
	Group 1.						
155	T Building Construction (A or B)	E. M. Pearson	...	...	...	7.15–9.15	...
156	T Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
157	T Builders' Quantities and Estimating	T. J. Higginson	7.15–9.15	...	...	...	...
158	T Structural Work	E. M. Pearson	...	...	...	...	7.15–9.15
	Group 2.						
159	T Carpentry and Joinery ...	G. H. Broadbent	...	...	...	...	7.15–9.15
160	T Architectural History (see Art School						
161	T Equipment of Buildings ...	E. M. Pearson	...	...	...	...	7.15–9.15
	Group 3, Practice Class.						
162	T Building Construction (A or B)	H. Walters	...	...	7.15–9.15	...	...
163	T Carpentry and Joinery ...						
164	T Structural Work						

N.B.—(1) Building Construction (A), together with Structural Work, and (2) Building Construction (B) with Equipment of Buildings are taken in alternate years. In 1939–40, Building Construction (B) with Equipment of Buildings will be given.

	COTTON SPINNING.						
	S3						
165	T Cotton Spinning (Theory) ...	S. Jackson	...	...	...	...	7.15–9.15
166	T Cotton Spinning (Practical) ...	S. Jackson	...	...	7.15–9.15*	...	...
167	T Textile Engineering	F. Taylor	...	...	7.15–9.15*	...	...
168	T Textile Science	H. Dawson, G. O. Stephens	...	...	...	7–9.30	...
	COTTON MANUFACTURE (WEAVING).						
	S1 (National Certificate)						
169	T Mathematics	J. Preston	...	...	7.15–9.15*	...	...
170	T Textile Drawing	J. Preston	7.15–9.15	...	...	...	...
171	T Cotton Weaving (Practical) ...	H. Gorton	...	...	...	...	7.15–9.15*
172	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...
	S2						
173	T Cotton Weaving (Theory) ...	W. Dagger	...	...	...	...	7.15–9.15
174	T Cotton Weaving (Practical) ...	H. Gorton, C. J. Breakell ...	...	...	7.15–9.15*	...	...
175	T Mathematics	R. Chatburn	7.15–9.15*	...	...	...	...
176	T Textile Science	H. Dawson, G. O. Stephens	...	...	...	7–9.30	...
	S3						
177	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	...	7.15–9.15
178	T Cotton Weaving (Practical) ...	H. Gorton, C. J. Breakell ...	...	...	7.15–9.15*	...	...
179	T Textile Science	H. Dawson, G. O. Stephens	...	...	...	7–9.30	...
180	A Textile Design and Colour ...	F. Southworth	...	...	7—9*	...	...
	A1						
181	T Cotton Weaving (Theory) ...	N. Highfield	...	...	7.15–9.15	...	...
182	T Cotton Weaving (Practical) ...	W. Dagger, N. Highfield ...	7.15–9.15*	...	...	...	...
183	T Textile Technology I. ...	D. Atkinson	7.15–9.15*	...	...	...	...
184	T Textile Economics	J. G. C. Dawson	...	7.15–9.15	...	...	...
185	A Textile Design I.	W. T. Garnar	...	7—9	...	...	...
186	T Textile Chemistry I.	C. A. Hatton	...	7–9.30	...	...	...
	A2						
187	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	7.15–9.15	...	...
188	T Cotton Weaving (Practical) ...	W. Dagger	7.15–9.15*	...	...	...	...
189	T Textile Technology II.... ...	D. Atkinson	7.15–9.15*	...	...	...	...
190	T Textile Economics	J. G. C. Dawson	...	7.15–9.15	...	...	...
191	A Textile Design II.	W. T. Garnar	...	7—9	...	...	...
192	T Textile Chemistry II.	C. A. Hatton	...	...	...	...	7–9.30

*Alternate weeks.

Textile Economics and Textile Engineering are taken in alternate years. Textile Economics will be taken in 1939–40.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	SPECIAL COURSES.						
	1st Year.						
193	T Cotton Spinning	S. Jackson	...	...	...	7.15–9.15*	...
194	T Textile Chemistry I.	C. A. Hatton	...	7–9.30	...	...	...
195	T Textile Technology I. ...	D. Atkinson	7.15–9.15*	...	...	...	...
	2nd Year.						
196	T Textile Technology II. ...	D. Atkinson	7.15–9.15*	...	...	...	...
197	T Textile Microscopy	H. W. Edmunds	...	7.15–9.15	...	...	...
198	T Textile Chemistry II.	C. A. Hatton	...	...	...	...	7–9.30
	Special Classes.						
199	T Rayon Manufacture	H. Dawson	...	...	7–9.30	...	...
200	T Hosiery	Miss E. Beaton	...	...	...	7.15–9.0	...
201	T Adult Spinners I.	S. Jackson	7.15–9.0	...	...	...	...
202	T Practical Rayon Weaving ...	W. Dagger	...	7.15–9.0	...	...	...
	COMMERCIAL COURSES.						
	S1						
203	A Arithmetic	F. R. Snalam	7.15–8.15	...	...	...	...
204	T Arithmetic	A. Frankish	7.15–8.15	...	...	...	...
205	T Arithmetic	A. Frankish	8.15–9.15	...	...	...	...
206	T Book-keeping	W. Webster	...	...	...	...	7.15–8.15
207	T Book-keeping	W. Webster	...	...	...	...	8.15–9.15
208	T Book-keeping	T. Bradshaw	...	...	7.15–8.15	...	...
209	T Book-keeping	T. Bradshaw	...	...	8.15–9.15	...	...
210	T Commerce	S. W. Williams	...	7.15–8.15	...	...	...
211	T Commerce	... ...	...	...	...	...	8.15–9.15
212	A English	F. R. Snalam	8.15–9.15	...	...	...	...
213	T English	A. Frankish, Miss M. A. Morris, W. A. C. Clarke	...	8.15–9.15	...	...	...
214	T English	J. Kettle, A. Frankish ...	...	...	...	...	7.15–8.15
215	T Shorthand (More Adv. Theory)	... ...	7.15–8.15	...	...	...	...
216	T Shorthand (Elementary) ...	... ...	8.15–9.15	...	...	...	...
217	T Shorthand (Elementary) ...	F. M. Crawley	7.15–8.15	...	...	...	...
218	T Shorthand (More Adv. Theory)	F. M. Crawley	8.15–9.15	...	...	...	...
219	T Shorthand (50-60)	Miss M. Nelson	...	...	...	7.15–9.15	...

*Alternate weeks.

	COMMERCIAL COURSES.							
	S1—*continued.*							
220	T Typewriting	J. Hilton	...	6.15–7.15	...	...	...	
221	T Typewriting	J. Hilton	...	7.15–8.15	...	...	...	
222	T Typewriting	J. Hilton	...	8.15–9.15	...	...	...	
223	T French (Beginners)	J. Kettle	...	...	7.15–9.15	...	...	
224	A Spanish	J. Kettle	8.15–9.15	...	...	...	...	
225	A Latin	W. A. C. Clarke	...	...	...	...	7.15–8.15	
226	T German (Beginners)	C. E. Robin	...	...	...	...	7.15–9.15	
227	T German (Scientific and Technical	C. E. Robin	...	7.15–9.15	...	...	...	
228	T Geography	H. C. Pye	7.15–8.15	...	...	...	...	
	S2							
229	T Arithmetic	E. Singleton	7.15–8.15	...	...	...	...	
230	T Arithmetic	E. Singleton	8.15–9.15	...	...	...	...	
231	T Book-keeping	H. Entwistle, F. Whitehead	...	...	7.15–9.15	...	...	
232	T Commerce	S. W. Williams	...	8.15–9.15	...	...	...	
233	T English	A. Frankish, Miss M. A. Morris	...	7.15–8.15	...	...	...	
234	T English	J. Kettle, A. Frankish ...	...	...	...	...	8.15–9.15	
235	T Shorthand (70 to 80 words) ...	W. Hanson, Mrs. E. Barnes	...	...	...	7.15–9.15	...	
236	T Typewriting	J. Hilton	...	...	...	...	6.15–7.15	
237	T Typewriting	J. Hilton	...	...	...	...	7.15–8.15	
238	T Typewriting	J. Hilton	...	...	...	...	8 15–9.15	
239	T French	T. C. Hayes	...	...	7.15–9.15	...	...	
240	T Geography	H. C. Pye	8.15–9.15	...	...	...	...	
241	A Spanish	J. Kettle	7.15–8.15	...	...	...	...	
242	T German	H. H. Allen	...	7.15–9.15	...	...	...	
	S3							
243	T Economics	W. Webster	7.15–9.15	...	...	...	...	
244	T Book-keeping	T. Cunliffe	...	7.15–9.15	...	...	...	
245	A Commerce	S. W. Williams	...	...	7.15–9.15	...	...	
246	A Shorthand (from 80 words) ...	T. Ashworth	...	...	...	7.15–9.15	...	
247	T English Language & Literature	H. H. Allen	...	...	...	7.15–9.15	...	
248	T French	H. H. Allen	7.15–9.15	...	...	...	...	
249	T Mercantile Law	J. White	...	...	8.15–9.15	...	...	
250	T Cotton Spinning (Theory) ...	J. Mitchell	...	7.15–9.15	...	...	...	
251	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday	Wednesday.	Thursday.	Friday.
	A1 and 2						
252	† Accounting and Auditing (A1)	N. Hindley	...	7.15–9.15	...	...	...
253	† Accounting and Auditing (A2)	N. Hindley	...	...	...	7.15–9.15	...
254	† Mercantile Law (A1)	J. White	...	...	8.15–9.15	...	...
255	† Mercantile Law (A2)	J. White	...	7.15–8.15	...	...	...
256	† Economics and Banking (A1)...	W. Webster	7.15–9.15	...	...	...	...
257	† Economics and Banking (A2)...	W. Webster	...	...	7.15–9.15	...	...
258	† French	... ...	...	...	...	7.15–9.15	...
259	† Cotton Spinning (Theory) ...	J. Mitchell	...	7.15–9.15	...	...	...
260	† Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...
	CHEMISTRY. (National Certificate Course) **S1**						
261	† Mathematics	F. B. Landolt	7—9	...	...	...	...
262	† Physics	F. B. Landolt	...	7–9.30	...	...	...
263	† Inorganic Chemistry	C. C. Addison, W. Harrison	...	...	...	...	7–9.30
	S2						
264	† Physics (Theory and Practical)	H. W. Edmunds	...	...	7–9.30	...	...
265	† Organic Chemistry (Theory and Practical)	C. C. Addison	... ...	7—8 8—9.30	...	...	...
266	† Inorganic Chemistry (Theory and Practical)	C. C. Addison	...	...	...	7–9.30	...
	S3						
267	† Organic Chemistry (Theory and Practical) ...	E. Taylor, C. C. Addison ...	...	7–9.30	...	...	...
268	† Inorganic Chemistry (Theory and Practical)	E. Taylor	...	...	7–9.30	...	...
269	† Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...

	A Section I.						
270	† Organic Chemistry (Theory) ...	E. Taylor	7—8	...	...	...	...
271	† Organic Chemistry (Practical).	W. G. Creasy	...	...	7–9.30	...	...
272	† Inorganic Chemistry (Theory)	E. Taylor	8—9	...	...	...	...
273	† Inorganic Chemistry (Practical)	W. G. Creasy, A. N. Edmondson ...	...	...	...	7–9.30	...
	A Section II.						
274	† Organic Chemistry (Theory) ...	E. Taylor	7—8	...	...	...	...
275	† Organic Chemistry (Practical)	W. G. Creasy	...	...	7–9.30	...	...
276	† Inorganic Chemistry (Theory)	E. Taylor	8—9	...	...	...	...
277	† Inorganic Chemistry (Practical)	W. G. Creasy, A. N. Edmondson	...	...	...	7–9.30	...

N.B.—The Sections I. and II. of the Theory will be taken in alternate years.—Section II. in 1939–40.

	PHARMACY.						
	(Preliminary Course).					...	
278	† Biology	H. W. Edmunds	7—9	...	...	...	...
279	† Physics	F. B. Landolt	...	7–9.30	...	...	...
280	† Chemistry	C. C. Addison, W. Harrison	...	...	...	...	7–9.30
	(Revision Course).						
281	† Biology	H. W. Edmunds	7—9	...	...	...	...
282	† Physics	F. B. Landolt	...	...	...	...	7–9.30
283	† Inorganic Chemistry (Theory and Practical)	E. Taylor	...	...	7–9.30	...	...
	POST COURSE (Part 1.)						
284	† Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...
285	† Organic Chemistry	C. C. Addison	...	7–9.30	...	...	...
286	† Inorganic Chemistry (Practical)	W. G. Creasy	...	...	7–9.30	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday
	INTER. B.Sc. AND 1ST YEAR A.I.C. COURSE.						
287	T Inorganic Chemistry	E. Taylor	...	...	7–9.30	...	...
288	T Pure Mathematics I.	G. O. Stephens	...	7—9	...	...	...
289	T Pure Mathematics II.	J. Slater	...	7—9	...	...	...
290	T Applied Mathematics	J. Slater	...	...	...	7—9	...
291	T Physics	F. B. Landolt	...	...	...	...	7–9.30
292	T Engineering Drawing	J. E. Taylor	7.15–9.15	...	...	...	...
	Alternative More Advanced Chemistry.						
293	T Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...
294	T Inorganic Chemistry	E. Taylor	8—9	...	...	...	...
295	T Practical Chemistry	W. G. Creasy	...	...	7–9.30	...	...
	B.Sc., A.I.C. COURSES and ADVANCED WORK (Practical)						
296	T Chemistry Theory	E. Taylor	...	8—9	...	...	...
297	T Physical Chemistry	W. G. Creasy, ... A. N. Edmondson	...	...	...	7–9.30	...
298	T Inorganic Chemistry	E. Taylor	7—9	...	...	...	...
299	T Organic Chemistry	W. G. Creasy	...	...	7–9.30	...	...
300	T Physics (Practical) ... ... *	F. B. Landolt	...	...	...	...	7–9.30
	TYPOGRAPHY.						
	1st Year.						
301	A Composing	E. Jones	...	...	7.15–9.15	...	...
302	A Machines	J. Taylor	7.15–9.15	...	...	...	...
303	T English	J. Kettle	...	...	...	...	7.15–8.15
	2nd Year.						
304	A Composing	E. Jones	...	...	...	...	7.15–9.15
305	A Machines	J. Taylor	...	...	7.15–9.15	...	...
306	T English	A. Frankish	...	7.15–8.15	...	...	...
	3rd and 4th Years.						
307	A Composing	E. Jones	...	7.15–9.15	...	...	...
308	A Machines	J. Taylor	...	...	...	7.15–9.15	...
309	A Commercial Art	A. Bann	...	...	7.15–9.15	...	...

* For Languages see pages 68 to 70.

	ENGINEERING, WORKSHOP.						
	S1						
310	† Calculations and Science ...	T. C. Nicholson	...	7.15–9.15	...	...	...
311	† Engineering Drawing	S. Laraway	7.15–9.15	...	...	...	...
312	† Engineering Workshop Processes	G. W. Robinson	...	...	7.15–9.15	...	7.15–9.15
	S2						
313	† Calculations and Science ...	D. F. F. Brewester	...	7.15–9.15	...	...	...
314	† Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...
315	† Engineering Workshop Processes	O. Jones	...	...	...	7.15–9.15	...
	S3						
316	† Engineering Workshop Processes	O. Jones	...	7.15–9.15	...	...	...
317	† Engineering Workshop Practice	O. Jones	7.15–9.15	...	...	...	...
318	† Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...
	MOTOR MECHANICS COURSE.						
	S1						
319	† Calculations and Science ...	J. Slater	...	...	...	...	7.15–9.15
320	† Motor Engineering	... ...	...	...	7.15–9.15	...	...
321	† Engineering Drawing	S. Laraway	7.15–9.15	...	...	...	...
	S2						
322	† Calculations and Science ...	D. F. F. Brewester	...	7.15–9.15	...	...	...
323	† Engineering Workshop Processes and Practice ...	G. W. Robinson	...	...	7.15–9.15	...	...
324	† Motor Engineering	H. Hindley	...	...	...	7.15–9.15	...
	S3						
325	† Engineering Workshop Processes and Practice ...	O. Jones	...	...	...	7.15–9.15	...
326	† Motor Eng. (Mech. Equip.) ...	H. Hindley	...	...	...	...	7.15–9.15
327	† Motor Eng. (Elect. Equip.) ...	J. F. Parsonage	7.15–9.15	...	...	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	MOTOR BODY BUILDING.						
	S1						
328	T Technical Drawing	T. A. Wetton	7.15–9.15	...	...	...	...
329	T Body Building	T. A. Wetton	...	..	...	7.15–9.15	...
330	T Calculations and Science ...	J. Slater	...	...	...	...	7.15–9.15
	S2						
331	T Technical Drawing	T. A. Wetton	7.15–9.15	...	...	...	...
332	T Body Building	T. A. Wetton	...	...	...	7.15–9.15	...
333	T Calculations and Science ...	D. F. F. Brewester	...	7.15–9.15	...	...	...
	ELECTRIC WELDING.						
334	T Electric Welding (I. and II.)...	S. H. Jones	...	7.15–9.15	...	...	...
335	T Electric Welding (I.) ...	S. H. Jones	7.15–9.15	...	...	...	...
336	T Electric Welding (II.)... ...	S. H. Jones	...	...	...	7.15–9.15	...
337	T Welding for Motor Body Builders	... ...	...	...	7.15–9.15	...	...
	SHEET AND PLATE METALWORK.						
	S1						
338	T Trade Processes and Materials	I. Dunn	...	7–9.30	...	...	...
339	T Calculations and Drawing ...	C. V. Case	...	...	...	7–9.30	...
	S2						
340	T Trade Processes and Materials	J. Royle	...	...	7–9.30	...	...
341	T Calculations and Drawing ...	C. V. Case	...	7–9.30	...	...	...
	S3						
342	T Trade Processes and Materials	J. Royle	7—9.30	...	...	...	...
343	T Calculations and Drawing ...	C. V. Case	...	7—9.30	...	...	...
	ELECTRICAL INSTALLATION.						
	S1						
344	T Installation Rules, Theory and Calculations	J. Brennand	...	7.15–9.15	...	...	...
345	T Practical Work; Sketching and Drawing	J. Brennand	...	...	7.15–9.15	...	...
346	T Engineering Science	G. E. Hall	7.15–9.15	...	...	...	...

	S2							
347	† Installation Rules, Theory and Calculations	S. Garnett	...	...	7.15–9.15	...	...	
348	† Practical Work ; Sketching and Drawing	S. Garnett	...	...	...	7.15–9.15	...	
349	† Electrical Engineering Science	A. Woods	7.15–9.15	...	...	...	...	
	S3							
350	† Installation Rules, Theory and Calculations	S. Garnett	...	...	7.15–9.15	...	...	
351	† Practical Work, Sketching and Drawing	S. Garnett	...	...	...	7.15–9.15	...	
352	† Mathematics	J. Bagot	...	7.15–9.15	...	...	...	
	RADIO SERVICE WORK.							
	S1							
353	† Mathematics	T. Wilkinson	7.15–9.15	...	...	...	...	
354	† Radio Theory	G. Damp	...	...	7.15–9.15	...	...	
355	† Calculations and Practical work	G. Damp	...	...	...	...	7.15–9.15	
	S2							
356	† Mathematics	J. Bagot	...	7.15–9.15	...	...	...	
357	† Radio Theory	D. Baxter	...	...	7.15–9.15	...	...	
358	† Calculations and Practical work	D. Baxter	...	...	...	7.15–9.15	...	
	S3							
359	† Electrical Engineering Science	A. Woods	7.15–9.15	...	...	...	...	
360	† Radio Theory	D. Baxter	...	...	7.15–9.15	...	...	
361	† Calculations and Practical work	D. Baxter	...	...	...	7.15–9.15	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	PLUMBING.						
	S1						
362	† Plumbing (Theory)	F. Coupe	...	...	7.15–9.15	...	...
363	† Plumbing (Practical)	J. Pilkington	7.15–9.15	...	...	...	...
364	† Geometry and Calculations ...	J. N. Walker	...	7.15–9.15	...	...	...
	S2						
365	† Plumbing (Practical)	F. Coupe	...	...	...	...	7.15–91·5
366	† Plumbing (Theory)	F. Coupe	7.15–9.15	...	...	...	...
367	† Plumbing Science & Calculation	F. W. Steele	...	7.15–9.15	...	...	...
	S3						
368	† Plumbing (Practical)	J. Dixon	...	...	7.15–9.15	...	...
369	† Plumbing (Theory)	J. Dixon	7.0–8.30	...	...	...	...
370	† Plumbing (Science)	J. Dixon	8.30–9.30	...	...	...	...
371	† Building Construction	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
	A						
372	† Plumbing (Practical)	J. Dixon	...	...	7.15–9.15	...	...
373	† Plumbing (Theory)	J. Dixon	7.0–9.30	...	...	...	...
374	† Building Construction or ...	G. H. Broadbent	...	7.15–9.15	...	...	...
375	† Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
	LEAD BURNING, SHEET COPPER WORK AND BRONZE WELDING.						
376	† Lead Burning	J. Fyffe	...	7.15–9.15	...	...	...
377	† Sheet Copper Work ... ... and Bronze Welding ...	J. Royle	...	...	...	7.15–9.15	...

	CARPENTRY AND JOINERY.							
	S1							
378	T Carpentry and Joinery (Theory) ...	H. Fisher	7.15–9.15	...	...	...	...	
379	T Carpentry and Joinery (Practical) ...	J. Smith	...	...	...	...	7.15–9.15	
380	T Geometry and Calculations ...	J. N. Walker	...	7.15–9.15	...	...	...	
	S2							
381	T Carpentry and Joinery (Theory) ...	H. Fisher	...	...	7.15–9.15	...	...	
382	T Carpentry and Joinery (Practical) ...	H. G. Yeadon	7.15–9.15	...	...	...	...	
383	T Science and Calculations ...	A. E. R. Bill	...	...	...	...	7.15–9.15	
	S3							
384	T Carpentry and Joinery (Theory)	H. Allen	...	...	...	...	7.15–9.15	
385	T Carpentry and Joinery (Practical)	H. G. Yeadon	...	7.15–9.15	...	...	...	
386	T Building Construction ...	A. E. R. Margerison ...	...	...	...	7.15–9.15	...	
	A							
387	T Carpentry and Joinery (Theory)	G. H. Broadbent	...	...	...	...	7.15–9.15	
388	T Carpentry and Joinery (Practical)	H. G. Yeadon	...	7.15–9.15	...	...	...	
389	T Geometry	J. N. Walker...	7.15–9.15	...	...	...	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	BRICKLAYERS.						
	S1						
390	T Building Construction ...	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
391	T Geometry	J. N. Walker	...	7.15–9.15	...	...	...
392	T Science and Calculations ...	A. E. R. Bill...	...	...	...	...	7.15–9.15
	S2						
393	T Building Construction... ...	G. H. Broadbent	...	7.15–9.15	...	...	...
394	T Geometry	J. N. Walker	...	...	...	...	7.15–9.15
395	T Brickwork and Masonry ...	H. Lonsdale	...	...	7.15–9.15	...	...
	S3						
396	T Building Construction ...	H. Walters	...	...	...	7.15–9.15	...
397	T Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
398	T Brickwork and Concreting ...	H. Lonsdale	...	...	7.15–9.15	...	...
	COTTON SPINNING.						
399	T Opening and Carding (Theory)	C. Smith	...	7.15–9.15	...	...	...
A 400	T Opening and Carding (Practical)	C. Smith	...	...	...	...	7.15–9.15*
401	T Roving Preparation (Theory)	C. Smith	...	...	...	7.15–9.15	...
B 402	T Roving Preparation (Practical)	C. Smith	...	...	...	...	7.15–9.15*
403	T Spinning (Theory)	S. Jackson	...	...	...	...	7.15–9.15
C 404	T Spinning (Practical)	S. Jackson	...	...	7.15–9.15*	...	...
405	T Trade Calculations and Science I. ...	J. Preston	...	...	7.15–9.15*	...	...
406	T ,, ,, ,, II. ...	R. Chatburn	7.15–9.15*	...	...	...	...

Students take A., **or** B. **or** C., **AND Trade Calculations and Science.**

	COTTON MANUFACTURE (WEAVING).							
	S1							
407	† Cotton Manufacture (Weaving) (Theory)	D. Atkinson	...	...	...	7.15–9.15	...	
408	† Cotton Manufacture (Weaving) (Practical)	J. W. Blackhurst	...	...	...	...	7.15–9.15*	
409	† Trade Calculations and Science	J. Preston	...	...	7.15–9.15*	...	...	
	S2							
410	† Cotton Manufacture (Weaving) (Theory)	W. Dagger	...	...	...	...	7.15–9.15*	
411	† Cotton Manufacture (Weaving) (Practical)	H. Gorton ... ... C. J. Breakell	...	...	7.15–9.15*	...	...	
412	† Trade Calculations and Science	R. Chatburn	7.15–9.15					
	LABORATORY ARTS.							
413	† Metalwork	G. W. Robinson	...	...	7.15–9.15	...	...	
414	† Woodwork	H. G. Yeadon	...	7.15–9.15	...	...	...	
415	† Glass Blowing	H. Helm	7.15–9.15	...	...	...	...	
	GYMNASIUM CLASSES.							
416	† Ladies	Mrs. Wilson	8.15–9.15	7—8	8.15–9.15	7—8	8.15–9.15	
417	† Men	F. Wilcock, A. Dunbill and T. Heaton	7—8	8.15–9.15	7—8	8.15–9.15	7—8	

ART SCHOOL (AVENHAM INSTITUTE).

DAY.	ROOM.	TIMES OF CLASSES.	SUBJECTS.	TEACHERS.
Monday ...	11 and Museum	10.0–12.30	General Drawing, Animals, Nature Drawing	G. A. Clucas
	11–12	2.0–4.0	Painting Still Life, Illustration, etc.	W. Rathbone
	1	2.0–4.0	Dress Design	—
	1	7.0–9.0	Dress Design	E. Rostron
	2	7.0–9.0	Crafts (Miscellaneous)	M. Duckett
	9–10	7.0–9.0	Drawing, Industrial and Commercial Art (2nd and 3rd years, P. & D., Advertising, etc.)	W. Rathbone and A. Bann
	11	7.0–9.0	General Art and Teachers' Course	E. Barton
	12	7.0–9.0	Interior Decoration, Historic Ornament (Architects, 4th and 5th years, P. & D.)*	B. Taylor
Tuesday ...	2–2A	10.0–12.30	Perspective, Etching	G. A. Clucas
	11–12	10.0–12.50	Design and Figure Drawing	W. Rathbone
	12	2.0–4.0	Advanced Decoration and Figure Composition, Figure ...	W. Rathbone
	10	2.0–4.0	Design and Crafts	M. Duckett
	1	7.0–9.0	Design—Industrial (Embroidery, Dress Design, etc.) ...	M. Duckett
	9	7.0–9.0	Design, Industrial P. & D., 1st to 3rd years*...	G. A. Clucas and V. Johnson
	10	7.0–9.0	Textile Design, 4th and 5th years*	W. Garnar
	11	7.0–9.0	Design—Commercial Art	A. Bann
Wednesday...	9	10.0–12.30	Architectural Drawing, etc.	G. A. Clucas
	12	10.0–12.30	Still Life, Painting and General Drawing	W. Rathbone
	10	2.0–4.0	Lettering and Commercial Art (Theory and Practice) ...	A. Bann.
	11	2.0–4.0	Figure Drawing	W. Rathbone
	1	7.0–9.0	Drawing, General Knowledge and Theory	M. Duckett
	2	7.0–9.0	Drawing from Life (Evening Students)	W. Rathbone

Day.	Room.	Times of Classes.	Subjects.	Teachers.
Wednesday... —*continued*	2a	7.0–9.0	Etching	G. A. Clucas
	8	7.0–7.30	Painting and Decorating (Theoretical), 2nd year*	F. W. Sharples
	8	7.30–9.0	Painting and Decorating (Practical), 2nd year*	F. W. Sharples
	9	7.0–9.0	Form and Colour (Junior Course)	E. Barton
	10	7.0–9.0	Textile Design, 3rd year*	F. Southworth
	11	7.0–9.0	Commercial Art Course (Lettering and Layouts)	A. Bann and V. Johnston
	7	7.0–9.0	Modelling and Casting*	W. N. Simm
Thursday ...	11–12	10.30–12.30	Drawing and Painting, Still Life, etc.	W. Rathbone
	11	2.0–4.0	Object Drawing, Memory Drawing	A. Bann
	5	2.0–5.0	Painting and Decorating Course (Apprentices)	W. Rathbone
	1	7.0–9.0	Schemes and Interior Decoration, 3rd, 4th and 5th years P. & D.	B. Taylor
	2	7.0–9.0	Drawing from Life (Advanced)	W. Rathbone
	9	7.0–9.0	Drawing (1st year, P. & D.)*	E. Robinson
	10	7.0–9.0	Junior Course (Design and Colour)	E. Barton
	11	7.0–9.0	Figure Drawing, Anatomy	W. Rathbone and W. N. Simm
	12	7.0–9.0	Bookbinding and Illustration	A. Bann
Friday ...	10	10.0–12.30	Illustration and Painting	W. Rathbone
	11–12	10.0–12.30	Architectural Drawing and Design	G. A. Clucas
	2	2.0–4.0	Anatomy*	W. Rathbone
	1	2.0–4.0	Design and Fabric Printing	M. Duckett
	1	7.0–9.0	Crafts, Industrial Art	M. Duckett
	5	7.0–9.0	Painting and Decorating, 3rd and 4th years*...	R. E. Cusworth
	8	7.0–9.0	Painting and Decorating, 1st year*	E. Robinson
	9	7.0–9.0	English, 1st and 2nd years, Junior Art*	F. Allen
	10	7.0–9.0	Architectural History*	G. A. Clucas

* These Classes will terminate after the Examinations.

DAY JUNIOR TECHNICAL SCHOOL.—TIME TABLE.

Monday—	9.15—10.15	10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1A. ..	Maths. & Geometry	Science	History	Gymnasium	Workshop	
		10.15—10.45	10.45—12.15	1.45—2.45	2.45—4.45	
1*a*. ..	Geography	Gymnasium	Workshop	Maths. & Geometry	Science	
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2A. ..	Science	Gymnasium	English	Workshop	Maths. & Geometry	
	9.15—10.45	10.45—12.15	1.45—3.15	3.15/3.45	3.45—4.45	
2*a*. ..	Workshop	Maths. & Geometry	Science	Gymnasium	English	
Tuesday—	9.15—10.15	10.15—10.45	10.45—12.15	1.45—2.45	2.45—4.45	
1A. ..	English	Gymnasium	Technical Drawing	Maths. & Geometry	Workshop	
		10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1*a*. ..	Maths. & Geometry	Workshop	English	Gymnasium	Art	
		10.15—11.15	11.15—12.15	1.45—3.15	3.15—3.45	3.45—4.45
2A. ..	History	English	Maths. & Geometry	Applied Mechanics	Gymnasium	Geography
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2*a*. ..	Maths. & Geometry	Gymnasium	Geography	Art	Chemistry	
Wednesday—	9.15—10.15	10.15—12.15				
1A. ..	Maths. & Geometry	Science	2.0—4.15			
1*a*. ..	English	Workshop	Organised Games			
	9.15—10.45	10.45—12.15				
2A. ..	Science	Maths. & Geometry	Organised Games			
	9.15—10.15	10.15—11.15	11.15—12.15			
2*a*. ..	English	History	Maths. & Geometry			
Thursday—	9.15—10.15	10.15—12.15	1.45—3.15	3.15—4.45		
1A. ..	English	Workshop	Maths. & Geometry	Art		
		10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1*a*. ..	Maths. & Geometry	Science	History	Gymnasium	Technical Drawing	
		10.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45	
2A. ..	Maths. & Geometry	Gymnasium	Technical Drawing	Chemistry	Workshop	
	9.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45		
2*a*. ..	Technical Drawing	Applied Mechanics	Workshop	Maths. & Geometry		
Friday—	9.15—10.15	10.15—10.45	10.45—12.15	1.45—2.45	2.45—3.45	3.45—4.45
1A. ..	Geography	Gymnasium	Technical Drawing	Maths. & Geometry	English	1A & 1*a* } General Information
	9.15—10.45		10.45—12.15	1.45—2.45	2.45—3.45	
1*a*. ..	Maths. & Geometry		Technical Drawing	English	Maths. & Geometry	
	9.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45		
2A. ..	Technical Drawing	Workshop	Art	Maths. & Geometry		
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2*a*. ..	Science	Gymnasium	Maths. & Geometry	Workshop	Technical Drawing	

DAY JUNIOR TECHNICAL SCHOOL.

TIME TABLE ANALYSIS (FIRST YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Mathematics and Geometry	G. E. Hall	9.15–10.15 (A)	1.45–2.45 (A)	9.15–10.15 (A)	1.45–3.15 (A)	1.45–2.45 (A)
	C. C. Addison	1.45–2.45 (a)	9.15–10.15 (a)	...	9.15–10.15 (a)	9.15–10.45 (a) 2.45–3.45 (a)
Science	E. M. Pearson	10.15–12.15 (A) 2.45–4.45 (a)	... ...	10.15–12.15 (A) ...	10.15–12.15 (a) ...	... ...
Technical Drawing ...	E. M. Pearson ... ... J. E. Taylor	... ...	... 10.45–12.15 (A)	... ...	3.15–4.45 (a) ...	10.45–12.15 (A) 10.45–12.15 (a)
Art	G. A. Clucas	...	3.15–4.45 (a)	...	3.15–4.45 (A)	...
Workshop ...	J. H. Hulse	10.45–12.15 (a) 3.15–4.45 (A)	10.15–12.15 (a) 2.45–4.45 (A)	10.15–12.15 (B) ...	10.15–12.15 (A) ...	... ...
English	H. H. Allen ... ... J. Kettle	... ...	9.15–10.15 (A) 1.45–2.45 (a)	9.15–10.15 (a) ...	... 9.15–10.15 (A)	2.45–3.45 (A) 1.45–2.45 (a)
History ...	R. S. Cross	1.45–2.45 (A) ...	... ...	... ...	1.45–2.45 (d) ...	... ...
Geography ...	... ...	9.15–10.15 (a)	...	...	...	9.15–10.15 (A)
Organised Games	A. Woods	...	...	2.0–4.15	...	...
Gymnasium ...	J. Kettle ... ... A. Frankish	10.15–10.45 (a) 2.45–3.15 (A)	10.15–10.45 (A) 2.45–3.15 (a)	... ...	... 2.45–3.15 (a)	10.15–10.45 (A) ...
General Information ...	... ...	...	...	...	...	3.45–4.45 A.& a.

DAY JUNIOR TECHNICAL SCHOOL.

(SECOND YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS				
		Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Mathematics and Geometry	G. E. Hall	10.45–12.15 (a)	9.15–10.45 (a) 11.15–12.15 (A)	10.45–12.15 (A)	3.15–4.45 (a)	3.15–4.45 (A)
	F. W. Walker	...	...	...	9.15–10.15 (A)	11.15–12.15 (a)
	C. C. Addison	3.15–4.45 (A)	...	11.15–12.15 (a)	...	...
Science	A. Woods	9.15–10.45 (A) 1.45–3.15 (a)	...	9.15–10.45 (A)	...	9.15–10.45 (a)
Applied Mechanics ...	F. W. Walker	...	1.45–3.15 (A)	...	10.45–12.15 (a)	...
Chemistry ...	C. C. Addison	...	3.15–4.45 (a)	...	1.45–3.15 (A)	...
Technical Drawing ...	J. S. Wrigley	...	...	...	10.45–12.15 (A)	9.15–10.45 (A)
	J. E. Taylor	...	...	...	9.15–10.45 (a)	3.15–4.45 (a)
Art	G. A. Clucas	...	1.45–3.15 (a)	...	...	1.45–3.15 (A)
Workshop ...	J. H. Hulse	9.15–10.45 (a) 1.45–3.15 (A)	... ...	... ...	1.45–3.15 (a) 3.15–4.45 (A)	10.45–12.15 (A) 1.45–3.15 (a)
English ...	H. H. Allen	11.15–12.15 (A)	10.15–11.15 (A)	...	...	...
	R. S. Cross	3.45–4.45 (a)	...	9.15–10.15 (a)	...	...
History	R. S. Cross	...	9.15–10.15 (A)	10.15–11.15 (a)	...	...
Geography ...	... ...	... ...	11.15–12.15 (a) 3.45–4.45 (A)	...	...	...
Organised Games	A. Woods	...	...	2.0–4.15	...	...
Gymnasium ...	J. Kettle	10.45–11.15 (A) 3.15–3.45 (a)	10.45–11.15 (a) 3.15–3.45 (A)	...	10.15–10.45 (A)	10.45–11.15 (a)

Day Junior Commercial School.

TIME TABLE.

	9.15—10.15	10.15—11.0	Interval.	11.15—12.15	1.45—2.45	2.45—3.45	3.45—4.30
Monday—							
1A. ..	Commercial Correspondence	Mathematics	11.0–11.15	Arithmetic	Typewriting	Shorthand	French
1B. ..	Geography	Arithmetic		English	French	Mathematics	Commerce
		10.15–11.15		11.30–12.15			
2A. ..	Geography	Typewriting	11.15–11.30	Gymnasium (B)	Art	English	Gymnasium (G)
2B. ..	French	Arithmetic		Geography (G)	Bookkeeping	Art	Bookkeeping (B)
Tuesday—	9.15–10.15	10.15–11.0		11.15–12.15	1.45–2.45	2.45–3.45	3.45–4.30
1A. ..	Shorthand	French	11.0–11.15	English	English	Geography	Gymnasium (B)
1B. ..	English	Arithmetic		History	Mathematics	Shorthand	Arithmetic (G)
2A. ..	Shorthand	English	11.0–11.15	French	Bookkeeping	English	Commerce
2B. ..	French	Shorthand		Arithmetic	Mathematics	Typewriting	English
Wednesday—	9.15—10.15	10.15—11.0		11.15—12.15	1.45—2.45	2.45—3.45	3.45—4.30
1A. ..	Typewriting	French	11.0–11.15	Commerce	Arithmetic	Science	Gymnasium (G)
1B. ..	French	Typewriting		Geography	Science	Shorthand	Shorthand (B)
2A. ..	Shorthand	Gymnasium (B)	11.0–11.15	Arithmetic	French	History	Commercial Correspondence
2B. ..	Geography	Bookkeeping (G)		French	English	Arithmetic	Shorthand
Thursday—	9.15—10.15	10.15—11.0		11.15—12.15	2.0—4.15		
1A. ..	History	French	11.0–11.15	Art	Games		
1B. ..	French	Arithmetic		Commercial Correspondence	Games		
		10.15—11.15		11.30—12.15			
2A. ..	English	Arithmetic	11.15–11.30	Gymnasium (G)	Games		
2B. ..	Shorthand	Typewriting		Geography (B)	Games		
Friday—	9.15—10.15	10.15—11.15		11.30—12.15	1.45—2.45	2.45—3.30	3.30—4.30
1A. ..	Mathematics	Shorthand	11.15–11.30	Gymnasium (G)	English	Gymnasium (B)	Geography
1B. ..	Typewriting	English		Arithmetic (B)	Shorthand	Shorthand (G)	Art
		10.15—11.0		11.15—12.15		2.45—3.45	3.45—4.30
2A. ..	Arithmetic	Typewriting	11.0–11.15	French	Science	Mathematics	Shorthand
2B. ..	History	English		Commerce	Commercial Correspondence	Science	English

(B)—Boys. (G)—Girls.

DAY JUNIOR COMMERCIAL SCHOOL.

TIME TABLE ANALYSIS (FIRST YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday	Thursday.	Friday.
Arithmetic ...	R. S. Cross	10.15–11.0 (B) 11.15–12.15 (A)	10.15–11.0 (B) 3.45–4.30 (Girls)	1.45–2.45 (A)	10.15–11.0 (B)	11.30–12.15 (Boys)
Art	G. A. Clucas	...	...	...	11.15–12.15 (A)	3.30–4.30 (B)
Commercial Correspondence	R. S. Cross	9.15–10.15 (A)	...	...	11.15–12.15 (B)	...
Commerce ...	W. Webster	3.45–4.30 (B)	...	11.15–12.15 (A)	...	...
English	A. Ellison	...	9.15–10.15 (B) 1.45–2.45 (A)	...	...	...
	A. Frankish	11.15–12.15 (B)	11.15–12.15 (A)	...	...	10.15–11.15 (B) 1.45–2.45 (A)
French	A. Frankish	3.45–4.30 (A) 1.45–2.45 (B)	10.15–11.0 (A) ...	10.15–11.0 (A) 9.15–10.15 (B)	10.15–11.0 (A) 9.15–10.15 (B)	...
Geography ...	A. Frankish	... 9.15–10.15 (B)	2.45–3.45 (A) ...	... 11.15–12.15 (B)	... ...	3.30–4.30 (A) ...
History	R. S. Cross	...	11.15–12.15 (B)	...	9.15–10.15 (A)	...

Mathematics ...	A. Frankish	10.15–11.0 (A) 2.45–3.45 (B)	... 1.45–2.45 (B)	... ...	... ...	9.15–10.15 (A) ...
Shorthand ...	... ...	2.45–3.45 (A)	9.15–10.15 (A) 2.45–3.45 (B) ...	... 2.45–3.45 (B) 3.45–4.30 (Boys)	... ...	10.15–11.15 (A) 1.45–2.45 (B) 2.45–3.30 (Girls)
Typewriting ...	D. Roberts ... ... W. Webster	1.45–2.45 (A) ...	... ...	9.15–10.15 (A) 10.15–11.0 (B)	... ...	... 9.15–10.15 (B)
Science	H. W. Edmunds ...	... ...	... ...	2.45–3.45 (A) 1.45–2.45 (B)	... ...	... ...
Gymnasium ...	A. Ellison	...	...	3.45–4.30 (Girls)	...	11.30–12.15 (Girls)
	J. Kettle	...	3.45–4.30 (Boys)	...	...	2.45–3.30 (Boys)
Organised Games	A. Ellison	...	...	...	2.0–4.15 (Girls)	...
	A. Woods	...	...	...	2.0–4.15 (Boys)	...
Intervals ...	——	11.0–11.15	11.0–11.15	11.0–11.15	11.0–11.15	11.15–11.30

DAY JUNIOR COMMERCIAL SCHOOL.

SECOND YEAR.

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday	Thursday	Friday.
Arithmetic ...	A. Ellison	... 10.15–11.15 (B)	... 11.15–12.15 (B)	11.15–12.15 (A) 2.45–3.45 (B)	10.15–11.15 (A) ...	9.15–10.15 (A) ...
Art	G. A. Clucas	1.45–2.45 (A) 2.45–3.45 (B)	... ...	... ...	... ...	... ...
Commercial Correspondence Commerce ...	R. S. Cross ... ... W. Webster	... ...	... 3.45–4.30 (A)	3.45–4.30 (A) ...	... ...	1.45–2.45 (B) 11.15–12.15 (B)
English ...	A. Ellison	2.45–3.45 (A)	10.15–11.0 (A) 2.45–3.45 (A) 3.45–4.30 (B)	... ... 1.45–2.45 (B)	9.15–10.15 (A)	11.15–12.15 (B) 10.15–11.0 (B) 3.45–4-30 (B)
French	J. Kettle	... 9.15–10.15 (B)	11.15–12.15 (A) 9.15–10.15 (B)	1.45–2.45 (A) 11.15–12.15 (B)	... ...	11.15–12.15 (A) ...
Geography ...	A. Ellison	9.15–10.15 (A) 11.30–12.15 (Girls)	... ...	9.15–10.15 (B) ...	... ...	... ...
	A. Frankish	...	...	...	11.30–12.15 (Boys)	...
History	R. S. Cross	...	...	9.15–10.15 (A)	...	9.15–10.15 (B)
Mathematics ...	R. S. Cross	...	1.45–2.45 (B)	...	...	2–45–3.45 (A)
Shorthand ...	W. Webster	... ...	9.15–10.15 (A) 10.15–11.0 (B)	9.15–10.15 (A) 3.45–4.30 (B)	... 9.15–10.15 (B)	3.45–4.30 (A) ...

Typewriting ...	D. Roberts ... ... W. Webster	10.15–11.15 (A) ...	... 2.45–3.45 (B)	... ...	... 10.15–11.15 (B)	10.15–11.0 (A) ...
Bookkeeping ...	... ...	1.45–2.45 (B) 3.45–4-30 (Boys)	1.45–2.45 (A) ...	... 10.15–11.0 (Girls)	... ...	... ...
Science	H. W. Edmunds ...	...	...	...	...	1.45–2.45 (A) 2.45–3.45 (B)
Gymnasium ...	A. Ellison ... ... J. Kettle	3.45–4.30 (Girls) 11.30–12.15 (Boys)	... ...	... 10.15–11.0 (Boys)	11.30–12.15 (Girls) ...	... ...
Organised Games	A. Ellison ... ... A. Woods	... ...	... ...	... ...	2.0–4.15 (Girls) 2.0–4.15 (Boys)	... ...
Intervals ...	——	11.15–11.30	11.0–11.15	11.0–11.15	11.15–11.30	11.0–11.15

NOTES.

NOTES.

HARRIS INSTITUTE, PRESTON.

CLASSES AFFILIATED TO MANCHESTER AND LIVERPOOL UNIVERSITIES.

These provide complete Courses of Instruction for the Joint Matriculation of the Northern Universities; the Intermediate B.Sc. and Intermediate B.Sc. (Tech.), Manchester; the Intermediate B.Sc., Liverpool; the Intermediate Examinations of the University of London; and the various Preliminary Professional Examinations, including Medical, Dental, and Pharmaceutical.

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All communications to be addressed to—

T. M. NAYLOR, Principal.

July, 1939.

Crozier & Co., Printers, North Road, Preston.

PRESTON HARRIS INSTITUTE

PROSPECTUS

SESSION - 1940-41



HARRIS INSTITUTE, PRESTON

TELEPHONE NUMBERS:
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THE INSTITUTE COMPRISES
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AND THE AVENHAM INSTITUTE.

PROSPECTUS
of
CLASSES

SESSION 1940-41.

A—

1. TECHNICAL DAY CLASSES	-	Re-open Sept. 9
2. JUNIOR DAY SCHOOLS (*Technical and Commercial*)	-	„ „ 9
3. EVENING CLASSES	- -	„ „ 16

B—

1. DAY ART CLASSES	- -	Re-open Sept. 9
2. EVENING ART CLASSES	-	„ „ 16

SPECIAL NOTICE.—Evening Students will be enrolled at the Technical College, Corporation Street, from 7 to 9 p.m. on Wednesday, Thursday and Friday evenings, September 11th, 12th and 13th, and may also enrol during the week commencing Monday, September 9th, between 9 a.m. and 5 p.m. (Saturday, 9 to 12).

Students who do not enrol on these dates will be charged an extra fee of 2/6. This will be strictly enforced.

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1940-41.

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F. FYFFE.
H. FISHER.
J. DIXON.
F. COUPE.
J. PILKINGTON.
J. HOLT, A.M.I.Inst.C.E.
H. D. DODD, L.R.I.B.A.
A. E. R. MARGERISON.
F. W. STEELE.
H. G. YEADON.
C. SHAW.

Laboratory Steward : G. WEBSTER.

CHEMISTRY, PHARMACY and PHYSICS DEPARTMENT.

Head : E. TAYLOR, M.Sc. ; A.I.C.

Lecturer in Chemistry : E. H. MARRIOTT, B.Sc.

Lecturer in Natural Science : H. W. EDMUNDS, B.Sc.

Lecturer in Physics : F. B. LANDOLT, B.Sc.

Lecturers in Chemistry for Evening Classes :

W. G. CREASY, B.Sc., A.I.C.
A. N. EDMONDSON, A.I.C.

Lecturer in Mathematics :

J. SLATER, B.Sc.
G. O. STEPHENS, Ph.D.

Glass Working :

H. HELM.

Laboratory Steward : J. JOHNSON.

COMMERCIAL DEPARTMENT AND DAY JUNIOR COMMERCIAL SCHOOL.

Head : W. WEBSTER, F.C.I.S.

Assistants :

Miss A. ELLISON.
Miss J. D. COOPER, B.A.
M. J. GRIFFITHS, B.A.
Miss D. ROBERTS.

Lecturers for Evening Classes :

T. ASHWORTH.
Mrs. E. BARNES.
Miss F. M. CRAWLEY.
T. CUNLIFFE, F.L.A.A.
H. ENTWISTLE, A.C.I.S.
W. HANSON.
J. HILTON.
N. HINDLEY, A.C.A.
Miss M. A. MORRIS.
Miss M. NELSON.
E. SINGLETON.
S W. WILLIAMS, B.Com.

LANGUAGES DEPARTMENT.

Lecturer in Charge : H. H. ALLEN, B.A.

Assistants :

J. KETTLE, B.A.
A. FRANKISH, B.A.

Lecturers for Evening Classes :

W. A. C. CLARKE, B.A.
T. C. HAYES.
H. C. PYE.

ENGINEERING DEPARTMENT.

Head : J. S. WRIGLEY, M.Sc., A.M.I.Mech.E.

Lecturer in Electrical Engineering (with special responsibility) :
A. WOODS.

Senior Lecturer in Mechanical Engineering :
F. W. WALKER, A.M.C.T.

Lecturers :

G. E. HALL, B.Sc., A.M.I.Mech.E.
J. E. TAYLOR, M.Sc. (Tech.), A.M.I.Mech.E.

Lecturers for Evening Classes :

F. CALLOW.
S. GARNETT.
J. H. HULSE.
T. A. WETTON.
O. JONES.
H. HINDLEY.
J. BRENNAND.
S. LARAWAY
G. R. MAXWELL
L. E. BIRCHALL, B.Sc. (Tech.).
J. BAGOT, B.Sc.
A. WOODACRE.
R. H. WIGNALL.
T. C. NICHOLSON.
S. H. JONES.
T. WILKINSON.
C. V. CASE.
J. ROYLE.
A. JACKSON, A.M.Inst.C.E.
G. W. ROBINSON.

JUNIOR TECHNICAL SCHOOL.

Head : THE PRINCIPAL.

The Staff consists of teachers from the Engineering, Building and Commercial Departments.

TEXTILE DEPARTMENT.

Head : D. ATKINSON, F.T.I.

Instructor : W. DAGGER.

Lecturers for Evening Classes :

J. W. BLACKHURST.
R. CHATBURN.
J. G. C. DAWSON, B.Com.
H. DAWSON B.Sc., (TECH.).
N. HIGHFIELD.
C. A. HATTON, M.Sc. (TECH), A.I.C.
S. JACKSON.
J. MITCHELL, F.T.I.
J. PRESTON, A.T.I.
F. TAYLOR.
G. O. STEPHENS, Ph.D.
C. SMITH

TYPOGRAPHY.

Lecturers :

J. TAYLOR. E. JONES.

ADMINISTRATION.

Registrar : J. A. GORTON.

Clerks :

ELIZ. A. RICHARDSON ; DOROTHY LOCKWOOD ; JESSIE DONALDSON.

Library Assistants :

NELLIE HOLT. DOROTHY M. SINGLETON.

Refectory Superintendent : Mrs. F. MCGOWAN.

Custodians : E. H. TRINDER (Technical College).
W. D. BREEZE (Avenham Institute).

Assistant Custodians : F. W. GARDINER ; J. GARDNER ; W. W. KITCHIN.

MAINTENANCE STAFF.

Engineer : O. JONES.
Mechanic : W. ARNETT.
Electrician : E. LUPTON.
Fireman : H. MADDOCK.

CALENDAR.

1940.

September	9th.	Day Classes begin.
	9th.	Council.
	11th.	Registration of Evening Students.
	12th.	Registration of Evening Students (Scholarship holders).
	13th.	Registration of Evening Students.
	16th.	Evening Classes begin.
November	4th.	Engineering and Building Committee.
	4th.	Textile Committee.
	4th.	Art, Science and Commerce Committee.
December	2nd.	Council and Annual Meeting.
	13th.	Prize Distribution.
	20th.	Christmas Vacation begins (Day and Evening Classes).

1941.

January	6th.	Evening Classes begin.
March	3rd.	Council.
April	10th.	Easter Vacation begins (Day and Evening Classes).
	17th.	Evening Classes begin.
	21st.	Day Classes begin.
May	3rd.	Junior Technical and Junior Commercial Schools Entrance Examination.
	29th.	Whitsuntide Vacation begins.
June	9th.	Day Classes begin.
June	16th.	Council.
July	3rd.	Junior Technical and Junior Commercial Schools' Sports.
	11th.	Senior Day Classes and Art Evening Classes close.
	11th.	Junior Technical and Junior Commercial Schools close.

The Library.

Senior Students in all departments should note that the Technical College Library exists primarily for their benefit, and that a good selection of the latest publications in their various subjects may be consulted. Although it is not practicable to arrange the lending of books for outside reading, students are strongly urged to avail themselves of the valuable facilities for reference which are afforded within the College. The production of a comprehensive catalogue, with separate author- and subject-index has been completed ; and it will prove of use to those desirous of ascertaining the extent of the Library's resources in any particular subject.

Social and Athletic Activities.

All students, on enrolment, must become members of the H.I. Students' Association. The subscription is one shilling, payable at the same time as the tuition fee. Members will receive gratis a copy of the Magazine and of the Prospectus, and will be free to participate in the various social and athletic functions of the College.

Various Social and Athletic Activities are held during the session, and notices are posted in the corridor giving the dates and times of the forthcoming events.

In connection with the Art Department, there is a Sketch Club, Students' Union and Dramatic Club, for details see page 54.

The Harris Institute Rugby Football Club, practice games and fixtures Saturday afternoons. Intending players should give their names at once to the Secretary. There is also a Hockey Club, and players are invited to join this.

The Institute possesses a Gymnasium which is fully equipped. For further information see pages 19, 41 and 75.

A social evening is allotted to each department when short plays and informal dances are held.

Students are invited to contribute to the Magazine, particulars of which will be posted up at the appropriate times.

Full particulars of these events are published on the notice board in the main corridor.

Refectory.

The Council has instituted a fully equipped Dining Room. Lunches, teas and light refreshments may be obtained from 10-30 a.m. to 7-15 p.m.

The Refectory is for the convenience of the students and staff, and all students may use the Refectory between the times stated.

The Refectory superintendent, Mrs. McGowan, will arrange special teas, suppers, etc., as required.

REGULATIONS.

APPLICABLE TO ALL STUDENTS ATTENDING CLASSES AT THE HARRIS INSTITUTE.

Students are expected to attend punctually at the Classes for which they enrol.

All students are expected to take an examination at the end of the course in those subjects for which they enrolled at the opening of the Session.

Smoking within the School buildings is strictly prohibited ; and Students must not loiter about the corridors.

The Lecturers are authorised to report periodically through the Principal, on attendance, homework and conduct of each Student.

The Council shall have power in dealing with Students who are unsatisfactory in these or other respects, to remove their names from the Register without return of fee.

SCHOLARSHIPS AND PRIZES.

A limited number of Scholarships and Prizes will be awarded at the discretion of the Council.

Prizes are also awarded by the Preston Building Trades Employers' Association, the Preston and District Engineering Employers' Association, the North Lancashire Master Cotton Spinners and Manufacturers' Association, the Preston Master Printers' Federation, the Typographical Association, Preston, and the National Registration of Plumbers (Preston Council).

Full particulars of Scholarships and Prizes may be obtained on application.

SUMMARY OF DAY, PART-TIME DAY AND EVENING COURSES.

DEPARTMENT.	DAY AND PART-TIME DAY.	EVENING.
ART	General principles of Art, History and Methods of Production, Drawing, Design, Colour Study, Figure Composition, Illustration, Painting, Sculpture, Commercial Art, Etching, etc. Industrial Art and Crafts. Architecture, Courses in Perspective, Architectural History and Drawing. Textile Design. Advanced Design and Decoration. Students prepared for examinations under the Board of Education; City and Guilds of London Institute; Union of Lancashire and Cheshire Institutes; and the National Society of Art Masters, etc. (See pages 48 to 54).	Designed chiefly to furnish suitable study and to further the interests of apprentices in trades and crafts where Art plays a more or less prominent part. Students prepared for examinations under the Board of Education; City and Guilds of London Institute; Union of Lancashire and Cheshire Institutes; and the National Society of Art Masters, etc. (See pages 48 to 54 and 76 and 77).
BUILDING	National Certificates of the Institute of Builders. Building Courses (Union of Lancashire and Cheshire Institutes) (COURSE NO. 7) Intermediate A.R.I.B.A.	National Certificates of the Institute of Builders. Building Courses (Union of Lancashire and Cheshire Institutes) Builders' Quantities, Carpentry and Joinery, Plumbing, Domestic and Sanitary Engineering — For City and Guilds Certificates. Carpentry and Joinery, Plumbing, Bricklaying — Union of Lancashire and Cheshire Institute Trade Courses. (COURSES NOS. 12, 29, 30, 31 and 32). Lead Burning. Sheet Copper Work and Bronze Welding.

Department.	Day and Part-Time day.	Evening.
COMMERCE	Royal Society of Arts Certificates (Course No. 5)	Union of Lancashire and Cheshire Institutes' Grouped Courses; Royal Society of Arts Certificates and Professional Examinations of all the leading Professional Associations and Institutions, covering their syllabuses in Arithmetic, Book-keeping, Commerce, English and Commercial Correspondence, Shorthand, Typewriting, French, Spanish, Latin, German and Geography. (Courses Nos. 19 and 20). Advanced Union of Lancashire and Cheshire Institute Courses, including Accounting and Auditing, Mercantile Law, Economics and Banking. (Course No. 21). For Languages see under Language Dept.
PRINTING		The classes in Typography prepare students for the City and Guilds of London Institute Examinations. (Course No. 18).
SCIENCE	Chemistry, Physics, Botany, Mathematics and Zoology as required for :— Preliminary Scientific Examination, Part 1 Pharmacy and Dispensers' Examination. L.D.S. of the Universities of Manchester, Liverpool, Edinburgh and London The Conjoint Examination M.R.C.S.; L.R.C.P. (Lond.). Pre-Registration Examination of the University of Edinburgh Inter B.Sc. Universities of Manchester, Liverpool and London. The Associateship of the Institute of Chemistry (A.I.C.) Biology and Chemistry for Nurserymen and Gardeners. (Courses Nos. 1, 2, 3 and 4).	Science Degree of London University. Associateship of the Institute of Chemistry (A.I.C.). National Certificate in Chemistry. Higher National Certificate in Chemistry. Preliminary Scientific Examination of the Pharmaceutical Society. Laboratory Arts Course. (Courses Nos. 15, 16, 17 and 35).

ENGINEERING	Engineering Degree of London University. National Certificates in Mechanical Engineering. National Certificates in Electrical Engineering. A.M.Inst.C.E. Classes A.M.I.Mech.E. Classes (COURSE No. 6)	Engineering Degree of London University. National Certificates in Mechanical Engineering. National Certificates in Electrical Engineering. A.M.Inst. C.E. Classes. A.M.I.Mech.E. Classes. Engineering Workshop Course. Automobile Engineering. Motor Mechanics Course and Inst. Auto. Engineers Repair Certificate Course. Sheet and Plate Metal Trades Course. Gas Supply Course. Electric Welding. Electrical Installation. Radio Service. (COURSES NOS. 10, 11, 22, 23, 24, 25, 26, 27 and 28).
LANGUAGES AND MATRICULATION	Northern Universities and University of London College of Preceptors and other Professional entrance examinations (COURSE No. 1)	Courses in French, German, Spanish, English, Geography, Science and Mathematics.
TEXTILE	National Certificates in Cotton Spinning or Weaving in Union of Lancashire and Cheshire Institutes and City and Guilds grouped courses. Associateship of the Textile Institute. (COURSE No. 8).	National Certificates in Cotton Spinning or Weaving in Union of Lancashire and Cheshire Institutes and City and Guilds Grouped courses. Associateship of the Textile Institute. Special Classes for Overlookers, Weavers, Spinners, in Hosiery, and in Rayon and Rayon Weaving. COURSES NOS. 13, 14, 33 and 34.

Department.	Day and Part-Time Day.	Evening.
JUNIOR COMMERCIAL ...	The Course extends over a period of two years, and prepares boys and girls for clerical posts. The following subjects are taken—Arithmetic, Art, Algebra, Accounts, Book-keeping, Commerce, Commercial Correspondence, Physical Training, English, French, Games, Geography, History, Office Routine, Mathematics, Science, Shorthand and Typewriting (See pages 42 to 45 and 81 to 85)	
JUNIOR TECHNICAL ...	The Course extends over a period of two years, and prepares boys entering Engineering, Building and other trades. The following subjects are taken—Mathematics, Engineering and Building Drawing, Geometry, Art, Science (including Applied Mechanics, Electricity, Magnetism, Heat, Chemistry), Metalwork, Woodwork, Geography, History, English, Physical Training and Organised Games (See pages 42 to 44 and 78 to 80)	

DAY CLASSES

TECHNICAL DAY CLASSES.

COURSES:

1. PROFESSIONAL ENTRANCE COURSE (Matriculation, etc.).
2. INTERMEDIATE B.Sc.
3. PRELIMINARY SCIENTIFIC—
   - (*a*) Pharmacy.
   - (*b*) Dental.
   - (*c*) Dispensers.
4. ELEMENTARY BIOLOGY.
5. COMMERCIAL SUBJECTS.
6. ENGINEERING (Mechanical and Electrical).
7. BUILDING.
8. TEXTILE (Cotton Spinning and Weaving).
9. GYMNASIUM CLASSES.

Classes begin on Monday, September 9th, 1940.

Autumn Term :—9th September, 1940—19th December, 1940.
Spring Term :—6th January, 1941—9th April, 1941.
Summer Term : 21st April, 1941—11th July, 1941.
(all dates inclusive).

ENROLMENT:

Students can enrol at the Technical College or Avenham Institute any day after September 2nd, or on Wednesday, Thursday and Friday evenings, September 11th, 12th and 13th.

N.B.—An essential preliminary to enrolment in any Senior Day Course is the production of a satisfactory report or certificate, signed by an employer, headmaster or other person competent to vouch for the student's good character and general diligence.

TECHNICAL DAY CLASSES.

Course 1.—PROFESSIONAL ENTRANCE COURSE (Matriculation, etc.).

(Northern Universities, University of London and Professional Societies).

Intending Students should procure, from the Authorities concerned, a copy of the Regulations relating to the particular examination for which they propose to enter. As a number of war time changes already announced in certain of these regulations may be extended or modified, it is of importance to make sure that up-to-date information is obtained.

Time Table, see page 55.

Fees: £3 15s. od. per subject, or
£15 15s. od. for the full course.
Sports 5/-.

Course 2.—INTERMEDIATE B.Sc. (Science and Engineering).

(Northern Universities and University of London.)

NOTE.—The Institute is affiliated to the Universities of Manchester and Liverpool, and recognised as a privileged Institution under their Ordinances, to the extent that the attendance in the courses in Biology, Physics, Mathematics and Chemistry at the Institute is accepted as satisfying the attendance for the Intermediate B.Sc. Courses.

Time Table, see page 55.

Fees: £3 15s. od. per subject.
Sports 5/-.

Advanced Students who have passed Inter B.Sc. or other examination of equivalent standard can be afforded facilities to work for the B.Sc. (Lond.) or the A.I.C. The Institute is fully equipped for advanced work of this character, and is approved by London University for Engineering Degree Course Work and by the Institute of Chemistry for the training of candidates for the Associateship.

Fees: £3 3s. od. per day for the Session.

Course 3.—PRELIMINARY SCIENTIFIC.

(*a*) PHARMACY. PHARMACEUTICAL SOCIETY'S EXAMINATION, PART I.

The Institute is recognised by the Pharmaceutical Society for instruction in the subjects of Part I. Examination, viz. :—Chemistry, Physics and Biology.

SPECIAL NOTE.—The Pharmaceutical Society of Great Britian require that candidates must register with them as Pharmaceutical Students before beginning any portion of their curriculum of studies.

All Students must produce evidence of such registration.

Attendance at an approved course in Physics, Chemistry and Biology is necessary. Students must show satisfactory work both in written exercises and in practical work before the certificate of entry to the examination can be signed.

Time Table, see pages 17 and 56.

Fees £10 10s. od. for the course, or,
£3 15s. od. per subject. Sports 5/–.

(*b*) FIRST EXAMINATION FOR MEDICAL DEGREES; candidates require Chemistry, Physics and Biology.

Time Table, see pages 17 and 56.

Fees : £10 10s. od. for the course, or
£3 15s. od. per subject.
Sports 5/-.

(*c*) DENTAL L.D.S., PART I. (Conjoint. London, Manchester, Liverpool and Edinburgh); candidates require Chemistry and Physics in their first examination but are advised to take the Biology of the Course in preparation for their later work.

Time Table, see pages 17 and 56.

Fees : £3 15s. od. per subject. Sports 5/-.

(*d*) DISPENSERS' EXAMINATION ; candidates require Chemistry.

Time Table, see pages 17 and 56.

Fee : £3 15s. od. Sports 5/-.

TIMES OF CLASSES.

	9.30—10.30	10.30—11.30	11.30—12.30	2—3	3—4.30
Monday ...	Biology Lecture	Biology Practical		Organic Chemistry Lecture	Chemistry Practical
Tuesday ...	Chemistry Lecture	Chemistry Practical		Physics Optics and Sound Lecture	Practical
Wednesday ...	Physics Heat & General Physics Lecture & Practical			Chemistry Lecture	Chemistry Practical
Thursday ...	Biology Lecture	Biology Practical		Chemistry Lecture	Chemistry Practical
Friday ...	Biology Lecture	Biology Practical		Physics Magnetism and Electricity Lecture	Practical

Course 4.—ELEMENTARY BIOLOGY, SCIENCE and SURVEYING.

A course for Park Apprentices and Nurserymen: for those wishing to study the scientific basis of horticulture.

It consists of a two-year course in elementary biology and science and a short practical course in surveying.

This and subsequent courses are intended to prepare for the Diploma of Park Administration and for the certificate of the R.H.S.

Time Table, see page 57.

Fee, 10/6 for bona fide gardeners.

Course 5.—COMMERCIAL SUBJECTS.

Time Table, see page 57.

Fees: £2 10s. per term for the morning course, or £4 per term for the full course.

Sports 2/6.

Course 6.—ENGINEERING (Part Time Day).

(National Certificate Courses in Mechanical and Electrical Engineering).

NOTE.—In the first year, Mechanical and Electrical Students will take the same course, and all Students should attend on one evening per week.

For general regulations and conditions of admission, see under Evening Classes, pages 24 to 26.

Time Table, see pages 57 to 59.

Fee : £2 2s. 0d. per session.

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering (Mechanical and Electrical).

Time Table, see page 56.

Students wishing to proceed to a degree must first pass the Matriculation examination, and should consult the Head of the Engineering Department.

Course 7.—BUILDING (Part Time Day).

(National Certificate Course.)

Time Table, see page 60.

Fee £1 1s. 0d. per Session.

MOTOR BODY BUILDING (Part Time Day).

Time Table, see page 60.

Fee : £2 2s. per session.

INTERMEDIATE R.I.B.A.

Time Table, see page 60.

Fee : £2 2s. 0d. per session.

Course 8.—TEXTILE (Part Time Day).

A part-time course in Cotton Spinning, Weaving and Designing, suitable for Students who desire a good general knowledge of the principles and processes involved in the making and selling of cotton and rayon fabrics.

The classes shown in the Time Table are held in the mornings of each day, but arrangements, where necessary, may be made for tuition in the ancillary subjects in afternoon or evening classes.

Time Table, see page 59.

Fees : £1 1s. 0d. per morning for the session.
£4 4s. 0d. for the full course.
Sports 5/-.

Course 9.—GYMNASIUM.

A course of instruction will be given on Saturday mornings if a sufficient number of Students enrol.

Fee : 5/- per session (2/6 if attending other classes).

For Gymnasium classes held during the evening session see page 41 or 75.

NOTE.—The fees stated for the various courses do not apply to Students residing in County Boroughs other than Preston.

Such Students should enquire at the Office before enrolling to ascertain the fees of their courses. The Lancashire County Council Capitation Scale will be applied.

WOMEN DAY STUDENTS.

All women day students, whether entering for the first time or not, are required to report to their Tutor-in-charge, Miss A. Ellison, at 2 p.m., on Friday, September 20th, 1940.

Those who may enrol after the above date must see Miss Ellison on the first Friday afternoon subsequent to their enrolment : and this time will be kept free each week throughout the Session in order to afford an opportunity for such further interviews as may be necessitated by circumstances of conduct or by other eventualities.

EVENING CLASSES

EVENING CLASSES.

SENIOR AND ADVANCED TECHNICAL AND COMMERCIAL COURSES.

These Courses proceed by progressive stages thus :—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

TECHNICAL COURSES.

10.—MECHANICAL ENGINEERING (National Certificate).
11.—ELECTRICAL ENGINEERING (National Certificate).
12.—BUILDING (National Certificate).
13.—COTTON SPINNING (National Certificate).
14.—COTTON MANUFACTURE (WEAVING) (National Certificate).
15.—PURE AND APPLIED CHEMISTRY (National Certificate).
16.—SCIENCE DEGREE and A.I.C. COURSES.
17.—PHARMACY.
18.—TYPOGRAPHY.

COMMERCIAL COURSES.

19.—GENERAL COMMERCIAL.
20.—SENIOR CLERICAL COURSE.
21.—ADVANCED COMMERCIAL.

LANGUAGE COURSES.

See pages 36 and 37.

TRADE COURSES.

The following Courses are held :—

22.—ENGINEERING WORKSHOP PRACTICE.
23.—MOTOR MECHANICS and I.A.E. REPAIR CERTIFICATE.
24.—MOTOR BODY BUILDING.
25.—ELECTRIC WELDING.
26.—SHEET AND PLATE METALWORK.
27.—ELECTRICAL INSTALLATION WORK.
28.—RADIO SERVICE WORK.
29.—CARPENTRY AND JOINERY.
30.—PLUMBING
31.—BRICKLAYERS.
32.—LEAD BURNING, SHEET COPPER WORK AND BRONZE WELDING.
33.—COTTON SPINNING.
34.—COTTON MANUFACTURE (WEAVING).
35.—LABORATORY ARTS.

MISCELLANEOUS, SCIENCE, LANGUAGES, Etc.

Physics, Chemistry, Mathematics, English, French, German, Spanish, Economics, Geography. Gymnasium Classes (see pages 41 and 75).

ENROLMENT:

Students will be enrolled at the Technical College on Wednesday, Thursday and Friday evenings, September 11th, 12th and 13th, from 7 to 9 p.m., and may enrol during the weeks commencing September 9th and 14th, between 9 a.m. and 5 p.m. (Saturday, 9—12).

Classes begin on Monday, September 16th, 1940.

VACATIONS:

The College will be closed for the Christmas vacation from December 20th, 1940, to January 4th, 1941, and for the Easter vacation from April 10th to April 16th, 1941.

The dates in each case are inclusive.

EVENING CLASSES.

GENERAL REGULATIONS.

CONDITIONS OF ADMISSION.

Before admission to a **Senior Course** a Student must have passed the 2nd year of the Preparatory Technical or Commercial Course (conducted by a Local Education Authority) in the Junior Evening Institutes or have reached an equivalent educational standard.

Before admission to a **Trade Course** a Student must have passed the 1st year of the Preparatory Technical Course (held in the Junior Evening Institutes), or have reached an equivalent educational standard.

Exceptions to the above conditions may be made only where Students are over 16 years of age, in which cases such Students must satisfy the Principal of the Institute that they are able to benefit by the classes to which they seek admission.

Students under 16 years of age who fail to satisfy the conditions of admission should attend the **Evening Junior Courses** (Technical or Commercial), conducted by the **Preston Education Committee in Junior Evening Institutes.** These Junior Courses link up the work of the Elementary School with the Evening Classes of the Harris Institute.

Full particulars may be obtained from THE DIRECTOR OF EDUCATION, Education Offices, Lancaster Road, Preston.

Scholars leaving the Elementary Day Schools should join a Junior Evening Institute immediately, in order to qualify for admission to the Harris Institute as soon as possible.

The Refectory is open to all Students from 10-30 a.m. to 7-15 p.m. Special lunches, teas or suppers may be had by arrangement with the Refectory Superintendent.

PROMOTION TO HIGHER YEARS.

To qualify for certificates and to pass on to the higher years of a course it is necessary that Students should :—

(*a*) Reach a certain standard of attainments, tested by examinations, held at the end of the Session, and

(*b*) Have made satisfactory progress during the Session, based on records of attendance, homework, classwork, etc.

FEES FOR SESSION.

All fees are payable in advance, and are not returnable.

	s.	d.
1st Year Course S1	12	6
2nd Year Course S2	15	0
3rd Year Course S3	17	6
4th Year Course A1	20	0
5th Year Course A2	20	0
Non-Course Students	17s. 6d. per subject.	

Students who do not enrol on the dates given will be charged an additional fee of 2s. 6d. This rule will be strictly enforced. The Council reserve the right to discontinue any Class in the event of a small number joining.

Students who desire to take the Examinations of the Union of Lancashire and Cheshire Institutes, or the City and Guilds of London Institute may be called upon to pay the whole or a portion of the Examination Fees.

NOTE.—The above fees do not apply to Students residing in County Boroughs other than Preston.

Such Students should enquire at the Office before enrolling to ascertain the fees of their courses. The Lancashire County Council Capitation Scale will be applied.

Applications for the remission of fees in cases of unemployment or other causes should be made to the Principal before enrolment.

NATIONAL CERTIFICATE COURSES.

National Certificate Courses are arranged in the following :—

Mechanical Engineering,
Electrical Engineering,
Pure and Applied Chemistry.
Building.
Textile.

Certificates are awarded at the end of

(*a*) A Three Years' Course (Senior).
(*b*) A further Two Years' Course (Advanced).

The Certificates in each case are awarded by the Board of Education in conjunction with one of the following Professional Institutions :—

(*a*) Mechanical Engineering : Institution of Mechanical Engineers.
(*b*) Electrical Engineering : Institution of Electrical Engineers.
(*c*) Pure and Applied Chemistry : Institute of Chemistry.
(*d*) Building : Institute of Builders.
(*e*) Textile : Textile Institute.

CONDITIONS OF AWARD OF CERTIFICATE.

In order to obtain a certificate a candidate must make not less than 70 per cent. of the possible attendances in each year of the course, and must obtain—

(1) Not less than 40 per cent. of the possible marks in EACH subject in the examination held at the end of each year.
(2) Not less than 40 per cent. of the possible marks obtainable in EACH year for homework, class work, laboratory work, etc., taken separately, in EACH subject for which such marks are to be awarded.
(3) Not less than 50 per cent. of the grand total of marks obtainable in EACH year. Of this total the possible marks in the examinations constitute 70 per cent., and the remaining 30 per cent. will be the possible marks for home work, class work, laboratory work, etc., in each year.

A "Distinction" may be awarded to any candidate qualified to receive a certificate who, in the opinion of the examiners, has shown special merit in the Final Examination and his certificate may be specially endorsed with the name or names of the subjects in which he has thus distinguished himself.

Fee to be paid by each Student entering the Final Examination, Five Shillings.

ENGINEERING DEPARTMENT.

Course 10.—MECHANICAL ENGINEERING.

NATIONAL CERTIFICATE COURSES (see page 61).

AWARD OF LOWER AND HIGHER CERTIFICATES.

The Institution of Mechanical Engineers, in conjunction with the Board of Education, has approved of the grouped courses of instruction for the award of certificates at the end of—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

ADVANCED COURSE.

Students must have passed the Senior Course or produce evidence of equivalent attainments.

After obtaining the Higher National Certificate, students wishing to qualify for Associate Membership of the Institution of Mechanical Engineers should take the A3 Course (See page 61).

TRADE COURSES, see pages 37 and 38 and 70 and 71.

Course 11.—ELECTRICAL ENGINEERING.

NATIONAL CERTIFICATE COURSES, see page 62.

The Institution of Electrical Engineers, in conjunction with the Board of Education, has approved of the grouped courses of instruction for the award of certificates at the end of—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

ADVANCED COURSE.

Students must have passed the Senior Course or produce evidence of equivalent attainments.

Electrical Students are expected to sit at the Examinations held by the Union of Lancashire and Cheshire Institutes in the subjects of the course.

Time Table: Mechanical and Electrical (see pages 61 and 62).

See Course 6 for Part Time Day Classes in Mechanical and Electrical Engineering.

NOTE.—Holders of the National Certificates in Mechanical or Electrical Engineering, who become candidates for Election as Students, Graduates, or Associate Members of the Institutions of

Mechanical or Electrical Engineers, and are able to satisfy the Council of their eligibility under the by-laws for one of these classes in respect of occupation and practical training, will be exempted from certain subjects in the Examinations for Election as Students and Associate Members.

Particulars relating to these exemptions may be obtained from the Head of the Department.

Students who desire to sit for the Final Examination in Electrical Engineering Practice, City and Guilds of London Institute, are now allowed to take Part I., consisting of a paper on Advanced Electrical Technology at the end of the First Year of the Advanced Course. A Certificate will not be awarded for success in Part I. only, but candidates will be notified of their success or failure in that Part.

If a candidate enters for Part I. and one section of Part II. in the same year, failure in Part I. will carry with it failure in the section of Part II. The class of Certificate awarded to a candidate successful in Part I. and one section of Part II. will be determined upon the results obtained in Part II.

For TRADE COURSES, see pages 38 and 39 and 71 and 72.

ENGINEERING DEGREE COURSE.

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering (Mechanical and Electrical).

Students wishing to proceed to a Degree must first pass the Matriculation examination and should consult the Head of the Engineering Department.

BUILDING DEPARTMENT.

Course 12.—BUILDING.

NATIONAL CERTIFICATE COURSES (see pages 62 and 63).

The Institute of Builders, in conjunction with the Board of Education, award an Ordinary Certificate on the satisfactory completion of a Three Years' Senior Course, and a Higher Certificate after a further Two Years' Advanced Course.

The conditions governing the award of National Certificates are given on page 26

Senior Course (Ordinary Certificate).

1st and 2nd Years, see pages 62 and 63.

3rd Year. Building Construction and at least two of the following :—

Building Science,
Building Geometry,
Building Mathematics,
Builders' Quantities, or
Builders' Book-keeping.

Students who are not candidates for a National Certificate may in the third year select three subjects given in the Third Year Course, see page 63. Building Construction must be taken.

Advanced Course (Higher Certificate).

1st Year :—Building construction (A) or (B) and

Two other subjects, of which not more than one may be from Group 3, see page 63.

2nd Year :—Building Construction (A) or (B) whichever was not taken in the 1st Year, and two other subjects set out for the Advanced Course, not taken in the 1st Year ; these three subjects being selected in accordance with the scheme for the 1st Year, see page 63.

NOTE.—Builders Quantities may not be offered in the 2nd Year.

TRADE COURSES, see pages 39 and 40 and 73 and 74.

TEXTILE DEPARTMENT.

National Certificate Courses.

The Textile Institute, in conjunction with the Board of Education, award an Ordinary National Certificate on the satisfactory completion of a Three Years' Senior Course and a Higher National Certificate after a further Two Years' Advanced Course.

The conditions governing the award of National Certificates are given on page 26.

Students may take either the Cotton Spinning or the Cotton Weaving Course.

Senior Students are expected to sit at the examinations conducted by the Union of Lancashire and Cheshire Institutes.

Advanced Students take the examinations of the City and Guilds of London Institute and should obtain a Full Technological Certificate.

Students who hold the Full Technological Certificate of the City and Guilds of London Institute in either Cotton Spinning or Cotton Weaving are advised to take the Special Course, with a view to becoming Associates of the Textile Institute.

Course 13.—COTTON SPINNING.

Time Table, page 63.

Course 14.—COTTON MANUFACTURE (Weaving).

Time Table, page 64.

For the full Technological Certificate of the City and Guilds of London Institute in Cotton Manufacture (Weaving), the candidates must pass examinations in :—

Cotton Manufacture (Weaving) } In the fourth
Textile Technology } and fifth years.

Also :—

Textile Economics and Textile Engineering.
or Textile Design I. and II.
or Textile Chemistry I. and II.

Special Classes suitable for Overlookers, Weavers, Spinners and Knitters are held also in the Manufacture of Rayon, and in Rayon Weaving.

See page 65.

TRADE COURSES, see pages 40 and 75.

SCIENCE DEPARTMENT.

Classes are arranged for Students desiring a training in Science and scientific methods. The Course of study recommended will depend on the aims of the Student.

Course 15.—PURE AND APPLIED CHEMISTRY.

NATIONAL CERTIFICATE COURSES.

The Courses arranged for the National Certificate in Chemistry and for the Higher National Certificate suit the requirements of those who desire training for a works' position. These are known

as the National Certificate Courses. Certificates are awarded by the Institute of Chemistry in conjunction with the Board of Education. The Ordinary Certificate is given on the satisfactory completion of a Three Years' Senior Course, and a Higher Certificate after a further two years' Advanced Course. Students who have obtained a Matriculation or School Certificate in the necessary subjects are excused the 1st year course. In all cases where students attend these Courses they are expected to take the appropriate examinations at the end of each session.

Course 16.—Degree and A.I.C. COURSES.

Time Table, page 69.

Students who desire a professional qualification in Science may prepare for a degree of B.Sc. (London), or for the Associateship of the Institute of Chemistry (A.I.C.). Before any Student is admitted to such a Course of study he must satisfy the Head of the Department that he has passed the necessary preliminary examination. For the B.Sc. (London) Course the Student should have matriculated at that University or have obtained exemption acceptable to that University. For the A.I.C. he must have matriculated or obtained the School Certificate and must register as a Student with the Institute of Chemistry. The Harris Institute is recognised by the Institute of Chemistry for the training of A.I.C. candidates, and any Students who have matriculated are advised to work for the Associateship. In either case the first Course is that for the Inter B.Sc., and 1st Year A.I.C. (page 69). Students for the Final B.Sc. and the A.I.C. attend the classes of the Advanced National Certificate Courses, A1 and A2, and for further advanced instruction.

The laboratories of the department are well equipped and advanced Students may make use of them for special work by arrangement with the Head of Department.

Course 17.—PHARMACY.

The Regulations of the Pharmaceutical Society now require that students preparing for the Preliminary Scientific Examination shall attend a full-time day course if they passed the examination required for registration after October, 1935.

Students who passed the pre-registration examination before this date should ask for advice as to the classes most suitable for them.

Students who intend to join the full-time day course and who have not studied chemistry, physics and biology previously are advised to take the preliminary evening Pharmacy Course before entering the day courses.

The Revision Pharmacy Course is suitable for students who have taken a full time day course and require revision classes for the Part I. examination.

Time Table, page 68.

Pharmacy Students who have successfully taken the Part 1 examination and who wish to extend their knowledge of Chemistry in preparation for the Part 2 Course are advised to attend the special Post Part 1 Pharmacy Course.

See page 68.

PRINTING DEPARTMENT.

Course 18.—TYPOGRAPHY.

The Classes in Typography prepare students for the City and Guilds of London Institute Examinations.

The full Course comprises instruction on three evenings per week for four years. The subjects to be taken are as follows :—

1st and 2nd years. Composing, Machines and English.
Final Course. Composing, Machines and Commercial Art.
Full Technological Course.—Composing, Machines and Commercial Art.

Time Table, page 69.

COMMERCIAL DEPARTMENT.

Course 19.—SENIOR GENERAL COURSE.
Course 20.—SENIOR CLERICAL COURSE.
Course 21.—ADVANCED COURSES.

SENIOR COURSES (19 and 20).

The First and Second Years of Course 19 consists of **four** subjects, and for Course 20, of **three** subjects. Third Year Course consists of three subjects.

In each Course (except the special ones specified later, which do not qualify for a Grouped Course Certificate), one or more subjects are obligatory ; others are generally optional.

From the latter subjects students may select the required number to make up their Course.

Before selecting a Course, students should **consult both the Time Table printed** (on pages 65 to 67), **and the tutors** who will be present to enrol on September 11th, 12th and 13th, 1940.

A student taking a course may, so far as his attainments and the Time Table permit, sit in a class and enter for an examination of a higher year than the remaining subjects of his course. Transfers from one class to another are not permitted after the first two weeks of the session. The detailed syllabuses of examinations in the subjects may be found complete in the Prospectus of the Lancashire and Cheshire Institutes.

Students are expected to take the Examinations of the Union of Lancashire and Cheshire Institutes.

ADVANCED COURSES.

This Course is intended to assist in preparing for the Professional, Secretarial and Accountancy Examinations. (See Course 21).

SENIOR COURSE (19).

General Course. (Four Subjects) :—

FIRST YEAR (S1).

OBLIGATORY : Commerce.

OPTIONAL : **Three** of the following Subjects :—

Commercial Arithmetic.
English.
Geography.
Book-keeping.
A Foreign Language (French, German or Spanish).
Cotton Spinning, or
Cotton Weaving.

General Course. (Four Subjects) :—

SECOND YEAR (S2).

OBLIGATORY : Commerce.

OPTIONAL : **Three** of the following Subjects :— *

Commercial Arithmetic.
English.
Geography.
Book-keeping.
A Foreign Language (French, German or Spanish).
Cotton Spinning or
Cotton Weaving.

* (A first year subject may be taken provided it has not been offered before).

General Course. (Three Subjects) :—

THIRD YEAR (S3).

OBLIGATORY : Commerce.

OPTIONAL : Any **two** of the following :—

Book-keeping.
Economics.
English Language and Literature.
Mercantile Law.
A Foreign Language (French or German).
Cotton Spinning, or
Cotton Weaving.

SENIOR COURSE (20).

Clerical Course A. (Three Subjects) :—

FIRST YEAR (S1).

(1) Shorthand (Grade I., Grade II. or Grade III.).
or
Typewriting (Grade I. or Grade II.).

(2) Arithmetic
or
Book-keeping (1st or 2nd year).

(3) English
or
Foreign Language (French, German, Spanish—Grade III.).

Clerical Course A. (Three Subjects) :—

SECOND YEAR (S2).

(1) Shorthand (Grade II. or III.).
or
Typewriting (Grade II. or III.).

(2-3) **TWO** of the following subjects :—
Commerce (1st year).
Book-keeping (1st or 2nd year).*
Arithmetic (1st or 2nd year).*
English **or** Foreign Language (French or German, Grade IV.).

Clerical Course B. (Three Subjects) :—

FIRST YEAR (S1).

(1) Shorthand (Grade I., Grade II. or Grade III.).
(2) Typewriting (Grade I. or Grade II).
(3) English
or
Foreign Language (French, German, Spanish.—Grade III.).

Clerical Course B. (Three Subjects) :—

SECOND YEAR (S2.)

(1) Shorthand (Grade II.—80 words, or Grade III.).
(2) Typewriting (Grade II. or III).
(3) **ONE** of the following subjects :—
Book-keeping (1st or 2nd year).
Commerce (1st year).
English.
Foreign Language (French or German, Grade IV.).

Shorthand.

In all grades the dictation tests will be of five minutes' duration.

Grade I. at 50 and 60 words per minute.
Grade II. at 70 and 80 words per minute, and
Grade III. at 90, 100, 120 and 140 words per minute

* If a subject chosen for the Second Year Course has been taken in the first year, then the next higher grade must be taken.

Students who have no knowledge of Shorthand will find it advisable during the first session to work for an internal examination. They should consult their tutors on the matter. The more advanced theory classes consist of :—Revision, Theory and Speed to 60 words per minute.

The Shorthand Theory Class for **beginners** does not prepare for the Examinations of the U.L.C.I. It is necessary for Group Course Candidates who wish to secure Scholarships that a speed examination be taken.

In Typewriting, students must consult the tutor on enrolment night as to which hour is available.

ADVANCED COMMERCIAL COURSES.

Course 21 (Three Subjects).

1st Year :—

Obligatory—Economics.

Optional—Two of the following subjects :—Accounting and Auditing ; Mercantile Law ; French (Grade V.).

2nd Year :—

Obligatory—Economics.

Optional—Two of the following subjects :—Accounting and Auditing ; Mercantile Law ; French (Grade VI.).

Time Table, page 67.

LANGUAGES DEPARTMENT.

GENERAL AND COMMERCIAL CLASSES.

These classes are designed to meet the requirements of those who select a Language as part of a course for the U.L.C.I., R.S.A., or other external examinations, and also to furnish a suitable medium of instruction for those who are not necessarily aiming at any particular examination but who desire to maintain and increase their familiarity with some foreign language for its own sake.

Time Table on pages 65 to 67.

SCIENTIFIC AND TECHNICAL.

Students in the Scientific and Engineering Departments, especially those in the more advanced sections who may look forward to opportunities for research, are reminded that a foreign

language, especially German, may ultimately prove of great value in extending the scope of their work.

Time Tables on page 66.

Students, before joining Language Classes, should consult the Head of the Department.

N.B.—SENIOR DAY CLASSES IN COMMERCIAL SUBJECTS.

Day Classes have been formed for persons over 16 years of age desirous of instruction in any of the following subjects :—

TYPEWRITING, SHORTHAND, COMMERCE, BOOK-KEEPING, ECONOMICS, COMMERCIAL CORRESPONDENCE, ENGLISH, FRENCH AND GEOGRAPHY.

See Course 5.—For Time Table see page 57.

TRADE COURSES.

Course 22.—ENGINEERING WORKSHOP PRACTICE.

Applicants for these classes must have attended a preliminary Technical Evening Course or be otherwise qualified.

This is a Three Years' Course, suitable for fitters, turners and machinists. For times of classes and subjects to be taken, see page 70. Students entering for this course are expected to sit for the examination set by the Union of Lancashire and Cheshire Institutes. The examinations take place about April, at the end of each year's course.

Course 23.—MOTOR MECHANICS COURSE.

This is a three years' Course, preparing Students for the examinations of the Union of Lancashire and Cheshire Institutes, or the examinations of the City and Guilds of London Institute.

The aim of the Course is to give sufficient knowledge of principles and their application to the construction and operation of motor vehicles, to enable the mechanic to deal with repairs, adjustments and general servicing.

See page 70 for times of classes.

Course 24.—MOTOR BODY BUILDING.

Students are prepared for the examinations of the City and Guilds of London Institute.

For Time Table see page 71.

For day classes in Motor Body Building, see page 60.

Course 25.—ELECTRIC WELDING.

Students are prepared for the examinations of the City and Guilds of London Institute.

For Time Table, see page 71.

A Special Course is arranged for Motor Body Builders. See page 71.

Course 26.—SHEET AND PLATE METALWORK.

Students are prepared for the examinations of the Union of Lancashire and Cheshire Institutes and the examinations of the City and Guilds of London Institute.

For Time Table, see page 71.

Course 27.—ELECTRICAL INSTALLATION WORK.

The scheme of work and of certification in Electrical Installation Work is that recommended by the City and Guilds of London Institute, in conjunction with the Board of Education, and approved by the Electrical Contractors' Association. The course is intended for those who have attended a preliminary Technical Evening Course, or are otherwise qualified. It is designed to cover three years, at the end of which the student should have reached the standard of a journeyman.

In the final year of the course the examination will be set and marked by the City and Guilds of London Institute for the purpose of the award of the Electricians' Interim Certificate. An apprentice or learner employed by an Electrical Installation Contractor, or a candidate otherwise engaged in electrical installation work, who has obtained the Electrician's Interim Certificate and who is desirous of obtaining the Electrician's Certificate, must forward to the City and Guilds of London Institute a statement of his practical training and work. If approved, he will be awarded the Electrician's Certificate. For times of classes and subjects to be taken, see pages 71 and 72.

Course 28.—RADIO SERVICE WORK.

This scheme of work has been devised by the advisory committee on Radio Service Work of the City and Guilds of London Institute, including the Radio Manufacturers' and Wireless Retailers' Associations to meet the present need for the training and certification of men engaged in Radio Service Work, and is intended for students actually engaged in the industry who will only be able to attend part-time courses.

It is designed to cover three years. In the final year the examination will be set and marked by the City and Guilds of London Institute and failure to obtain 50 per cent. of the possible marks for practical work will carry with it failure in the examination as a whole.

For Time Table, see page 72.

Course 29.—CARPENTRY AND JOINERY.

For Time Table, see pages 73 and 74.

Course 30.—PLUMBING.

For Time Table, see page 73.

Course 31.—BRICKLAYERS.

For Time Table, see page 74.

Applicants for the above courses must have attended a preliminary Technical Evening Course, or produce evidence of attainments equivalent to the preliminary Technical Evening Course. Students taking these courses are expected to sit for the College examination for the first and second years of the course, and for the third year of the course to sit for the Union of Lancashire and Cheshire Institutes Examination.

Carpentry and Joinery students may after completing the third year proceed to prepare for the final examination in Carpentry and Joinery of the City and Guilds of London Institute, or for the Senior National Certificate in Building by entering the first year of the National Certificate Course.

Plumbing students, after the third year, may proceed to prepare for the final examination in Plumber's work of the City and Guilds of London Institute.

Course 32.—LEAD BURNING, SHEET COPPER WORK AND BRONZE WELDING.

For Time Table see page 73.

TRADE COURSES FOR TEXTILES. (Courses 33 and 34).

A three years' course is arranged in Cotton Spinning and in Cotton Weaving. These Trade Courses are for students who have attended a preliminary Technical Evening Course, or are otherwise qualified. They are arranged for attendance on two evenings per week, and are specially suited for practical men. Successful students may follow up their studies in the National Certificate Courses and work for the Full Technological Certificate of the City and Guilds of London Institute.

Course 33.—COTTON SPINNING.

The main subject of Cotton Spinning is divided into three sections, viz.: Opening and Carding, Roving Preparation and Spinning. Students may take these in any order, choosing the most suitable to their requirements.

In addition, all sections will attend the class in Trade Calculations and Science which is held on alternate weeks.

Time Table page 75.

Course 34.—COTTON MANUFACTURING (WEAVING).

The main subject of Cotton Weaving is taken in three years of progressive study, commencing with simpler cloths and mechanisms, and leading to more complex work.

Students will also attend the class in Trade Calculations and Science.

Time Table page 75.

Course 35.—LABORATORY ARTS.

A short course in woodwork, metalwork and glass blowing, which should be suitable for the training of laboratory assistants.

For Time Table, see page 75.

MISCELLANEOUS CLASSES AND SPECIAL COURSES.

The following classes are here indicated separately for the benefit of students who desire to take up the study of certain subjects for the Professional Entrance Examinations, and to assist students of an advanced grade to a higher standard of attainments.

A course consists of any three of the following subjects :—

Subject.	Class No.
Arithmetic	... 230, 231.
Book-keeping	... 244.
Chemistry	... 263.
English Language and Literature	... 247.
French	... 225, 239, 248 and 258.
German	... 227 and 242.
Mathematics	... 261.
Physics	... 262.
Spanish	... 226, 241.
Geography	... 229, 240.
Shorthand	... 246.

An Internal Examination will be held in those subjects not otherwise provided for, and certificates will be given.

Gymnasium Classes will be held as follows :—

MON.	TUES.	WED.	THUR.	FRI.	SAT.
*7—8	†7—8	*7—8	†7—8	*7—8	*9-45—10-45
†8-15—9-15	*8-15—9-15	†8-15—9-15	*8-15—9-15	†8-15—9-15	†11—12

Classes for Men are indicated by a *.
Classes for Women are indicated by a †.

Fees : 5/- per session and 2/6 per session for students taking other classes in the institute.

JUNIOR COURSES.

(FULL TIME DAY).

COURSES:

JUNIOR TECHNICAL.

JUNIOR COMMERCIAL.

Classes begin on Monday, September 9th, 1940.
Autumn Term :—9th September, 1940—19th December, 1940.
Spring Term :—6th January, 1941—9th April, 1941.
Summer Term :—21st April, 1941—11th July, 1941.

(All dates inclusive).

FEE: £3 0s. 0d. per Session, or £1 per term.
TIME TABLES, see pages 78 to 85.

DAY JUNIOR SCHOOLS.

CONDITIONS OF ENTRY, Etc.

(1) Day Junior Technical School.
(2) Day Commercial School.

ENTRANCE AND SCHOLARSHIP EXAMINATIONS.

Each boy or girl admitted must not be less than 13 years old at the date of admission, and must pass the School Entrance Examination.

The Entrance Examination will be held on Saturday, the 3rd May, 1941, at the Technical College.

Entries must be made on a form which can be obtained from the Technical College and forwarded to the Principal, Harris Institute, Corporation Street, on or before the 5th April, 1941.

Fee: £3 for Session, September to July. This may be paid by three instalments of £1.

Parents or Guardians will be required to sign an agreement form undertaking that the pupil attends regularly for two years, or in default pay the sum of £3 3s. 0d.

The Council of the Harris Institute offer a limited number of Scholarships (providing free tuition only) to boys and girls not less than 13 years of age on October 1st, 1941, and who for two years

prior to the date of the examination have been in regular attendance at a Day School within seven miles of the Preston Town Hall.

The Preston Local Education Committee award a number of Free Admissions to the School, and Book allowances are given to Candidates residing in the County Borough of Preston.

The Lancashire County Council also award a limited number of Exhibitions on the result of this Entrance Examination (open to candidates residing in the Administrative County) subject to certain conditions. The Exhibitions provide free tuition, travelling expenses, and allowance for books and maintenance. Full particulars as to these Exhibitions may be obtained from the Director of Education, County Offices, Preston.

Leaving Certificates are given to all who satisfactorily conclude their period of training, and a certain number of free Scholarships to Evening Classes are granted to those whose attainments and conduct in the Day School have merited it.

The School Uniform is as follows :—

Girls.—Navy Tunic and Girdle, Navy Knickers, White Blouse, with polo collar and long sleeves in winter and short sleeves in summer ; School Tie, Velour Hat in winter, Straw Hats with School Band in Summer, Black Stockings, Black Footwear, Navy Coat ; School Blazer.

Boys.—School Cap, Tie, and School Blazer.

The above should be purchased from the School Outfitters on the presentation of the Regulation Form, which may be obtained at the College Office.

Every endeavour is made at the end of the course to assist worthy students to obtain suitable posts. Many employers apply to the School for employees and apprentices.

DAY JUNIOR TECHNICAL SCHOOL.

The aim of the School is to provide a suitable education for boys who desire to enter Engineering, Building and other trades.

The curriculum is planned with the object of providing for the continuance of a general education, together with an education in all subjects which are necessary to boys about to enter industrial occupations.

The students are brought into close contact with their future occupation through teachers who have had experience in industry.

The students also have access to the Engineering laboratories an textile sheds, where they become acquainted with machinery and equipment which helps towards a thorough understanding of the application of scientific principles to industry.

The course of instruction extends over a period of two years, and the subjects taught include the following :—Mathematics, Engineering and Building Drawing, Geometry, Art, Science (including Applied Mechanics, Electricity, Magnetism, Heat and Chemistry) Metalwork, Woodwork, Geography, History, English, Physical Training and Organised Games.

DAY JUNIOR TECHNICAL SCHOOL.—ENTRANCE EXAMINATION.

SYLLABUSES.

Accuracy is of great importance. A thorough knowledge of the following will be required :—

Mathematics.

The fundamental rules. Vulgar and decimal fractions. Percentages and averages. Ratio, proportion, simple interest and simple profit and loss. Elementary mensuration, rectangles and triangles. Circumference and area of circle. Surface and volume of simple solids,—prism and cylinder (weights of simple solids, given weight per unit volume). Elementary algebra. Use of symbols. Addition, subtraction, multiplication and division.

English.

(1) An essay. (2) Condensation and expansion of passages. (3) The parts of speech and elementary parsing. (4) Easy analysis of sentences. (5) The use of words in sentences to illustrate their meaning. (6) Simple letters. (7) Correction of common grammatical errors. (8) A general knowledge of good literature suitable for children.

Candidates may also be given an opportunity in this section of showing their acquaintance with present-day affairs.

A reasonable proficiency in spelling is expected; and gross errors in the simpler, everyday words will be suitably penalised.

DAY JUNIOR COMMERCIAL SCHOOL.

The Course extends over a period of two years, and prepares boys and girls for clerical posts. The following subjects are taken: Arithmetic, Algebra, Accounts, Book-keeping, Commerce, Commercial Correspondence, Drawing, Physical Training, English, French, Games, Geography, History, Office Routine, Mathematics, Science, Shorthand and Typewriting.

DAY JUNIOR COMMERCIAL SCHOOL.—ENTRANCE EXAMINATION.

SYLLABUSES.

Accuracy is of great importance. A thorough knowledge of the following will be required :—

Arithmetic.

Simple rules, including the use of brackets. Money tables—Ordinary weights and measures (excluding Troy weight and Apothecaries weight). Reduction of money. The simple rules as applied to weights and measures. Simple vulgar fractions. Terminating decimals. Practice. Proportion by unitary method. Easy percentages. Simple interest. The Metric System. Areas.

English.

The syllabus is as prescribed for Junior Technical Entrance.

JUNIOR LIBRARY.

The Junior Library is reserved exclusively for the use of pupils in the two Junior Schools, and any of the books may be borrowed for home reading. There is a wide selection of good fiction, together with miscellaneous works on a variety of interesting subjects; and pupils are advised to take full advantage of the opportunities which their own Library offers them.

[ART SCHOOL]

ART SCHOOL.

OBJECTS OF THE SCHOOL.

The objects of the School are :—

(1) To give instruction in Art to those engaged in trades and professions in which the power of drawing and a knowledge of design are essential or helpful.

(2) To train those wishing to qualify to become teachers of Art in Secondary Schools, or in Schools of Art.

(3) To provide facilities to those desiring to study Art as a branch of general education, or as an accomplishment.

(4) To train those who are desirious of taking up Art as a career, and who intend to specialise as painters, sculptors, illustrators, designers, etc.

(5) To meet the requirements of those engaged in various industrial occupations.

(6) Junior Courses. To prepare young students between the ages of 14 and 16, in order that they may specialise later on, in any of the above courses.

The School is open for three terms, viz. :—

9th September, 1940 to 19th December, 1940.

6th January, 1941 to 9th April, 1941.

21st April, 1941 to 11th July, 1941.

FEES FOR SESSION (payable in advance).

Full Time Day Students	£3 3 0 (Games fee 5/-)
Students attending one day per week for Single Subjects	2 2 0
Ditto per term	0 17 6
Special Classes for Crafts (Tuesday afternoons)	1 1 0
Evening Classes	see page 24
Summer Courses (one day per week) ...	0 17 6
Summer Evening Classes	0 7 6

Classes begin on Monday, September 9th, 1940.

General Information.

The Courses suggested below are recommended to ensure comprehensive training for definite careers, but are purposely arranged to be sufficiently elastic to meet individual requirements.

DAY CLASSES.

(1) FULL-TIME COURSES, including general principles of Art, History and Methods of Production, Drawing, Design, Colour Study, Figure Composition, Illustration, Painting, Sculpture, Commercial Art, &c. ; Graded Schemes to equip Students for the Board of Education examinations in Drawing, Painting, Industrial Design, etc. Preparation for Local Art Scholarships and Exhibitions.

(2) PART-TIME COURSES arranged mainly for the study of Industrial Art and training in single subjects.

(3) CRAFT COURSES AND CLASSES. Carving in Wood and Plaster, Writing and Illuminating, Dress Design, Embroidery, Leather Work, Wood Decoration, Etching, Aquatint, Wood and Lino Cuts, Fabric Printing, etc. Advanced Decoration (see Evening).

(4) ARCHITECTURE. Facilities to enable Architectural Students to prepare for R.I.B.A. examinations.

The Course includes Preparation of Testimonies, Perspective, Architectural Design, History of Architecture, Structural Mechanics, Building Construction.

For Time Table, see pages 51, 76 and 77.

EVENING CLASSES.

Designed chiefly to furnish suitable study and to further the interests of apprentices in trades and crafts where Art plays a more or less prominent part, to offer opportunities for extended study after qualifying, to render possible the achievement of a desire to practice some branch of Art as a career, and to encourage many forms of artistic appreciation.

ADVANCED COLOUR STUDY AND PAINTING. Practice in oil and watercolour for Still Life, Portraiture and Composition.

GENERAL ART. This course endeavours to meet the needs of occupations where artistic training, though required, demands freer interpretation, and more individual treatment. In many cases such subjects as colour and figure study, architectural or modelling knowledge, illustration or lettering may predominate and be supplimented by the type of design or other specialised subjects applicable to the need.

INDUSTRIAL ART AND CRAFTS. The aim in these Courses is to secure efficient training for apprentices in trades and crafts. They cover the syllabuses of various Examining Authorities. (See Examinations, pages 52 and 53).

Full Grouped Courses of three evenings per week, include Study in Drawing and lettering, Nature and Colour, Methods of Production and Technical Problems, Knowledge of Tools and Materials, Estimating, etc., History and Styles of Architecture, Heraldry, Original Design, embodying modern requirements. Practical work.

The following is a list of the chief subjects which may be undertaken as definite Courses or practiced on the craft side alone :—

Dress Design, including costume history, making and drafting.

Painting and Decorating, including preparation of schemes of Interior Decoration. Embroidery, Leather-work, Bookbinding, Wood Decoration, Etching, etc., Lino Cuts, Writing and Illuminating, Wood and Plaster Carving, Modelling and Casting (Demonstrations at arranged periods), Soft Toy Making.

Summer Courses in most crafts will be held from Easter to July.

COMMERCIAL ART. Treatments for the Press, Layouts, Posters and Show Cards, etc.

ILLUSTRATION. Including study of figure and accessories, composition, etc.

TEACHERS. Study for the National Society of Art Masters' Exams., Colour, Design, Illustration, etc. Further study in various subjects and crafts.

ARCHITECTURE. Courses in Perspective, Architectural History and Drawing.

PROFESSIONAL. The Art School is open for further study and practice to Architects, Sculptors and Artists. In connection with this, advantage is usually taken of advanced work in Life Painting, Sculpture and Crafts.

TEXTILE DESIGN. Held in conjunction with Technical Weaving Courses.

ADVANCED DESIGN AND DECORATION. The application of previous courses to more ambitious work—Theatrical Settings, Costume, Interior Decoration, Lighting and Building-up, Relief Decoration, Details to scale and full size, Figure Composition, Intended for qualified Students.

LECTURES. Day and Evening lectures have been arranged with relation to Industrial and Commercial Art. These will deal definitely with practical problems in Colour and Design, Principles of Art, Historic Art, etc.

A Series of monthly lectures by specialists will be given (see separate detailed lists and time tables). All students are advised to attend.

WORK. All completed studies are to be handed in to the Teachers, to be available for inspection and criticism. They will be retained until the end of the session, when they will be returned unless required for the School's Exhibition.

DAY AND EVENING CLASSES.—TIME TABLE (see also pages 76 & 77).

	MORNING, 10-0—12-30.	AFTERNOON, 2-0—4-0.	EVENING, 7-0—9-0.
Monday	Drawing Ornament Animals Nature Drawing	Still Life Painting Design Posters Illustration Drawing from Life	Design (Commercial Art) Drawing from Life Design, Painting Drawing, Dress Design Drawing (Painting and Decorating)
Tuesday	Drawing Antique Design Perspective Etching Methods of Painting	Drawing (Elem. & Advanced) Antique Decoration (Advanced) Crafts (various) Design	*Textile Art (4th and 5th years). Design, Industrial and Crafts Nature Study Design (Commercial Art) Design (Painting and Decorating)
Wednesday	General Drawing Design Architectural Drawing Still Life Painting History of Painting	Still Life Drawing from the Antique Nature Study Lettering Dress Design Drawing from Life	Crafts (Embroidery, Bookbinding, etc.) Junior Course, Form and Colour Drawing from Life Etching *Painting and Decorating (1st and 2nd years) Commercial Art *Modelling and Casting
Thursday	Drawing and Painting Still Life	Games Practice Object Drawing Memory Drawing Painting and Decorating Dress Design	Junior Course, Design and Colour Illustration Antique Interior Decoration Dress Design
Friday	Architecture Design Illustration Posters Schemes of Decoration	Leather Work } Theory Embroidery } &Prac. General Drawing—Objects and Interiors Design Drawing and Painting from Life Anatomy Fabric Printing	Architectural History *English (1st and 2nd years) Painting and Decorating (3rd and 4th years) Coach Painting General Art Teachers' Course

* These classes will terminate after the U.L.C.I. Examinations.

During the Summer term an out-of-door Sketching Class will be held on Monday, Tuesday and Friday afternoons also Wednesday mornings.

Short Summer Courses in various Crafts—Mondays and Wednesdays.

Special lectures relating to outdoor sketching and on painting will be arranged for the summer term.

EXAMINATIONS IN ART.

Internal.

Grouped Examinations will be held at the end of each term, comprising the subjects of the various Courses.

The Board of Education will hold Examinations in the following subjects of Art :—

(*a*) Drawing.
(*b*) Painting.
(*c*) Modelling.
(*d*) Pictorial Design for Reproduction in black and white or colour.
(*e*) Industrial Design for (i.) Handicrafts and
(ii.) Manufactures.

1. The Examination in Drawing will be of a standard suitable for candidates who, after a good general education, including some preliminary instruction in Drawing, up to the age of 16 or later, have devoted themselves to serious and continuous study of Drawing for, as a rule, not less than two years.

2. The Examinations in Painting, Modelling, and Pictorial Design will be of such a standard as could be attained, according to the capacity of the candidate, by two or more years of serious and continuous specialised study after passing the Examination in Drawing.

3. Examinations in Industrial Design will be of such a standard as could be attained through regular attendance at Evening or other Part Time Classes in the intervals of employment for a period of four years after the age of 16.

4. Candidates will not be admitted to the Examinations in Painting, Modelling, or Pictorial Design, unless they have previously passed the Examination in Drawing.

City and Guilds of London Institute.

Students are prepared for these Examinations in the following subjects :—Painting and Decorating, Embroidery, Design and Colour for Textiles.

National Society of Art Masters.

A series of Examinations in Drawing arranged for Teachers in Elementary Schools.

UNION OF LANCASHIRE AND CHESHIRE INSTITUTES.

Students are prepared for the Examinations arranged by the U.L.C.I. Authority in the following subjects :—Junior Industrial Art, Painting and Decorating, Architecture, Embroidery, Leatherwork, Woodcarving, Textile Design, etc.

SCHOLARSHIPS.

Harris Art Scholarship.

One Scholarship, of the value of £7 10s. 0d. per annum, tenable for three years, will be awarded annually.

The Scholarship will be open to all Students of the School of Art, who have attended for not less than one year immediately preceding the award, and will be tenable at the Harris Institute.

The Scholarship will be awarded on the results of the annual examinations, in conjunction with the Student's work of the session.

Should one or more of these Scholarships fall vacant before the full period of three years, two or three (as the case may be), will be given instead of one, in the year when they lapse.

Free Studentships.

Free Studentships to the Day Classes are offered to Students of the School (Day or Evening), who are studying with a view to becoming designers, craft workers, or teachers.

Method of award, the same as for the Harris Art Scholarship.

Free Studentships to the Evening Classes are offered to students taking definite courses, and will be awarded on the result of marks given for homework, attendance, and internal examinations.

Special Scholarships are awarded to Students who have left or are about to leave Elementary Schools, who intend to follow occupations requiring an Art Training.

PRIZES : "STEELE" BEQUEST.

Three Prizes (one Day and two Evening) of £4 each are offered for the best work done by Students each Session.

SOCIAL AND ATHLETIC ACTIVITIES.

A Sketch Club is organised by the Staff and Students for the purpose of encouraging individual effort. Monthly competitions are arranged during the Session, and a series of subjects are set for the long vacation.

All Students are eligible. Further information and particulars may be obtained from members of the Staff.

A Dramatic Club is being formed and Social evenings will be arranged, when there will be informal dances, musical items, and short plays, etc.

Excursions to Art Galleries, Exhibitions, Works, etc., will also be arranged during the session.

A Rugby Football Club has been formed, and intending players should report at once to the Secretary. Hockey is also played.

Notices of the various activities, giving times and dates will be placed on the notice board in the corridor.

Also see page 7.

The Gymnasium is open at the recognised times to Students on payment of the sports fee. See pages 41 or 75.

REFECTORY.

There is a fully equipped Dining Room at the Technical College. Lunches, teas and light refreshment may be obtained from 10-30 a.m. to 7-15 p.m.

The Refectory is for the convenience of the students and staff and all students may use the Refectory between the times stated.



TIME TABLE OF CLASSES. SESSION 1940-41.

T—*Technical College.* A—*Avenham Institute.*

TECHNICAL DAY CLASSES.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	PROFESSIONAL ENTRANCE, Etc.						
1	T English	H. H. Allen	3—4	...	...	2—3	1.45–2.45
2	T History	H. H. Allen	...	...	...	9.15–10.15	...
3	T French	H. H. Allen	2—3	1.45–2.45	...	3—4	...
4	T Latin	H. H. Allen	...	11.15–12.15	...	...	11.15–12.15
5	T Mathematics	F. B. Landolt, E. Taylor ...	9.30–10.30	9.30–11	...	...	9.30–11
6	T Physics	F. B. Landolt	10.30–11.30	11–12.30	...	3—4	...
7	T Chemistry	E. A. Marriott	...	...	9.15–11.15	10.30–12.30	...
8	T Geography	M. J. Griffiths	...	2.45–3.45	...	...	2.45–3.45
9	T Biology*	H. W. Edmunds	...	...	11.30–12.30	...	...
	* Practical class at times to be arranged.						
	INTER-B.Sc. (Science and Engineering.)						
10	T Pure Mathematics	F. B. Landolt	11.30–12.30	...	...	9.30–10.30	...
11	T Applied Mathematics	F. B. Landolt	...	...	...	...	9.30–11.30
12	T Heat and General Physics ...	F. B. Landolt	...	...	9.30–12.30	...	...
13	T Magnetism and Electricity ...	F. B. Landolt	...	...	...	...	2–4.30
14	T Sound and Optics	F. B. Landolt	...	2–4.30	...	...	...
15	T Engineering Drawing ...	G. E. Hall	3—5	...	...	...	...
16	T Chemistry	E. Taylor	...	9.30–12.30	2–4.30	2–4.30	...
17	T Geology...	H. W. Edmunds	...	...	...	...	...
18	T Biology	H. W. Edmunds	9.30–12.30	...	...	9.30–12.30	9.30–12.30
19	T German	H. H. Allen	...	7.15–9.15	...	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	FINAL B.Sc. (Science and Engineering.)						
20	T Chemistry (Theory)	E. Taylor	7—9	8—9	...	9.30–10.30	...
21	T Chemistry, Inorg. (Practical)	E. Taylor	7—9	...	...	10.30–12.30	
22	T Chemistry, Org. (Practical) ...	W. G. Creasy	...	...	7—9.30	2—5	...
23	T Physical Chemistry	W. G. Creasy, A. N. Edmondson	...	...	...	7—9.30	...
24	T Physics	... ...	...	...	...	...	7—9.30
25	T Strength of Materials	J. E. Taylor	...	...	2—4.30	7.15–9.15	...
26	T Theory of Structures	E. M. Pearson	...	10—12.30	...	...	...
27	T Theory of Machines	J. S. Wrigley	...	...	9.30–12.0	...	...
28	T Applied Heat and Thermo-dynamics	J. S. Wrigley	...	7.15–9.15	2—4.30	...	...
29	T Mechanics of Fluids	J. E. Taylor	7.15–9.15	...	...	...	...
30	T Applied Electricity	A. Woods	...	...	...	9.30–12.0	...
31	T Mathematics (Pure)	J. Slater	...	7—9	...	...	...
32	T Mathematics (Applied) ...	F. B. Landolt	...	...	...	7—9	...
33	T Engineering Tutorial	J. S. Wrigley	...	...	...	...	2—4.30
	PRELIMINARY SCIENTIFIC : Pharmacy, Dental, Medical, Dispensing.						
34	T Chemistry, Org. (Theory) ...	E. Taylor	2—3	...	...	...	...
35	T Chemistry, Inorg. (Theory) ...	E. Taylor	...	9.30–10.30	2—3	2—3	...
36	T Chemistry, (Practical)... ...	E. Taylor	3–4.30	10.30–12.30	3–4.30	3–4.30	...
37	T Physics (Theory)	F. B. Landolt	...	2—3	9.30–10.30	...	2—3
38	T Physics (Practical)	F. B. Landolt	...	3–4.30	10.30–12.30	...	3–4.30
39	T Biology (Theory)	H. W. Edmunds	9.30–10.30	...	...	9.30–10.30	9.30–10.30
40	T Biology (Practical)	H. W. Edmunds	10.30–12.30	...	...	10.30–12.30	10.30–12.30

	SCIENCE FOR HORTICULTURE.								
41	T Biology and Chemistry ...	H. W. Edmunds	...	2.30—5 (Sept. to March).	...	...	...
42	T Park Management	A. V. Pearson	...	5.15–6.15	...	...	...
43	T Surveying	J. S. Wrigley	...	2.30–5	...	...	...
44	T Mathematics	J. E. Taylor	...	2.30–4.30 (April to July)	...	...	...
	SENIOR DAY COMMERCIAL CLASSES.								
45	T Typewriting	D. Roberts	9.15–10.15	10.15–11.15	11.15–12.15	11.15–12.15	11.15–12.15
46	T Shorthand	D. Roberts	11.15–12.15	9.15–10.15	10.15–11.15	10.15–11.15	9.15–10.15
47	T Bookkeeping	W. Webster	10.15–11.15	11.15–12.15	...	...	...
48	T Commerce	M. J. Griffiths	...	...	9.15–10.15	...	...
49	T Commercial Correspondence ...	J. D. Cooper	...	...	...	...	10.15–11.15
50	T Economics	M. J. Griffiths	...	...	...	9.15–10.15	...
51	T English	H. H. Allen	3—4	...	...	2—3	1.45–2.45
52	T French	H. H. Allen	2—3	1.45–2.45	...	3—4	...
53	T Geography	M. J. Griffiths	...	2.45–3.45	...	...	2.45–3.45
	PART TIME DAY ENGINEERING. (National Certificate Course) **S1**								
54	T Mathematics	A. Woods	11.30-12.30 and 4–5	...	...	...	...
55	T Engineering Science	J. E. Taylor	2—4	...	...	...	...
56	T Engineering Drawing ...	J. S. Wrigley	9.30–11.30	...	...	...	...
57	T Motor Engineering		...	...	7.15–9.15	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday
	S2						
58	T Mathematics ... (A) ...	F. W. Walker	11.30–12.30 and 2—3	...	...	...	...
59	T ,, ... (B) ...	F. W. Walker	9.30–11.30	...	...	...	...
60	T Mechanics and ... (A) ...	F. W. Walker	3—5	...	...	...	...
61	T Heat Engines ... (B) ...	J. S. Wrigley	11.30–12.30 and 2—3	...	...	...	...
62	T Engineering Drawing (A) ...	J. E. Taylor	9.30–11.30	...	...	...	...
63	T Do. (B) ...	G. E. Hall	3—5	...	...	...	...
64	T Electrical Engineering Science.	G. R. Maxwell	7.15–9.15	...	...	...	...
65	T Motor Engineering	H. Hindley	...	...	...	7.15–9.15	...
	S2. (Electrical)						
66	T Mathematics	F. W. Walker	9.30–11.30	...	...	...	...
67	T Mechanical Engineering Science	J. S. Wrigley	11.30–12.30 2—3	...	...	...	...
68	T Electrical Engineering Science	G. R. Maxwell	3—5	...	...	...	...
	S3. (Electrical)						
69	T Mathematics	A. Jackson	7.15–9.15	...	...	...	...
70	T Electro-Technics	A. Woods	...	...	...	9.30—12	...
71	T Electrical Laboratory ...	A. Woods	...	...	...	2—4.30	...
	MECHANICAL ENGINEERING.						
	S3						
72	T Mathematics	A. Jackson	7.15–9.15	...	...	...	...
73	T Mechanics	F. W. Walker	...	...	2–4.30	...	...
74	T Heat Engines	F. W. Walker	...	...	9.30–12	...	...

	A1							
75	† Strength of Materials	J. E. Taylor	...	...	...	2–4.30	...	...
76	† Theory of Machines	J. S. Wrigley	...	...	...	9.30–12	...	...
77	† Mathematics	J. E. Taylor	...	...	...	...	...	7.15–9.15
	A2							
78	† Elec. Eng. for Mech. Engrs. ...	L. E. Birchall	...	...	...	...	7.15–9.15	...
79	† Machine Design	J. E. Taylor	...	...	...	9.30–12	...	...
80	† Heat Engines	J. S. Wrigley	...	...	...	2–4.30	...	...
	A3 1st and 2nd Terms*							
81	† Economics	M. J. Griffiths	...	...	...	...	9.15–10.15	...
82	† Chemistry	E. H. Marriott	...	...	...	...	10.15–12.30	...
83	† Physics	F. B. Landolt	...	...	...	...	2—4.30	...
84	† Chemistry (General)	E. H. Marriott	...	...	...	...	...	7–8
85	† Chemistry and Physics ...	G. O. Stephens	...	...	...	...	...	8—9
86	† Workshop Organisation and Management	M. J. Griffiths	7.15–9.15	...	...	...	...	...
87	† German	H. H. Allen	...	7.15–9.15	...	...	...	...
88	† English Language and Literature	H. H. Allen	...	...	...	...	7.15–9.15	...
	*3rd Term.—Advanced Engineering Laboratory.							
	TEXTILE CLASSES.							
89	† Textile Testing (Theory) ...	D. Atkinson	...	...	...	...	9.30–10.45	...
90	† Textile Testing (Practical) ...	D. Atkinson	...	...	...	...	10.45–12.0	...
91	† Weaving Mechanism	D. Atkinson	9.30–10.45	...	...	...	...	...
92	† Weaving (Practical)	W. Dagger	10.45–12.0	...	...	...	...	10.45–12.0
93	† Weaving Calculations	D. Atkinson	...	...	9.30–10.45	...	...	...
94	† Cloth Dissection, Analysis ...	D. Atkinson	...	...	10.45–12.0	...	...	...
95	† Fabric Structure	D. Atkinson	...	9.30–10.45	...	...	...	...
96	† Practical Designing	D. Atkinson	...	10.45–12.0	...	...	...	...
97	† Yarn Preparation	D. Atkinson	...	...	...	...	...	9.30–10.45

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	PART TIME DAY BUILDING. (National Certificate Course) **S1**						
98	T Building Science	E. M. Pearson	...	2—4	...	...	...
99	T Mathematics	J. E. Taylor	...	9.30–10.30	...	...	...
100	T Geometry	J. D. Jones	...	10.30–12.30	...	...	...
101	T Building Construction ...	E. M. Pearson	...	4—5	...	...	...
102	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...
	PART TIME DAY MOTOR BODY BUILDING.						
103	T Mathematics	J. E. Taylor	...	9.30–10.30	...	...	...
104	T Geometry	J. D. Jones	...	10.30–12.30	...	...	...
105	T Science	E. M. Pearson	...	2.0—4.0	...	...	...
106	T Mathematics	G. E. Hall	...	4.0—5.0	...	...	...
107	T Technical Drawing	T. A. Wetton	7.15–9.15	...	...	...	...
108	T Body Building	T. A. Wetton	...	...	...	7.15–9.15	...
	INTERMEDIATE R.I.B.A.						
109	T Structural Mechanics	E. M. Pearson	...	10–12.30	...	...	...
110	A Architecture and Design ...	G. A. Clucas	...	...	10–12.30	...	10–12.30
111	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...
112	A Architectural History ...	G. A. Clucas	...	...	...	...	7—9

	MECHANICAL ENGINEERING. (National Certificate Course)							
	S1							
113	† Mathematics	R. H. Wignall	...	...	...	...	7.15–9.15	...
114	† Engineering Drawing	F. Callow	...	...	...	...	...	7.15–9.15
115	† Engineering Science	F. W. Walker	...	7.15–9.15	...	...	...	...
	S2							
116	† Mathematics	J. Bagot	...	...	...	...	7.15–9.15	...
117	† Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...	...
118	† Mechanics and Heat Engines...	G. E. Hall	...	...	...	...	...	7.15–9.15
	S3							
119	† Mathematics	G. E. Hall	...	7.15–9.15	...	...	...	...
120	† Mechanics	F. W. Walker	...	...	7.15–9.15	...	...	...
121	† Heat Engines	F. W. Walker	...	...	...	7.15–9.15	...	
	A1							
122	† Mathematics	J. E. Taylor	...	...	...	...	...	7.15–9.15
123	† Theory of Machines	J. S. Wrigley	...	...	7.15–9.15	...	...	
124	† Strength of Materials	J. E. Taylor	..	...	...	7.15–9.15	...	
	A2							
125	† Heat Engines	J. S. Wrigley	...	7.15–9.15	...	...	...	
126	† Machine Design	J. E. Taylor	7.15–9.15	...	...	...	...	
127	† Electrical Engineering for Mechanical Engineers	L. E. Birchall	...	...	...	7.15–9.15	...	
	A3							
128	† Workshop Organisation and Management	M. J. Griffiths	7.15–9.15	...	...	...	...	
129	† Chemistry (General)	E. H. Marriott	...	...	...	...	7—8	
130	† Chemistry and Physics ...	G. O. Stephens	...	...	...	...	8—9	
131	† English (S3)	H. H. Allen	...	...	...	7.15–9.15	...	
132	† German	H. H. Allen	...	7.15–9.15	...	...	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	ELECTRICAL ENGINEERING (National Certificate Course)						
	S1						
133	† Mathematics	T. Wilkinson...	7.15–9.15	...	...	...	...
134	† Engineering Drawing	F. Callow	...	7.15–9.15	...	...	...
135	† Engineering Science	J. H. Hulse	...	...	...	7.15–9.15	...
	S2						
136	† Mathematics	J. Bagot	...	7.15–9.15	...	...	...
137	† Mechanical Engineering Science	... ...	...	...	...	7.15–9.15	...
138	† Electrical Engineering Science	G. R. Maxwell	7.15–9.15	...	...	...	...
	S3						
139	† Mathematics	A. Jackson	7.15–9.15	...	...	...	...
140	† Electro-Technics	A. Woods	...	7.15–9.15	...	...	...
141	† Electrical Laboratory	A. Woods	...	...	...	...	7.15–9.15
	A1						
142	† Mathematics	J. E. Taylor	...	...	...	...	7.15–9.15
143	† Electrical Technology, Sect. I.	L. E. Birchall	...	...	7.15–9.15	...	...
144	† Electrical Technology, Sect. II.	L. E. Birchall	7.15–9.15	...	...	...	...
	A2						
145	† Generation and Transmission of Electrical Energy ...	L. E. Birchall	7.15–9.15	...	...	...	...
146	† Distribution and Utilization of Electrical Energy ...	L. E. Birchall	...	...	7.15–9.15	...	...
147	† Heat Engines	F. W. Walker	...	...	...	7.15–9.15	...
	BUILDING.						
	S1						
148	† Building Science	W. Taylor	...	7.15–9.15	...	...	...
149	† Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...
150	† Geometry	J. N. Walker	...	...	...	...	7.15–9.15

	S2						
151	† Mathematics	W. Taylor	7.15–9.15	...	...	...	...
152	† Building Construction ...	G. H. Broadbent	...	7.15–9.15	...	...	...
153	† Building Science	J. Holt	...	...	...	7.15–9.15	...
	S3						
154	† Building Construction ...	H. Walters	...	...	...	7.15–9.15	...
155	† Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
156	† Geometry	J. N. Walker	7.15–9.15	...	...	...	...
157	† Brickwork and Concreting ...	C. Shaw	...	...	7.15–9.15	...	...
158	† Carpentry and Joinery ...	H. Allen	...	...	...	...	7.15–9.15
159	† Mathematics	G. E. Hall	...	7.15–9 15	...	...	...
160	† Building Science	E. M. Pearson	...	...	7.15–9.15	...	...
	A1 and A2						
	Group 1.						
161	† Building Construction (A or B)	E. M. Pearson	...	...	...	7.15–9.15	...
162	† Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
163	† Builders' Quantities and Estimating	T. J. Higginson	7.15–9.15	...	...	...	...
164	† Structural Work	E. M. Pearson	...	...	...	...	7.15–9.15
	Group 2.						
165	† Carpentry and Joinery ...	G. H. Broadbent	...	...	...	...	7.15–9.15
166	† Architectural History (see Art School						
167	† Equipment of Buildings ...	E. M. Pearson	...	...	...	...	7.15–9.15
	Group 3, Practice Class.						
168	† Building Construction (A or B)	H. Walters	...	...	7.15–9.15	...	...
169	† Carpentry and Joinery ...						
170	† Structural Work						
	COTTON SPINNING.						
	S1						
171	† Cotton Spinning (Theory) ...	S. Jackson	...	...	...	7.15–9.15	...
172	† Cotton Spinning (Practical) ...	C. Smith	...	...	7.15–9.15*	...	...
173	† Textile Mathematics	J. Preston	...	...	7.15–9.15*	...	...
174	† Textile Drawing	J. Preston	7.15–9.15	...	...	...	...

N.B.—(1) Building Construction (A), together with Structural Work, and (2) Building Construction (B) with Equipment of Buildings are taken in alternate years. In 1940–41, Building Construction (A) with Structural Work will be given.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	COTTON MANUFACTURE (WEAVING).						
	S1 (National Certificate)						
175	T Mathematics	J. Preston	...	...	7.15–9.15*	...	...
176	T Textile Drawing	J. Preston	7.15–9.15	...	...	...	...
177	T Cotton Weaving (Practical) ...	H. Gorton	...	...	7.15–9.15*	...	...
178	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...
	S2						
179	T Cotton Weaving (Theory) ...	W. Dagger	...	...	...	...	7.15–9.15
180	T Cotton Weaving (Practical) ...	H. Gorton, C. J. Breakell ...	...	...	7.15–9.15*	...	...
181	T Mathematics	J. Preston	...	...	7.15–9.15*	...	...
182	T Textile Science	H. Dawson, G. O. Stephens	...	...	...	7–9.30	...
	S3						
183	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	...	7.15–9.15
184	T Cotton Weaving (Practical) ...	H. Gorton, C. J. Breakell ...	...	...	7.15–9.15*	...	...
185	T Textile Science	H. Dawson, G. O. Stephens	...	...	...	7–9.30	...
186	A Textile Design and Colour ...	W. T. Garnar	...	7—9*	...	...	...
	A1						
187	T Cotton Weaving (Theory) ...	N. Highfield	...	...	7.15–9.15	...	...
188	T Cotton Weaving (Practical) ...	W. Dagger, N. Highfield ...	7.15–9.15*	...	...	...	...
189	T Textile Technology I. ...	D. Atkinson	7.15–9.15*	...	...	...	...
190	T Textile Economics	J. G. C. Dawson	...	7.15–9.15	...	...	...
191	A Textile Design I.	W. T. Garnar	...	7—9	...	...	...
192	T Textile Chemistry I.	C. A. Hatton	...	7–9.30	...	...	...
	A2						
193	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	7.15–9.15	...	...
194	T Cotton Weaving (Practical) ...	W. Dagger	7.15–9.15*	...	...	...	...
195	T Textile Technology II.... ...	D. Atkinson	7.15–9.15*	...	...	...	...
196	T Textile Economics	J. G. C. Dawson	...	7.15–9.15	...	...	...
197	A Textile Design II.	W. T. Garnar	...	7—9	...	...	...
198	T Textile Chemistry II.	C. A. Hatton	...	...	...	...	7–9.30

*Alternate weeks.

Textile Economics and Textile Engineering are taken in alternate years. Textile Economics will be taken in 1940–41.

	SPECIAL COURSES.						
	1st Year.						
199	† Cotton Spinning	S. Jackson, C. Smith ...	7.15–9.15*	...	...	7.15–9.15*	...
200	† Textile Chemistry I.	C. A. Hatton	...	7–9.30	...	...	...
201	† Textile Technology I. ...	D. Atkinson	7.15–9.15*	...	...	...	...
	2nd Year.						
202	† Textile Technology II. ...	D. Atkinson	7.15–9.15*	...	...	...	...
203	† Textile Microscopy	H. W. Edmunds	...	7.15–9.15	...	...	...
204	† Textile Chemistry II.	C. A. Hatton	...	...	...	...	7–9.30
	Special Classes.						
205	† Rayon Manufacture	H. Dawson	...	...	7–9.30	...	...
206	† Hosiery	Miss E. Beaton	...	...	...	7.15–9.0	...
207	† Adult Opening and Carding Processes	C. Smith	...	...	...	7.15–9.0	...
208	† Adult Spinners I.	S. Jackson	7.15–9.0	...	...	...	...
209	† Practical Rayon Weaving ...	W. Dagger	...	7.15–9.0	...	...	...
	COMMERCIAL COURSES.						
	S1						
210	† Arithmetic	A. Frankish	7.15–8.15	...	...	...	...
211	† Arithmetic	A. Frankish	8.15–9.15	...	...	...	...
212	† Book-keeping	W. Webster	...	...	...	...	7.15–8.15
213	† Book-keeping	W. Webster	...	...	...	...	8.15–9.15
214	† Book-keeping	M. J. Griffiths	...	...	7.15–8.15	...	...
215	† Book-keeping	M. J. Griffiths	...	...	8.15–9.15	...	...
216	† Commerce	M. J. Griffiths	...	7.15–8.15	...	...	...
217	† English	A. Frankish, Miss M. A. Morris	...	8.15–9.15	...	...	...
218	† English	J. Kettle	...	...	...	...	7.15–8.15
219	† Shorthand (Elementary) ...	F. M. Crawley	7.15–8.15	...	...	...	...
220	† Shorthand (More Adv. Theory)	F. M. Crawley	8.15–9.15	...	...	...	...
221	† Shorthand (50-60)	Miss M. Nelson	...	...	...	7.15–9.15	...

*Alternate weeks.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday	Wednesday.	Thursday.	Friday.
	COMMERCIAL COURSES.						
	S1—*continued.*						
222	T Typewriting	J. Hilton	...	6.15–7.15	...	...	...
223	T Typewriting	J. Hilton	...	7.15–8.15	...	...	...
224	T Typewriting	J. Hilton	...	8.15–9.15	...	...	...
225	T French (Beginners)	J. Kettle	...	...	7.15–9.15	...	...
226	A Spanish	J. Kettle	8.15–9.15	...	...	...	...
227	T German (Beginners)	T. C. Hayes	...	...	...	...	7.15–9.15
228	T German (Scientific and Technical)	H. H. Allen	...	7.15–9.15	...	...	...
229	T Geography	J. D. Cooper	7.15–8.15	...	...	...	...
	S2						
230	T Arithmetic	E. Singleton	7.15–8.15	...	...	...	...
231	T Arithmetic	E. Singleton	8.15–9.15	...	...	...	...
232	T Book-keeping	H. Entwistle, W. Webster ...	...	...	7.15–9.15	...	...
233	T Commerce	M. J. Griffiths	...	8.15–9.15	...	...	...
234	T English	A. Frankish, Miss M. A. Morris	...	7.15–8.15	...	...	...
235	T English	J. Kettle	...	...	...	...	8.15–9.15
236	T Shorthand (70 to 80 words) ...	W. Hanson, Mrs. E. Barnes	...	...	...	7.15–9.15	...
237	T Typewriting	J. Hilton	...	...	...	...	7.15–8.15
238	T Typewriting	J. Hilton	...	...	...	...	8.15–9.15
239	T French	H. H. Allen	7.15–9.15	...	...	...	...
240	T Geography	J. D. Cooper	8.15–9.15	...	...	...	...
241	A Spanish	J. Kettle	7.15–8.15	...	...	...	...
242	T German	H. H. Allen	...	7.15–9.15	...	...	...
	S3						
243	T Economics	W. Webster	7.15–9.15	...	...	...	...
244	T Book-keeping	T. Cunliffe	...	7.15–9.15	...	...	...
245	T Commerce	S. W. Williams	...	...	7.15–9.15	...	...
246	T Shorthand (from 80 words) ...	T. Ashworth	...	...	...	7.15–9.15	...
247	T English Language & Literature	H. H. Allen	...	...	...	7.15–9.15	...
248	T French	A. Frankish	...	...	...	...	7.15–9.15
249	T Mercantile Law	... ...	...	...	8.15–9.15	...	...
250	T Cotton Spinning (Theory) ...	S. Jackson	...	...	...	7.15–9.15	...
251	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...

	A1 and **2**							
252	† Accounting and Auditing (A1)	N. Hindley	...	7.15–9.15	...	...	...	
253	† Accounting and Auditing (A2)	N. Hindley	...	...	...	7.15–9.15	...	
254	† Mercantile Law (A1)	... ...	...	...	8.15–9.15	...	...	
255	† Mercantile Law (A2)	... ...	...	7.15–8.15	...	...	...	
256	† Economics (A1)	W. Webster	7.15–9.15	...	...	...	...	
257	† Economics (A2)	H. Entwistle	...	...	...	...	7.15–9.15	
258	† French	... ...	...	...	...	7.15–9.15	...	
259	† Cotton Spinning (Theory) ...	S. Jackson	...	...	...	7.15–9.15	...	
260	† Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...	
	CHEMISTRY. (National Certificate Course) **S1**							
261	† Mathematics	H. W. Edmunds	7—9	...	...	...	...	
262	† Physics	F. B. Landolt	...	7–9.30	...	...	...	
263	† Inorganic Chemistry	E. H. Marriott	...	...	...	...	7–9.30	
	S2							
264	† Physics (Theory and Practical)	H. W. Edmunds	...	...	7–9.30	...	...	
265	† Organic Chemistry (Theory and Practical)	E. H. Marriott	...	7—9.30	...	...	...	
266	† Inorganic Chemistry (Theory) and Practical)	E. H. Marriott	...	...	...	7–9.30	...	
	S3							
267	† Organic Chemistry (Theory and Practical) ...	E. Taylor	...	7–9.30	...	...	...	
268	† Inorganic Chemistry (Theory and Practical)	E. Taylor	...	...	7–9.30	...	...	
269	† Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday
	A Section I.						
270	† Organic Chemistry (Theory) ...	E. Taylor	7—8	...	...	...	...
271	† Organic Chemistry (Practical).	W. G. Creasy	...	...	7–9.30	...	...
272	† Inorganic Chemistry (Theory)	E. Taylor	8—9	...	...	...	...
273	† Inorganic Chemistry (Practical)	A. N. Edmondson	...	...	...	7–9.30	...
	A Section II.						
274	† Organic Chemistry (Theory) ...	E. Taylor	7—8	...	...	...	...
275	† Organic Chemistry (Practical)	W. G. Creasy	...	...	7–9.30	...	...
276	† Inorganic Chemistry (Theory)	E. Taylor	8—9	...	...	...	...
277	† Inorganic Chemistry (Practical)	A. N. Edmondson	...	...	...	7–9.30	...
	N.B.—The Sections I. and II. of the Theory will be taken in alternate years.—Section II. in 1939–40.						
	PHARMACY.					...	
	(Preliminary Course).						
278	† Biology	H. W. Edmunds	7—9	...	...	...	...
279	† Physics	F. B. Landolt	...	7–9.30	...	...	...
280	† Chemistry	E. H. Marriott	...	...	...	...	7–9.30
	(Revision Course).						
281	† Biology	H. W. Edmunds	7—9	...	...	...	...
282	† Physics	F. B. Landolt	...	...	...	...	7–9.30
283	† Inorganic Chemistry (Theory and Practical)	E. Taylor	...	...	7–9.30	...	...
	POST COURSE (Part 1.)						
284	† Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...
285	† Organic Chemistry	E. Taylor	...	7–9.30	...	...	...
286	† Inorganic Chemistry (Practical)	W. G. Creasy	...	...	7–9.30	...	...

	INTER. B.Sc. AND 1ST YEAR A.I.C. COURSE.							
287	T Inorganic Chemistry	E. Taylor	...	...	7–9.30	...	...
288	T Pure Mathematics I.	G. O. Stephens	...	7—9	...	...	...
289	T Pure Mathematics II.	J. Slater	...	7—9	...	...	...
290	T Applied Mathematics	F. B. Landolt	...	...	...	7—9	...
291	T Physics	F. B. Landolt	...	...	...	...	7–9.30
292	T Engineering Drawing	J. E. Taylor	7.15–9.15	...	...	...	...
	Alternative More Advanced Chemistry.						
293	T Physical Chemistry	W. G. Creasy	...	...	...	7–9.30	...
294	T Inorganic Chemistry	E. Taylor	8—9	...	...	...	...
295	T Practical Chemistry	W. G. Creasy	...	...	7–9.30	...	...
	B.Sc., A.I.C. COURSES and ADVANCED WORK (Practical).						
296	T Chemistry Theory	E. Taylor	...	8—9	...	...	...
297	T Physical Chemistry	A. N. Edmondson	...	...	...	7–9.30	...
298	T Inorganic Chemistry	E. Taylor	7—9	...	...	...	...
299	T Organic Chemistry	W. G. Creasy	...	...	7–9.30	...	...
300	T Physics (Practical) ... ... *	F. B. Landolt	...	...	...	...	7–9.30
	TYPOGRAPHY.						
	1st Year.						
301	A Composing	E. Jones	...	...	7.15–9.15	...	...
302	A Machines	J. Taylor	7.15–9.15	...	...	...	...
303	T English	J. Kettle	...	...	...	...	7.15–8.15
	2nd Year.						
304	A Composing	E. Jones	...	...	...	...	7.15–9.15
305	A Machines	J. Taylor	...	...	7.15–9.15	...	...
306	T English	A. Frankish	...	7.15–8.15	...	...	...
	3rd and 4th Years.						
307	A Composing	E. Jones	...	7.15–9.15	...	...	...
308	A Machines	J. Taylor	...	...	...	7.15–9.15	...
309	A Commercial Art	A. Bann	...	...	7.15–9.15	...	...

* For Languages see pages 65 to 67.

TRADE COURSES.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	ENGINEERING, WORKSHOP.						
	S1						
310	T Calculations and Science ...	T. C. Nicholson	...	7.15–9.15	...	...	...
311	T Engineering Drawing	S. Laraway	7.15–9.15	...	...	...	...
312	T Engineering Workshop Processes	G. W. Robinson	...	...	7.15–9.15	...	...
	S2						
313	T Calculations and Science ...		...	...	...	...	7.15–9.15
314	T Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...
315	T Engineering Workshop Processes	O. Jones	...	...	...	7.15–9.15	...
	S3						
316	T Engineering Workshop Processes	O. Jones	7.15–9.15	...	...	...	...
317	T Engineering Workshop Practice	O. Jones	...	7.15–9.15	...	...	...
318	T Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...
	MOTOR MECHANICS COURSE.						
	S1						
319	T Calculations and Science ...	T. C. Nicholson	...	7.15–9.15	...	...	...
320	T Motor Engineering	H. Hindley	...	...	7.15–9.15	...	...
321	T Engineering Drawing	S. Laraway	7.15–9.15	...	...	...	...
	S2						
322	T Calculations and Science ...		...	...	...	...	7.15–9.15
323	T Engineering Workshop Processes and Practice ...	G. W. Robinson	...	...	7.15–9.15	...	...
324	T Motor Engineering	H. Hindley	...	...	...	7.15–9.15	...
	S3						
325	T Engineering Workshop Processes and Practice ...	O. Jones	...	...	...	7.15–9.15	...
326	T Motor Eng. (Mech. Equip.) ...	H. Hindley	...	...	...	...	7.15–9.15
327	T Motor Eng. (Elect. Equip.) ...		7.15–9.15	...	...	...	...

	MOTOR BODY BUILDING.							
	S1							
328	† Technical Drawing	T. A. Wetton	7.15–9.15	...	...	...	...	
329	† Body Building	T. A. Wetton	...	..	...	7.15–9.15	...	
330	† Calculations and Science ...	T. C. Nicholson	...	7.15–9.15	...	...	...	
	S2							
331	† Technical Drawing	T. A. Wetton	7.15–9.15	....	...	...	...	
332	† Body Building	T. A. Wetton	...	...	...	7.15–9.15	...	
333	† Calculations and Science ...		...	...	...	...	7.15–9.15	
	ELECTRIC WELDING.							
334	† Electric Welding (I. and II.)...	S. H. Jones	...	7.15–9.15	...	...	...	
335	† Electric Welding (I.) ...	S. H. Jones	7.15–9.15	...	...	...	...	
336	† Electric Welding (II.)... ...	S. H. Jones	...	...	...	7.15–9.15	...	
337	† Welding for Motor Body Builders		...	...	7.15–9.15	...	...	
	SHEET AND PLATE METALWORK.							
	S1							
338	† Trade Processes and Materials		...	7–9.30	...	...	...	
339	† Calculations and Drawing ...	C. V. Case	...	...	...	7–9.30	...	
	S2							
340	† Trade Processes and Materials	J. Royle	...	...	7–9.30	...	...	
341	† Calculations and Drawing ...	C. V. Case	...	...	...	7–9.30	...	
	S3							
342	† Trade Processes and Materials	J. Royle	7—9.30	...	...	...	...	
343	† Calculations and Drawing ...	C. V. Case	...	7—9.30	...	...	...	
	ELECTRICAL INSTALLATION.							
	S1							
344	† Installation Rules, Theory and Calculations	J. Brennand	...	7.15–9.15	...	...	...	
345	† Practical Work; Sketching and Drawing	J. Brennand	...	...	7.15–9.15	...	...	
346	† Engineering Science	G. E. Hall	...	...	...	7.15–9.15	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	S2						
347	T Installation Rules, Theory and Calculations	S. Garnett	...	...	7.15–9.15	...	...
348	T Practical Work ; Sketching and Drawing	S. Garnett	...	...	...	7.15–9.15	...
349	T Electrical Engineering Science	A. Woods	7.15–9.15	...	...	...	...
	S3						
350	T Installation Rules, Theory and Calculations	S. Garnett	...	...	7.15–9.15	...	...
351	T Practical Work, Sketching and Drawing	S. Garnett	...	...	...	7.15–9.15	...
352	T Mathematics	J. Bagot	...	7.15–9.15	...	...	...
	RADIO SERVICE WORK.						
	S1						
353	T Mathematics	T. Wilkinson	7.15–9.15	...	...	...	...
354	T Radio Theory		...	...	7.15–9.15	...	...
355	T Calculations and Practical work		...	...	...	...	7.15–9.15
	S2						
356	T Mathematics	J. Bagot	...	7.15–9.15	...	...	...
357	T Radio Theory	A. Woodacre...	...	...	7.15–9.15	...	...
358	T Calculations and Practical work	A. Woodacre...	...	...	...	7.15–9.15	...
	S3						
359	T Electrical Engineering Science	A. Woods	7.15–9.15	...	...	...	...
360	T Radio Theory	A. Woodacre...	...	...	7.15–9.15	...	...
361	T Calculations and Practical work	A. Woodacre...	...	...	...	7.15–9.15	...

	PLUMBING.							
	S1							
362	T Plumbing (Theory)	F. Coupe	...	...	7.15–9.15	...	...
363	T Plumbing (Practical)	J. Pilkington	7.15–9.15	...	...	...	...
364	T Geometry and Calculations ...	J. N. Walker	...	7.15–9.15	...	...	...
	S2							
365	T Plumbing (Practical)	F. Coupe	...	...	...	...	7.15–91·5
366	T Plumbing (Theory)	F. Coupe	7.15–9.15	...	...	...	...
367	T Plumbing Science & Calculation	F. W. Steele	...	7.15–9.15	...	...	...
	S3							
368	T Plumbing (Practical)	J. Dixon	...	...	7.15–9.15	...	...
369	T Plumbing (Theory)	J. Dixon	7.0–8.30	...	...	...	...
370	T Plumbing (Science)	J. Dixon	8.30–9.30	...	...	...	...
371	T Building Construction	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
	A							
372	T Plumbing (Practical)	J. Dixon	...	...	7.15–9.15	...	...
373	T Plumbing (Theory)	J. Dixon	7.0–9.30	...	...	...	...
374	T Building Construction or ...	G. H. Broadbent	...	7.15–9.15	...	...	...
375	T Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
	LEAD BURNING, SHEET COPPER WORK AND BRONZE WELDING.							
376	T Lead Burning	J. Fyffe	...	7.15–9.15	...	...	...
377	T Sheet Copper Work ... ... and Bronze Welding ...	... ... J. Royle	... ...	... ...	... ...	... 7.15–9.15	... ...
	CARPENTRY AND JOINERY.							
	S1							
378	T Carpentry and Joinery (Theory) ...	H. Fisher	7.15–9.15	...	...	...	...
379	T Carpentry and Joinery (Practical) ...	J. Smith	...	...	...	...	7.15–9.15
380	T Geometry and Calculations ...	J. N. Walker	...	7.15–9.15	...	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	S2						
381	T Carpentry and Joinery (Theory) ...	H. Fisher	...	...	7.15–9.15	...	...
382	T Carpentry and Joinery (Practical) ...	H. G. Yeadon	7.15–9.15	...	...	...	...
383	T Science and Calculations ...	A. E. R. Bill	...	...	...	...	7.15–9.15
	S3						
384	T Carpentry and Joinery (Theory)	H. Allen	...	...	...	...	7.15–9.15
385	T Carpentry and Joinery (Practical)	H. G. Yeadon	...	7.15–9.15	...	...	...
386	T Building Construction ...	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
	A						
387	T Carpentry and Joinery (Theory)	G. H. Broadbent	...	...	...	...	7.15–9.15
388	T Carpentry and Joinery (Practical)	H. G. Yeadon	...	7.15–9.15	...	...	...
389	T Geometry	J. N. Walker...	7.15–9.15	...	...	...	...
	BRICKLAYERS.						
	S1						
390	T Building Construction ...	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
391	T Geometry	J. N. Walker	...	7.15–9.15	...	...	...
392	T Science and Calculations ...	A. E. R. Bill...	...	...	...	...	7.15–9.15
	S2						
393	T Building Construction... ...	G. H. Broadbent	...	7.15–9.15	...	...	...
394	T Geometry	J. N. Walker	...	...	...	...	7.15–9.15
395	T Brickwork and Masonry ...	C. Shaw	...	...	7.15–9.15	...	...
	S3						
396	T Building Construction ...	H. Walters	...	...	...	7.15–9.15	...
397	T Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
398	T Brickwork and Concreting ...	C. Shaw	...	...	7.15–9.15	...	...

	COTTON SPINNING.							
399 A	† Opening and Carding (Theory)	C. Smith	...	...	...	7.15–9.15*	...	
400	† Opening and Carding (Practical)	C. Smith	...	...	...	7.15–9.15*	...	
401 C	† Spinning (Theory)	S. Jackson	...	...	...	7.15–9.15	...	
402	† Spinning (Practical)	S. Jackson	...	...	7.15–9.15*	...	...	
403	† Trade Calculations and Science I. ...	J. Preston	...	...	7.15–9.15*	...	...	
404	† ,, ,, ,, II. ...	J. Preston	...	...	7.15–9.15*	...	...	

Students take A. **or** C., **AND Trade Calculations and Science.**

	COTTON MANUFACTURE (WEAVING).							
	S1							
405	† Cotton Manufacture (Weaving) (Theory)	D. Atkinson	...	...	...	7.15–9.15	...	
406	† Cotton Manufacture (Weaving) (Practical)	H. Gorton	...	...	7.15–9.15*	...	...	
407	† Trade Calculations and Science	J. Preston	...	...	7.15–9.15*	...	...	
	S2							
408	† Cotton Manufacture (Weaving) (Theory)	W. Dagger	...	...	...	...	7.15–9.15*	
409	† Cotton Manufacture (Weaving) (Practical)	H. Gorton ... ... C. J. Breakell	...	...	7.15–9.15*	...	...	
410	† Trade Calculations and Science	J. Preston			7.15–9.15*			
	LABORATORY ARTS.							
411	† Metalwork	G. W. Robinson	...	...	7.15–9.15	...	...	
412	† Woodwork	H. G. Yeadon	...	7.15–9.15	...	...	...	
413	† Glass Blowing	H. Helm	7.15–9.15	...	...	...	...	
	GYMNASIUM CLASSES.							
414	† Ladies	Mrs. Wilson	8.15–9.15	7—8	8.15–9.15	7—8	8.15–9.15	
415	† Men	F. Wilcock, A. Dunbill ...	7—8	8.15–9.15	7—8	8.15–9.15	7—8	

* Alternate weeks.

ART SCHOOL (AVENHAM INSTITUTE).

DAY.	ROOM.	TIMES OF CLASSES.	SUBJECTS.	TEACHERS.
Monday ...	12 and Museum	9.30–12.30	General Drawing, Animals, Nature Drawing	G. A. Clucas
	11–12	2.0–4.30	Painting Still Life, Illustration, etc.	W. Rathbone
	1	7.0–9.0	Design, Commercial Art	M. Duckett
	2	7.0–9.0	Drawing from Life	W. Rathbone
	9	7.0–9.0	Drawing and Theory } Painting and Decorating	H. C. Clarke and E. Robinson
	11	7.0–9.0	Industrial Drawing, Dress Design and Embroidery	J. Laing
	12	7.0–9.0	Figure Drawing (Antique)	W. Rathbone
Tuesday ...	1–2	9.30–12.30	Perspective, Materials, and Methods of Painting	G. A. Clucas
	11–12	9.30–12.30	Design and Figure Drawing, Still Life, etc.	W. Rathbone
	12	2.0–4.30	Advanced Decoration and Figure Composition, Figure Drawing	W. Rathbone
	10	2.0–4.30	Design and Crafts	M. Duckett
	1	7.0–9.0	Design—Industrial (Embroidery, Dress Design, etc.). ...	M. Duckett
	9	7.0–9.0	Design, Industrial P. & D.	G. A. Clucas
	10	7.0–9.0	Textile Design, 3rd, 4th and 5th years	W. Garnar
	11	7.0–9.0	Drawing—Commercial Art	H. C. Clarke
Wednesday...	1	9.30–12.30	Architectural Drawing, Elementary Figure	G. A. Clucas
	11–12	9.30–12.30	History of Painting	W. Rathbone
	1	2.0–4.30	Dress Design, Lettering, etc.	J. Laing
	2	2.0–4.30	Drawing and Painting from Life, Antiques, etc.	W. Rathbone
	1	7.0–9.0	Crafts (Various)	M. Duckett
	2–2a	7.0–9.0	Drawing from Life, Etching	G. A. Clucas
	7	7.0–9.0	Modelling and Casting	W. Rathbone
	8	7.0–9.0	Painting and Decorating (1st and 2nd years, Practical)* ...	F. W. Sharples
	9	7.0–9.0	Junior Course (Form and Colour)	E. Barton
	11	7.0–9.0	Commercial Art Course (Lettering and Layouts)	H. C. Clarke

Day.	Room.	Times of Classes.	Subjects.	Teachers.
Thursday ...	11–12	9.30–12.30	Drawing and Painting, Still Life, etc.	W. Rathbone
	11	2.0–4.30	Object Drawing, Memory Drawing, Dress Design	W. Rathbone and J. Laing
	1	7.0–9.0	Dress Design and History of Costume	J. Laing
	9	7.0–9.0	Junior Course (Design and Colour)	E. Barton
	11	7.0–9.0	Figure Drawing, Anatomy	W. Rathbone
Friday ...	11–12	9.30–12.30	Illustration and Painting	W. Rathbone
	1	9.30–12.30	Architectural Drawing and Design, Schemes of Decoration	G. A. Clucas
	2	2.0–4.0	Anatomy*	W. Rathbone
	1	2.0–4.0	Design and Fabric Printing	M. Duckett
	8	7.0–9.0	Painting and Decorating and Coach Painting (Practical)* ...	E. Robinson
	9	7.0–9.0	English, 1st and 2nd years, Junior Art*	F. Allen
	10	7.0–9.0	Architectural History*	G. A. Clucas
	11	7.0–9.0	General Art and Teachers Course	M. Duckett

* These Classes will terminate after the Examinations.

DAY JUNIOR TECHNICAL SCHOOL.—TIME TABLE.

Monday—	9.15—10.15	10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1A. ..	Maths. & Geometry	Science	History	Gymnasium	Workshop	
		10.15—10.45	10.45—12.15	1.45—2.45	2.45—4.45	
1*a*. ..	Geography	Gymnasium	Workshop	Maths. & Geometry	Science	
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2A. ..	Science	Gymnasium	English	Workshop	Maths. & Geometry	
	9.15—10.45	10.45—12.15	1.45—3.15	3.15/3.45	3.45—4.45	
2*a*. ..	Workshop	Maths. & Geometry	Science	Gymnasium	English	
Tuesday—	9.15—10.15	10.15—10.45	10.45—12.15	1.45—2.45	2.45—4.45	
1A. ..	English	Gymnasium	Technical Drawing	Maths. & Geometry	Workshop	
		10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1*a*. ..	Maths. & Geometry	Workshop	English	Gymnasium	Art	
		10.15—11.15	11.15—12.15	1.45—3.15	3.15—3.45	3.45—4.45
2A. ..	History	English	Maths. & Geometry	Applied Mechanics	Gymnasium	Geography
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2*a*. ..	Maths. & Geometry	Gymnasium	Geography	Art	Chemistry	
Wednesday—	9.15—10.15	10.15—12.15				
1A. ..	Maths. & Geometry	Science	} 2.0—4.15			
			} Organised Games			
1*a*. ..	English	Workshop				
	9.15—10.45	10.45—12.15	Organised Games			
2A. ..	Science	Maths. & Geometry	11.15—12.15			
	9.15—10.15	10.15—11.15	Maths. & Geometry			
2*a*. ..	English	History				
Thursday—	9.15—10.15	10.15—12.15	1.45—3.15	3.15—4.45		
1A. ..	English	Workshop	Maths. & Geometry	Art		
		10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1*a*. ..	Maths. & Geometry	Science	History	Gymnasium	Technical Drawing	
		10.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45	
2A. ..	Maths. & Geometry	Gymnasium	Technical Drawing	Chemistry	Workshop	
	9.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45		
2*a*. ..	Technical Drawing	Applied Mechanics	Workshop	Maths. & Geometry		
Friday—	9.15—10.15	10.15—10.45	10.45—12.15	1.45—2.45	2.45—3.45	3.45—4.45
1A. ..	Geography	Gymnasium	Technical Drawing	Maths. & Geometry	English	1A & 1*a* } Civics.
	9.15—10.45		10.45—12.15	1.45—2.45	2.45—3.45	
1*a*. ..	Maths. & Geometry		Technical Drawing	English	Maths. & Geometry	
	9.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45		
2A. ..	Technical Drawing	Workshop	Art	Maths. & Geometry		
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2*a*. ..	Science	Gymnasium	Maths. & Geometry	Workshop	Technical Drawing	

DAY JUNIOR TECHNICAL SCHOOL.

TIME TABLE ANALYSIS (FIRST YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Mathematics and Geometry	G. E. Hall	9.15–10.15 (A)	1.45–2.45 (A)	9.15–10.15 (A)	1.45–3.15 (A)	1.45–2.45 (A)
	E. H. Marriott	1.45–2.45 (a)	9.15–10.15 (a)	...	9.15–10.15 (a)	9.15–10.45 (a) 2.45–3.45 (a)
Science	E. M. Pearson	10.15–12.15 (A) 2.45–4.45 (a)	... ...	10.15–12.15 (A) ...	10.15–12.15 (a) ...	... ...
Technical Drawing ...	E. M. Pearson	...	...	...	3.15–4.45 (a)	10.45–12.15 (A)
	J. E. Taylor	...	10.45–12.15 (A)	...	...	10.45–12.15 (a)
Art	G. A. Clucas	...	3.15–4.45 (a)	...	3.15–4.45 (A)	...
Workshop ...	J. H. Hulse	10.45–12.15 (a) 3.15–4.45 (A)	10.15–12.15 (a) 2.45–4.45 (A)	10.15–12.15 (a) ...	10.15–12.15 (A) ...	... ...
English	H. H. Allen	...	9.15–10.15 (A)	9.15–10.15 (a)	...	2.45–3.45 (A)
	J. Kettle	...	1.45–2.45 (a)	...	9.15–10.15 (A)	1.45–2.45 (a)
History ...	J. D. Cooper	1.45–2.45 (A) ...	... ...	... ...	1.45–2.45 (a) ...	... ...
Geography ...	M. J. Griffiths	9.15–10.15 (a)	...	...	...	9.15–10.15 (A)
Organised Games	A. Woods	...	...	2.0–4.15	...	...
Gymnasium ...	J. Kettle	10.15–10.45 (a)	10.15–10.45 (A)	...	...	10.15–10.45 (A)
	A. Frankish	2.45–3.15 (A)	2.45–3.15 (a)	...	2.45–3.15 (a)	...
Civics	J. D. Cooper	...	...	...	...	3.45–4.45 A.& a.

DAY JUNIOR TECHNICAL SCHOOL.

(SECOND YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS				
		Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Mathematics and Geometry	G. E. Hall	10.45–12.15 (a)	9.15–10.45 (a) 11.15–12.15 (A)	10.45–12.15 (A)	3.15–4.45 (a)	3.15–4.45 (A)
	F. W. Walker	...	...	...	9.15–10.15 (A)	11.15–12.15 (a)
	E. H. Marriott	3.15–4.45 (A)	...	11.15–12.15 (a)	...	...
Science	A. Woods	9.15–10.45 (A) 1.45–3.15 (a)	...	9.15–10.45 (A)	...	9.15–10.45 (a)
Applied Mechanics ...	F. W. Walker	...	1.45–3.15 (A)	...	10.45–12.15 (a)	...
Chemistry ...	E. H. Marriott	...	3.15–4.45 (a)	...	1.45–3.15 (A)	...
Technical Drawing ...	J. S. Wrigley	...	...	...	10.45–12.15 (A)	9.15–10.45 (A)
	J. E. Taylor	...	...	...	9.15–10.45 (a)	3.15–4.45 (a)
Art	G. A. Clucas	...	1.45–3.15 (a)	...	...	1.45–3.15 (A)
Workshop ...	J. H. Hulse	9.15–10.45 (a) 1.45–3.15 (A)	... ...	... ...	1.45–3.15 (a) 3.15–4.45 (A)	10.45–12.15 (A) 1.45–3.15 (a)
English ...	H. H. Allen	11.15–12.15 (A)	10.15–11.15 (A)	...	...	...
	J. D. Cooper	3.45–4.45 (a)	...	9.15–10.15 (a)	...	...
History	J. D. Cooper	...	9.15–10.15 (A)	10.15–11.15 (a)	...	...
Geography ...	M. J. Griffiths	...	11.15–12.15 (a)	...	...	...
		...	3.45–4.45 (A)			
Organised Games	A. Woods	...	...	2.0–4.15	...	...
Gymnasium ...	J. Kettle	10.45–11.15 (A)	10.45–11.15 (a)	...	10.15–10.45 (A)	10.45–11.15 (a)
		3.15–3.45 (a)	3.15–3.45 (A)			

DAY JUNIOR COMMERCIAL SCHOOL.

TIME TABLE.

	9.15—10.15	10.15—11.0	INTERVAL.	11.15—12.15	1.45—2.45	2.45—3.45	3.45—4.30
Monday—							
1A. ..	Commercial Correspondence	Mathematics	11.0–11.15	Arithmetic	Typewriting	Shorthand	French
1B. ..	Geography	Shorthand		English	French	Mathematics	Typewriting
		10.15–11.15		11.30–12.15			
2A. ..	Geography	Typewriting	11.15–11.30	Gymnasium (B)	Art	English	Gymnasium (G)
2B. ..	French	Arithmetic		Geography (G)	Bookkeeping	Art	Bookkeeping (B)
Tuesday—	9.15–10.15	10.15–11.0		11.15–12.15	1.45–2.45	2.45–3.45	3.45–4.30
1A. ..	Shorthand	French	11.0–11.15	English	English	Geography	Gymnasium (B)
1B. ..	English	Commercial Correspondence		History	Mathematics	Arithmetic	Arithmetic (G)
2A. ..	Shorthand	English	11.0–11.15	French	Bookkeeping	English	Commerce
2B. ..	French	Shorthand		Arithmetic	Mathematics	Typewriting	English
Wednesday—	9.15—10.15	10.15—11.0		11.15—12.15	1.45—2.45	2.45—3.45	3.45—4.30
1A. ..	Typewriting	French	11.0–11.15	Commerce	Arithmetic	Science	Gymnasium (G)
1B. ..	French	Typewriting		Geography	Science	Shorthand	Shorthand (B)
2A. ..	Shorthand	Gymnasium (B)	11.0–11.15	Arithmetic	French	History	Commercial Correspondence
2B. ..	Geography	Bookkeeping (G)		Shorthand	English	Arithmetic	French
Thursday—	9.15—10.15	10.15—11.0		11.15—12.15	2.0—4.15		
1A. ..	History	French	11.0–11.15	Art	Games		
1B. ..	French	Arithmetic		Commerce	Games		
		10.15—11.15		11.30—12.15			
2A. ..	English	Arithmetic	11.15–11.30	Gymnasium (G)	Games		
2B. ..	Shorthand	Typewriting		Geography (B)	Games		
Friday—	9.15—10.15	10.15—11.15		11.30—12.15	1.45—2.45	2.45—3.30	3.30—4.30
1A. ..	Mathematics	Shorthand	11.15–11.30	Gymnasium (G)	English	Gymnasium (B)	Geography
1B. ..	Typewriting	English		Arithmetic (B)	Shorthand	Shorthand (G)	Art
		10.15—11.0		11.15—12.15		2.45—3.45	3.45—4.30
2A. ..	Arithmetic	Typewriting	11.0–11.15	French	Mathematics	Science	Shorthand
2B. ..	History	English		Commerce	Science	Commercial Correspondence	English

(B)—Boys. (G)—Girls.

DAY JUNIOR COMMERCIAL SCHOOL.

TIME TABLE ANALYSIS (FIRST YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday	Thursday.	Friday.
Arithmetic ...	J. D. Cooper	... 11.15–12.15 (A)	2.45–3.45 (B) 3.45–4.30 (Girls)	1.45–2.45 (A)	10.15–11.0 (B)	11.30–12.15 (Boys)
Art	G. A. Clucas	...	...	...	11.15–12.15 (A)	3.30–4.30 (B)
Commercial Correspondence Commerce ...	J. D. Cooper ... ... M. J. Griffiths	9.15–10.15 (A) ...	10.15–11.0 (B) ...	... 11.15–12.15 (A)	... 11.15–12.15 (B)	... ...
English	A. Ellison ... ... A. Frankish	... 11.15–12.15 (B)	9.15–10.15 (B) 1.45–2.45 (A) 11.15–12.15 (A)	... ...	... ...	... ... 10.15–11.15 (B) 1.45–2.45 (A)
French	A. Frankish	3.45–4.30 (A) 1.45–2.45 (B)	10.15–11.0 (A) ...	10.15–11.0 (A) 9.15–10.15 (B)	10.15–11.0 (A) 9.15–10.15 (B)	... ...
Geography ...	A. Frankish	... 9.15–10.15 (B)	2.45–3.45 (A) ...	... 11.15–12.15 (B)	... ...	3.30–4.30 (A) ...
History	J. D. Cooper	...	11.15–12.15 (B)	...	9.15–10.15 (A)	...

Mathematics ...	A.Frankish	10.15–11.0 (A) 2.45–3.45 (B)	... 1.45–2.45 (B)	... ...	... ...	9.15–10.15 (A) ...
Shorthand ...	M. J. Griffiths	10.15–11.0 (B) 2.45–3.45 (A)	9.15–10.15 (A) ...	... 2.45–3.45 (B)	... ...	10.15–11.15 (A) 1.45–2.45 (B)
	W. Webster	...	...	3.45–4.30 (Boys)	...	2.45–3.30 (Girls)
Typewriting ...	D. Roberts	1.45–2.45 (A)	...	9.15–10.15 (A)	...	...
	W. Webster	3.45–4.30 (B)	...	10.15–11.0 (B)	...	9.15–10.15 (B)
Science	H. W. Edmunds ...	... ...	... ...	2.45–3.45 (A) 1.45–2.45 (B)	... ...	... ...
Gymnasium ...	A. Ellison	...	...	3.45–4.30 (Girls)	...	11.30–12.15 (Girls)
	J. Kettle	...	3.45–4.30 (Boys)	...	...	2.45–3.30 (Boys)
Organised Games	A. Ellison	...	...	...	2.0–4.15 (Girls)	...
	A. Woods	...	...	...	2.0–4.15 (Boys)	...
Intervals ...	——	11.0–11.15	11.0–11.15	11.0–11.15	11.0–11.15	11.15–11.30

DAY JUNIOR COMMERCIAL SCHOOL.

SECOND YEAR.

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday	Thursday	Friday.
Arithmetic ...	A. Ellison	... 10.15–11.15 (B)	... 11.15–12.15 (B)	11.15–12.15 (A) 2.45–3.45 (B)	10.15–11.15 (A) ...	9.15–10.15 (A) ...
Art	G. A. Clucas	1.45–2.45 (A) 2.45–3.45 (B)	... ...	... ...	... ...	... ...
Commercial Correspondence	J. D. Cooper	...	...	3.45–4.30 (A)	...	2.45–3.45 (B)
Commerce ...	W. Webster	...	3.45–4.30 (A)	...	...	11.15–12.15 (B)
English ...	A. Ellison	2.45–3.45 (A)	10.15–11.0 (A) 2.45–3.45 (A) 3.45–4.30 (B)	... ... 1.45–2.45 (B)	9.15–10.15 (A)	11.15–12.15 (B) 10.15–11.0 (B) 3.45–4-30 (B)
French	J Kettle	... 9.15–10.15 (B)	11.15–12.15 (A) 9.15–10.15 (B)	1.45–2.45 (A) 3.45–4.30 (B)	... ...	11.15–12.15 (A) ...
Geography ...	A. Ellison	9.15–10.15 (A) 11.30–12.15 (Girls)	... ...	9.15–10.15 (B) ...	... ...	... ...
	A. Frankish	...	...	...	11.30–12.15 (Boys)	...
History	J. D. Cooper	...	...	2.45–3.45 (A)	...	9.15–10.15 (B)
Mathematics ...	E. H. Marriott	...	1.45–2.45 (B)	...	...	1.45–2.45 (A)
Shorthand ...	W. Webster	... ...	9.15–10.15 (A) 10.15–11.0 (B)	9.15–10.15 (A) 3.45–4.30 (B)	... 9.15–10.15 (B)	3.45–4.30 (A) ...

Typewriting ...	D. Roberts ... ... W. Webster	10.15–11.15 (A) ...	... 2.45–3.45 (B)	... ...	... 10.15–11.15 (B)	10.15–11.0 (A) ...
Bookkeeping ...	M. J. Griffiths	1.45–2.45 (B) 3.45–4-30 (Boys)	1.45–2.45 (A) ...	... 10.15–11.0 (Girls)	... ...	... ...
Science	H. W. Edmunds ...	...	...	...	...	1.45–2.45 (B) 2.45–3.45 (A)
Gymnasium ...	A. Ellison	3.45–4.30 (Girls)	...	...	11.30–12.15 (Girls)	...
	J. Kettle	11.30–12.15 (Boys)	...	10.15–11.0 (Boys)	...	...
Organised Games	A. Ellison	...	...	...	2.0–4.15 (Girls)	...
	A. Woods	...	...	...	2.0–4.15 (Boys)	...
Intervals ...	——	11.15–11.30	11.0–11.15	11.0–11.15	11.15–11.30	11.0–11.15

HARRIS INSTITUTE, PRESTON.

CLASSES AFFILIATED TO MANCHESTER AND LIVERPOOL UNIVERSITIES.

These provide complete Courses of Instruction for the Joint Matriculation of the Northern Universities; the Intermediate B.Sc. and Intermediate B.Sc. (Tech.), Manchester; the Intermediate B.Sc., Liverpool; the Intermediate Examinations of the University of London; and the various Preliminary Professional Examinations, including Medical, Dental, and Pharmaceutical.

LONDON UNIVERSITY (EXTERNAL DEGREES).

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering.

INSTITUTE OF CHEMISTRY.

Approval has been granted by the Institute of Chemistry and courses may now be taken leading to the Associateship of the Institute of Chemistry (A.I.C.).

ART.
SENIOR DAY ENGINEERING COURSES.
SENIOR DAY COMMERCIAL SCHOOL.
MATRICULATION AND INTERMEDIATE SCIENCE.
DENTAL AND PHARMACEUTICAL COURSES.
PART TIME TEXTILE CLASSES.
DAY JUNIOR TECHNICAL AND COMMERCIAL SCHOOLS.

ART. SCIENCE AND MISCELLANEOUS.

ORGANISED COURSES IN :—

BUILDING. COMMERCE.
COTTON SPINNING. COTTON WEAVING.
MECHANICAL ENGINEERING. SCIENCE.
PHYSICS AND ELECTRICAL ENGINEERING.

All communications to be addressed to—

T. M. NAYLOR, Principal.

July, 1940.

Crozier & Co., Printers, North Road, Preston.

PRESTON HARRIS INSTITUTE

PROSPECTUS

SESSION - 1941-42



HARRIS INSTITUTE, PRESTON

TELEPHONE NUMBERS:
TECHNICAL COLLEGE 4016. AVENHAM INSTITUTE 3093.

THE INSTITUTE COMPRISES
THE TECHNICAL COLLEGE (CORPORATION STREET),
AND THE AVENHAM INSTITUTE.

PROSPECTUS
of
CLASSES

SESSION 1941-42.

A—

1. TECHNICAL DAY CLASSES	-	Re-open Sept. 9
2. JUNIOR DAY SCHOOLS (*Technical and Commercial*)	-	,, ,, 9
3. EVENING CLASSES	- -	,, ,, 15

B—

1. DAY ART CLASSES	- -	Re-open Sept. 9
2. EVENING ART CLASSES	-	,, ,, 15

SPECIAL NOTICE.—Evening Students will be enrolled at the Technical College, Corporation Street, from 7 to 9 p.m. on Wednesday (Scholarship Holders only), Thursday and Friday evenings, September 10th, 11th and 12th, and may also enrol during the week commencing Monday, September 8th, between 9 a.m. and 5 p.m. (Saturday, 9 to 12).

Students who do not enrol on these dates will be charged an extra fee of 2/6. This will be strictly enforced.

PRICE 2D. BY POST, 4D.

1941-42.

HARRIS INSTITUTE, PRESTON.

Trustees:

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Mr. J. H. TOULMIN, J.P.
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Principal:

Mr. T. M. NAYLOR, M.Sc., A.M.Inst.C.E., A.M.I.Mech.E.

Staff:

Principal : T. M. NAYLOR, M.Sc., A.M.Inst.C.E., A.M.I.Mech.E.

ART SCHOOL.

Headmaster : W. RATHBONE, A.R.M.S., F.I.B.D.

Secondmaster : G. A. CLUCAS, A.T.D., F.R.S.A.

Assistants.

Miss M. DUCKETT. Miss J. LAING.

Assistants for Evening Classes.

F. ALLEN. F. W. SHARPLES.

BUILDING DEPARTMENT.

Head : E. M. PEARSON, A.R.S.I., A.M.I.Struct.E.

Handicraft Teacher : J. H. HULSE.

Lecturers for Evening Classes :

H. ALLEN.
G. H. BROADBENT, L.R.I.B.A.
W. TAYLOR.
H. WALTERS, A.R.I.B.A.
J. SMITH.
J. T. HIGGINSON.
J. N. WALKER
A. E. R. BILL.
T. C. NICHOLSON.
R. JAMES
J. DIXON.
F. COUPE.
H. MASON
J. HOLT, A.M.Inst.C.E.
H. D. DODD, L.R.I.B.A.
A. E. R. MARGERISON.
N. DOUGLAS.
R. BALSHAW.
C. SHAW.

Laboratory Steward : C. CASTLE (Temporary).

CHEMISTRY, PHARMACY and PHYSICS DEPARTMENT.

Head : E. TAYLOR, M.Sc. ; A.I.C.

Lecturers in Chemistry : C. C. ADDISON (Loaned, Ministry of Supply).
E. H. MARRIOTT, B.Sc. (Temporary).

Lecturer in Natural Science : H. W. EDMUNDS, B.Sc.

Lecturer in Physics : J. BAGOT, B.Sc.

Lecturers for Evening Classes :

Chemistry :

L. AIREY, B.Sc. W. H. REECE.

Mathematics : G. O. STEPHENS, Ph.D.

Laboratory Steward : J. JOHNSON.

COMMERCIAL DEPARTMENT AND DAY JUNIOR COMMERCIAL SCHOOL.

Head : W. WEBSTER, F.C.I.S.

Assistants :

Miss P. M. W. MORECOMBE, B.A.
Miss E. M. BIRKETT, B.A.
Miss O. M. COUPLAND, B.A.
M. J. GRIFFITHS, B.A. (On Active Service).
Miss D. ROBERTS.

Lecturers for Evening Classes :

T. ASHWORTH
Mrs. E. BARNES.
H. A. BROWN.
T. BRADSHAW.
Miss F. M. CRAWLEY.
T. CUNLIFFE.
H. ENTWISTLE, A.C.I.S.
W. L. HAYDOCK.
J. HILTON.
N. HINDLEY, A.C.A.
J. T. HORSLEY.
Miss M. NELSON.
A. SAMPLE, A.C.I.S.
S. W. WILLIAMS, B.Com.

GENERAL EDUCATION AND MODERN LANGUAGES DEPARTMENT.

Lecturer in Charge : H. H. ALLEN, B.A.

Assistants :

J. KETTLE (On Active Service).

Lecturers for Evening Classes :

T. C. HAYES.

ENGINEERING DEPARTMENT.

Head : J. S. WRIGLEY, M.Sc., A.M.I.Mech.E.

Lecturer in Electrical Engineering (with special responsibility) :

A. WOODS.

Senior Lecturer in Mechanical Engineering :

F. W. WALKER, A.M.C.T.

Lecturers :

G. E. HALL, B.Sc., A.M.I.Mech.E.
J. E. TAYLOR, M.Sc. (Tech.), A.M.I.Mech.E.

Lecturers for Evening Classes :

F. CALLOW.
S. GARNETT.
J. H. HULSE.
O. JONES.
H. HINDLEY.
S. LARAWAY
G. R. MAXWELL
L. E. BIRCHALL, B.Sc. (Tech.).
W. GREGORY, B.Sc. (Tech.) B.D.
G. H. ATKINSON.
R. H. WIGNALL.
T. C. NICHOLSON.
S. H. JONES.
T. WILKINSON.
C. V. CASE.
J. ROYLE.
A. JACKSON, A.M.Inst.C.E.
A. REED.
S. CARROLL.
F. R. V. SCHOFIELD.

JUNIOR TECHNICAL SCHOOL.

Head : A. WOODS.

The Staff consists of teachers from the Engineering, Building, Science, Commercial and Art Departments.

TEXTILE DEPARTMENT.

Head : D. ATKINSON, F.T.I.

Instructor : W. DAGGER.

Lecturers for Evening Classes :

W. T. GARNAR.
J. G. C. DAWSON, B.Com.
H. DAWSON B.Sc., (TECH.).
C. A. HATTON, M.Sc. (TECH), A.I.C.
S. JACKSON.
J. PRESTON, A.T.I.
G. O. STEPHENS, Ph.D.
C. SMITH

TYPOGRAPHY.

Lecturers :

J. TAYLOR. E. JONES.

ADMINISTRATION.

Registrar : J. A. GORTON.

Clerks :

E. D. HARDMAN (On Active Service) ; ELIZ. A. RICHARDSON ; DOROTHY LOCKWOOD ; JESSIE DONALDSON ; ANNIE STANLEY.

Library Assistant :

DOROTHY M. SINGLETON.

Refectory Superintendent : Mrs. F. MCGOWAN.

Custodians : E. H. TRINDER (Technical College).
J. GARDNER (Avenham Institute).

Assistant Custodians : F. W. GARDINER ;
W. H. JACKSON (Temporary) ; A. SMITH (Temporary).

MAINTENANCE STAFF.

Engineer : O. JONES.

Mechanic : G. W. ROBINSON (Loaned I.C.I.) ; W. ARNETT (Temporary).

Electrician : E. LUPTON (On Active Service).

Fireman : T. HOLDEN (On Active Service) ; R. RICHARDSON (Temporary).

CALENDAR.

1941.

September	8th.	Council.
	9th.	Day Classes begin.
	10th.	Registration of Evening Students (Scholarship holders).
	11th.	Registration of Evening Students.
	12th.	Registration of Evening Students.
	15th.	Evening Classes begin.
November	3rd.	Engineering and Building Committee.
	3rd.	Textile Committee.
	3rd.	Art, Science and Commerce Committee.
December	1st.	Council and Annual Meeting.
	12th.	Prize Distribution.
	19th.	Christmas Vacation begins (Day and Evening Classes).

1942.

January	5th.	Day and Evening Classes begin.
March	2nd.	Council.
April	2nd.	Easter Vacation begins (Day and Evening Classes).
	9th.	Evening Classes begin.
	13th.	Day Classes begin.
May	2nd.	Junior Technical and Junior Commercial Schools Entrance Examination.
	22nd.	Whitsuntide Vacation begins.
June	1st.	Day Classes begin.
June	8th.	Council.
July	2nd.	Junior Technical and Junior Commercial Schools' Sports.
	10th.	Senior Day Classes and Art Evening Classes close.
	10th.	Junior Technical and Junior Commercial Schools close.

REGULATIONS.

APPLICABLE TO ALL STUDENTS ATTENDING CLASSES AT THE HARRIS INSTITUTE.

Students are expected to attend punctually at the Classes for which they enrol.

All students are expected to take an examination at the end of the course in those subjects for which they enrolled at the opening of the Session.

Smoking within the School buildings is strictly prohibited ; and Students must not loiter about the corridors.

The Lecturers are authorised to report periodically through the Principal, on attendance, homework and conduct of each Student.

The Council shall have power in dealing with Students who are unsatisfactory in these or other respects, to remove their names from the Register without return of fee.

SCHOLARSHIPS AND PRIZES.

A limited number of Scholarships and Prizes will be awarded at the discretion of the Council.

Prizes are also awarded by the Preston Building Trades Employers' Association, the Preston and District Engineering Employers' Association, the North Lancashire Master Cotton Spinners and Manufacturers' Association, the Preston Master Printers' Federation, the Typographical Association, Preston, and the National Registration of Plumbers (Preston Council).

Full particulars of Scholarships and Prizes may be obtained on application.

DAY CLASSES

TECHNICAL DAY CLASSES.

COURSES:

1. PROFESSIONAL ENTRANCE COURSE (Matriculation, etc.).
2. INTERMEDIATE B.Sc.
3. PRELIMINARY SCIENTIFIC—
   - (*a*) Pharmacy.
   - (*b*) Dental.
   - (*c*) Dispensers.
4. ELEMENTARY BIOLOGY.
5. COMMERCIAL SUBJECTS.
6. ENGINEERING (Mechanical and Electrical).
7. BUILDING.
8. TEXTILE (Cotton Spinning and Weaving).
9. GYMNASIUM CLASSES.

Classes begin on Monday, September 8th, 1941.

Autumn Term :—9th September, 1941—18th December, 1941.
Spring Term :—5th January, 1942—1st April, 1942.
Summer Term : 13th April, 1942—10th July, 1942.
(all dates inclusive).

ENROLMENT:

Students can enrol at the Technical College or Avenham Institute any day after September 1st, or on Wednesday, Thursday and Friday evenings, September 10th, 11th and 12th.

N.B.—An essential preliminary to enrolment in any Senior Day Course is the production of a satisfactory report or certificate, signed by an employer, headmaster or other person competent to vouch for the student's good character and general diligence.

TECHNICAL DAY CLASSES.

Course 1.—PROFESSIONAL ENTRANCE COURSE (Matriculation, etc.).

(Northern Universities, University of London and Professional Societies).

Intending Students should procure, from the Authorities concerned, a copy of the Regulations relating to the particular examination for which they propose to enter. As a number of war time changes already announced in certain of these regulations may be extended or modified, it is of importance to make sure that up-to-date information is obtained.

Time Table, see page 45.

Fees: £3 15s. od. per subject, or
£15 15s. od. for the full course.
Sports 5/-.

Course 2.—INTERMEDIATE B.Sc. (Science and Engineering).

(Northern Universities and University of London.)

NOTE.—The Institute is affiliated to the Universities of Manchester and Liverpool, and recognised as a privileged Institution under their Ordinances, to the extent that the attendance in the courses in Biology, Physics, Mathematics and Chemistry at the Institute is accepted as satisfying the attendance for the Intermediate B.Sc. Courses.

Time Table, see page 45.

Fees: £3 15s. od. per subject.
Sports 5/-.

Advanced Students who have passed Inter B.Sc. or other examination of equivalent standard can be afforded facilities to work for the B.Sc. (Lond.) or the A.I.C. The Institute is fully equipped for advanced work of this character, and is approved by London University for Engineering Degree Course Work and by the Institute of Chemistry for the training of candidates for the Associateship.

Fees: £3 3s. od. per day for the Session.

Course 3.—PRELIMINARY SCIENTIFIC.

(*a*) PHARMACY. PHARMACEUTICAL SOCIETY'S EXAMINATION, INTERMEDIATE.

The Institute is recognised by the Pharmaceutical Society for instruction in the subjects of Part I. Examination, viz. :—Chemistry, Physics and Biology.

SPECIAL NOTE.—The Pharmaceutical Society of Great Britian require that candidates must register with them as Pharmaceutical Students before beginning any portion of their curriculum of studies.

All Students must produce evidence of such registration.

Attendance at an approved course in Physics, Chemistry and Biology is necessary. Students must show satisfactory work both in written exercises and in practical work before the certificate of entry to the examination can be signed.

Time Table, see page 46.

Fees £10 10s. 0d. for the course, or,
£3 15s. 0d. per subject. Sports 5/-.

(*b*) FIRST EXAMINATION FOR MEDICAL DEGREES; candidates require Chemistry, Physics and Biology.

Time Table, see page 46.

Fees : £10 10s. 0d. for the course, or
£3 15s. 0d. per subject.
Sports 5/-.

(*c*) DENTAL L.D.S., PART I. (Conjoint. London, Manchester, Liverpool and Edinburgh); candidates require Chemistry and Physics in their first examination but are advised to take the Biology of the Course in preparation for their later work.

Time Table, see page 46.

Fees : £3 15s. 0d. per subject. Sports 5/-.

(*d*) DISPENSERS' EXAMINATION ; candidates require Chemistry.

Time Table, see page 46.

Fee : £3 15s. 0d. Sports 5/-.

TIMES OF CLASSES.

	9.30—10.30	10.30—11.30	11.30—12.30	2—3	3—4.30
Monday ...	Biology Lecture	Biology Practical		Organic Chemistry Lecture	Chemistry Practical
Tuesday ...	Chemistry Lecture	Chemistry Practical		Physics Optics and Sound Lecture	Practical
Wednesday ...	Physics Heat & General Physics Lecture & Practical			Chemistry Lecture	Chemistry Practical
Thursday ...	Biology Lecture	Biology Practical		Chemistry Lecture	Chemistry Practical
Friday ...	Biology Lecture	Biology Practical		Physics Magnetism and Electricity Lecture	Practical

Course 4.—ELEMENTARY BIOLOGY, SCIENCE and SURVEYING.

A course for Park Apprentices and Nurserymen: for those wishing to study the scientific basis of horticulture.

It consists of a two-year course in elementary biology and science and a short practical course in surveying.

This and subsequent courses are intended to prepare for the Diploma of Park Administration and for the certificate of the R.H.S.

Time Table, see page 47.

Fee, 10/6 for bona fide gardeners.

Course 5.—COMMERCIAL SUBJECTS.

Time Table, see page 47.

Fees: £2 10s. per term for the morning course, or £4 per term for the full course.

Sports 2/6.

Course 6.—ENGINEERING (Part Time Day).

(National Certificate Courses in Mechanical and Electrical Engineering).

NOTE.—In the first year, Mechanical and Electrical Students will take the same course, and all Students should attend on one evening per week.

For general regulations and conditions of admission, see under Evening Classes, pages 20 to 22.

Time Table, see pages 47 to 49.

Fee : £2 2s. 0d. per session.

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering (Mechanical and Electrical).

Time Table, see page 46.

Students wishing to proceed to a degree must first pass the Matriculation examination, and should consult the Head of the Engineering Department.

Course 7.—BUILDING (Part Time Day).

(National Certificate Course.)

Time Table, see page 50.

Fee £1 1s. 0d. per Session.

INTERMEDIATE R.I.B.A.

Time Table, see page 50.

Fee : £2 2s. 0d. per session.

Course 8.—TEXTILE (Part Time Day).

A part-time course in Cotton Spinning, Weaving and Designing, suitable for Students who desire a good general knowledge of the principles and processes involved in the making and selling of cotton and rayon fabrics.

The classes shown in the Time Table are held in the mornings of each day, but arrangements, where necessary, may be made for tuition in the ancillary subjects in afternoon or evening classes.

Time Table, see page 49.

Fees : £1 1s. 0d. per morning for the session.
£4 4s. 0d. for the full course.
Sports 5/-.

Course 9.—GYMNASIUM.

A course of instruction will be given on Saturday mornings if a sufficient number of Students enrol.

Fee : 5/- per session (2/6 if attending other classes).

For Gymnasium classes held during the evening session see page 36 or 65.

NOTE.—The fees stated for the various courses do not apply to Students residing in County Boroughs other than Preston.

Such Students should enquire at the Office before enrolling to ascertain the fees of their courses. The Lancashire County Council Capitation Scale will be applied.

WOMEN DAY STUDENTS.

All women day students, whether entering for the first time or not, are required to report to their Tutor-in-charge, Miss P. M. W. Morecombe, at 2 p.m., on Friday, September 19th, 1941.

Those who may enrol after the above date must see Miss Morecombe on the first Friday afternoon subsequent to their enrolment : and this time will be kept free each week throughout the Session in order to afford an opportunity for such further interviews as may be necessitated by circumstances of conduct or by other eventualities.

EVENING CLASSES

EVENING CLASSES.

SENIOR AND ADVANCED TECHNICAL AND COMMERCIAL COURSES.

These Courses proceed by progressive stages thus :—

(1) A Three Years' Course (Senior).

(2) A further Two Years' Course (Advanced).

TECHNICAL COURSES.

10.—MECHANICAL ENGINEERING (National Certificate).
11.—ELECTRICAL ENGINEERING (National Certificate).
12.—BUILDING (National Certificate).
13.—COTTON SPINNING (National Certificate).
14.—COTTON MANUFACTURE (WEAVING) (National Certificate).
15.—PURE AND APPLIED CHEMISTRY (National Certificate).
16.—SCIENCE DEGREE and A.I.C. COURSES.
17.—PHARMACY.
18.—TYPOGRAPHY.

COMMERCIAL COURSES.

19.—GENERAL COMMERCIAL.
20.—SENIOR CLERICAL COURSE.
21.—ADVANCED COMMERCIAL.

GENERAL EDUCATION AND MODERN LANGUAGE COURSES.

See pages 32 and 33.

TRADE COURSES.

The following Courses are held :—

22.—ENGINEERING WORKSHOP PRACTICE.
23.—MOTOR MECHANICS and I.A.E. REPAIR CERTIFICATE.
24.—MOTOR BODY BUILDING.
25.—ELECTRIC WELDING.
26.—SHEET AND PLATE METALWORK.
27.—ELECTRICAL INSTALLATION WORK.
28.—RADIO SERVICE WORK.
29.—CARPENTRY AND JOINERY.
30.—PLUMBING.
31.—BRICKLAYERS.

MISCELLANEOUS, SCIENCE, LANGUAGES, Etc.

Physics, Chemistry, Mathematics, English, French, German, Spanish, Economics, Geography. Gymnasium Classes (see pages 36 and 65).

ENROLMENT:

Students will be enrolled at the Technical College on Wednesday, Thursday and Friday evenings, September 10th, 11th and 12th, from 7 to 9 p.m., and may enrol during the week commencing September 8th, between 9 a.m. and 5 p.m. (Saturday, 9—12).

Classes begin on Monday, September 15th, 1941.

VACATIONS:

The College will be closed for the Christmas vacation from December 19th, 1941, to January 3rd, 1942, and for the Easter vacation from April 2nd to April 8th, 1942.

The dates in each case are inclusive.



EVENING CLASSES.

GENERAL REGULATIONS.

CONDITIONS OF ADMISSION.

Before admission to a **Senior Course** a Student must have passed the 2nd year of the Preparatory Technical or Commercial Course (conducted by a Local Education Authority) in the Junior Evening Institutes or have reached an equivalent educational standard.

Before admission to a **Trade Course** a Student must have passed the 1st year of the Preparatory Technical Course (held in the Junior Evening Institutes), or have reached an equivalent educational standard.

Exceptions to the above conditions may be made only where Students are over 16 years of age, in which cases such Students must satisfy the Principal of the Institute that they are able to benefit by the classes to which they seek admission.

Students under 16 years of age who fail to satisfy the conditions of admission should attend the **Evening Junior Courses** (Technical or Commercial), conducted by the **Preston Education Committee in Junior Evening Institutes.** These Junior Courses link up the work of the Elementary School with the Evening Classes of the Harris Institute.

Full particulars may be obtained from THE DIRECTOR OF EDUCATION, Education Offices, Lancaster Road, Preston.

Scholars leaving the Elementary Day Schools should join a Junior Evening Institute immediately, in order to qualify for admission to the Harris Institute as soon as possible.

The Refectory is open to all Students from 10-30 a.m. to 7-15 p.m. Special lunches, teas or suppers may be had by arrangement with the Refectory Superintendent.

PROMOTION TO HIGHER YEARS.

To qualify for certificates and to pass on to the higher years of a course it is necessary that Students should :—

(*a*) Reach a certain standard of attainments, tested by examinations, held at the end of the Session, and

(*b*) Have made satisfactory progress during the Session, based on records of attendance, homework, classwork, etc.

FEES FOR SESSION.

All fees are payable in advance, and are not returnable.

	s.	d.
1st Year Course S1	12	6
2nd Year Course S2	15	0
3rd Year Course S3	17	6
4th Year Course A1	20	0
5th Year Course A2	20	0
Non-Course Students	17s. 6d. per subject.	

Students who do not enrol on the dates given will be charged an additional fee of 2s. 6d. This rule will be strictly enforced. The Council reserve the right to discontinue any Class in the event of a small number joining.

Students who desire to take the Examinations of the Union of Lancashire and Cheshire Institutes, or the City and Guilds of London Institute may be called upon to pay the whole or a portion of the Examination Fees.

NOTE.—The above fees do not apply to Students residing in County Boroughs other than Preston.

Such Students should enquire at the Office before enrolling to ascertain the fees of their courses. The Lancashire County Council Capitation Scale will be applied.

Applications for the remission of fees in cases of unemployment or other causes should be made to the Principal before enrolment.

NATIONAL CERTIFICATE COURSES.

National Certificate Courses are arranged in the following :—

Mechanical Engineering,
Electrical Engineering,
Pure and Applied Chemistry.
Building.
Textile.

Certificates are awarded at the end of

(*a*) A Three Years' Course (Senior).
(*b*) A further Two Years' Course (Advanced).

The Certificates in each case are awarded by the Board of Education in conjunction with one of the following Professional Institutions :—

(*a*) Mechanical Engineering: Institution of Mechanical Engineers.
(*b*) Electrical Engineering: Institution of Electrical Engineers.
(*c*) Pure and Applied Chemistry: Institute of Chemistry.
(*d*) Building: Institute of Builders.
(*e*) Textile: Textile Institute.

CONDITIONS OF AWARD OF CERTIFICATE.

In order to obtain a certificate a candidate must make not less than 70 per cent. of the possible attendances in each year of the course, and must obtain—

(1) Not less than 40 per cent. of the possible marks in EACH subject in the examination held at the end of each year.
(2) Not less than 40 per cent. of the possible marks obtainable in EACH year for homework, class work, laboratory work, etc., taken separately, in EACH subject for which such marks are to be awarded.
(3) Not less than 50 per cent. of the grand total of marks obtainable in EACH year. Of this total the possible marks in the examinations constitute 70 per cent., and the remaining 30 per cent. will be the possible marks for home work, class work, laboratory work, etc., in each year.

A "Distinction" may be awarded to any candidate qualified to receive a certificate who, in the opinion of the examiners, has shown special merit in the Final Examination and his certificate may be specially endorsed with the name or names of the subjects in which he has thus distinguished himself.

Fee to be paid by each Student entering the Final Examination, Five Shillings.

ENGINEERING DEPARTMENT.

Course 10.—MECHANICAL ENGINEERING.

NATIONAL CERTIFICATE COURSES (see page 51).

AWARD OF ORDINARY AND HIGHER CERTIFICATES.

The Institution of Mechanical Engineers, in conjunction with the Board of Education, has approved of the grouped courses of instruction for the award of certificates at the end of—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

ADVANCED COURSE.

Students must have passed the Senior Course or produce evidence of equivalent attainments.

After obtaining the Higher National Certificate, students wishing to qualify for Associate Membership of the Institution of Mechanical Engineers should take the A3 Course (See page 51).

TRADE COURSES, see pages 60 and 61.

Course 11.—ELECTRICAL ENGINEERING.

NATIONAL CERTIFICATE COURSES, see page 52.

The Institution of Electrical Engineers, in conjunction with the Board of Education, has approved of the grouped courses of instruction for the award of certificates at the end of—

(1) A Three Years' Course (Senior).
(2) A further Two Years' Course (Advanced).

ADVANCED COURSE.

Students must have passed the Senior Course or produce evidence of equivalent attainments.

Electrical Students are expected to sit at the Examinations held by the Union of Lancashire and Cheshire Institutes in the subjects of the course.

Time Table: Mechanical and Electrical (see pages 51 and 52).

See Course 6 for Part Time Day Classes in Mechanical and Electrical Engineering.

NOTE.—Holders of the National Certificates in Mechanical or Electrical Engineering, who become candidates for Election as Students, Graduates, or Associate Members of the Institutions of

Mechanical or Electrical Engineers, and are able to satisfy the Council of their eligibility under the by-laws for one of these classes in respect of occupation and practical training, will be exempted from certain subjects in the Examinations for Election as Students and Associate Members.

Particulars relating to these exemptions may be obtained from the Head of the Department.

Students who desire to sit for the Final Examination in Electrical Engineering Practice, City and Guilds of London Institute, are now allowed to take Part I., consisting of a paper on Advanced Electrical Technology at the end of the First Year of the Advanced Course. A Certificate will not be awarded for success in Part I. only, but candidates will be notified of their success or failure in that Part.

If a candidate enters for Part I. and one section of Part II. in the same year, failure in Part I. will carry with it failure in the section of Part II. The class of Certificate awarded to a candidate successful in Part I. and one section of Part II. will be determined upon the results obtained in Part II.

For TRADE COURSES, see pages 62 and 63.

ENGINEERING DEGREE COURSE.

The Institute is approved by the University of London for the purpose of preparation for the Degree of B.Sc. in Engineering (Mechanical and Electrical).

Students wishing to proceed to a Degree must first pass the Matriculation examination and should consult the Head of the Engineering Department.

BUILDING DEPARTMENT.

Course 12.—BUILDING.

NATIONAL CERTIFICATE COURSES (see pages 52 and 53).

The Institute of Builders, in conjunction with the Board of Education, award an Ordinary Certificate on the satisfactory completion of a Three Years' Senior Course, and a Higher Certificate after a further Two Years' Advanced Course.

The conditions governing the award of National Certificates are given on page 22.

Senior Course (Ordinary Certificate).

1st and 2nd Years, see pages 52 and 53.

3rd Year. Building Construction and at least two of the following :—

Building Science,
Building Geometry,
Building Mathematics,
Builders' Quantities, or
Builders' Book-keeping.

Students who are not candidates for a National Certificate may in the third year select three subjects given in the Third Year Course, see page 53. Building Construction must be taken.

Advanced Course (Higher Certificate).

1st Year :—Building construction (A) or (B) and

Two other subjects, of which not more than one may be from Group 3, see page 53.

2nd Year :—Building Construction (A) or (B) whichever was not taken in the 1st Year, and two other subjects set out for the Advanced Course, not taken in the 1st Year ; these three subjects being selected in accordance with the scheme for the 1st Year, see page 53.

NOTE.—Builders Quantities may not be offered in the 2nd Year.

TRADE COURSES, see pages 63, 64 and 65.

TEXTILE DEPARTMENT.

National Certificate Courses.

The Textile Institute, in conjunction with the Board of Education, award an Ordinary National Certificate on the satisfactory completion of a Three Years' Senior Course and a Higher National Certificate after a further Two Years' Advanced Course.

The conditions governing the award of National Certificates are given on page 22.

Students may take either the Cotton Spinning or the Cotton Weaving Course.

Senior Students are expected to sit at the examinations conducted by the Union of Lancashire and Cheshire Institutes.

Advanced Students take the examinations of the City and Guilds of London Institute and should obtain a Full Technological Certificate.

Students who hold the Full Technological Certificate of the City and Guilds of London Institute in either Cotton Spinning or Cotton Weaving are advised to take the Special Course, with a view to becoming Associates of the Textile Institute.

Course 13.—COTTON SPINNING.

Time Table, page 53.

Course 14.—COTTON MANUFACTURE (Weaving).

Time Table, page 54.

For the full Technological Certificate of the City and Guilds of London Institute in Cotton Manufacture (Weaving), the candidates must pass examinations in :—

Cotton Manufacture (Weaving) } In the fourth
Textile Technology } and fifth years.

Also :—

Textile Economics and Textile Engineering.
or Textile Design I. and II.
or Textile Chemistry I. and II.

Special Classes suitable for Overlookers, Weavers and Spinners.

See page 55.

SCIENCE DEPARTMENT.

Classes are arranged for Students desiring a training in Science and scientific methods. The Course of study recommended will depend on the aims of the Student.

Course 15.—PURE AND APPLIED CHEMISTRY.

NATIONAL CERTIFICATE COURSES.

The Courses arranged for the National Certificate in Chemistry and for the Higher National Certificate suit the requirements of those who desire training for a works' position. These are known

as the National Certificate Courses. Certificates are awarded by the Institute of Chemistry in conjunction with the Board of Education. The Ordinary Certificate is given on the satisfactory completion of a Three Years' Senior Course, and a Higher Certificate after a further two years' Advanced Course. Students who have obtained a Matriculation or School Certificate in the necessary subjects are excused the 1st year course. In all cases where students attend these Courses they are expected to take the appropriate examinations at the end of each session.

Course 16.—Degree and A.I.C. COURSES.

Time Table, page 59.

Students who desire a professional qualification in Science may prepare for a degree of B.Sc. (London), or for the Associateship of the Institute of Chemistry (A.I.C.). Before any Student is admitted to such a Course of study he must satisfy the Head of the Department that he has passed the necessary preliminary examination. For the B.Sc. (London) Course the Student should have matriculated at that University or have obtained exemption acceptable to that University. For the A.I.C. he must have matriculated or obtained the School Certificate and must register as a Student with the Institute of Chemistry. The Harris Institute is recognised by the Institute of Chemistry for the training of A.I.C. candidates, and any Students who have matriculated are advised to work for the Associateship. In either case the first Course is that for the Inter B.Sc., and 1st Year A.I.C. (page 59). Students for the Final B.Sc. and the A.I.C. attend the classes of the Advanced National Certificate Courses, A1 and A2, and for further advanced instruction.

The laboratories of the department are well equipped and advanced Students may make use of them for special work by arrangement with the Head of Department.

Course 17.—PHARMACY.

The Regulations of the Pharmaceutical Society now require that students preparing for the Preliminary Scientific Examination shall attend a full-time day course if they passed the examination required for registration after October, 1935.

Students who passed the pre-registration examination before this date should ask for advice as to the classes most suitable for them.

Students who intend to join the full-time day course and who have not studied chemistry, physics and biology previously are advised to take the preliminary evening Pharmacy Course before entering the day courses.

The Revision Pharmacy Course is suitable for students who have taken a full time day course and require revision classes for the Part I. examination.

Time Table, page 58.

Pharmacy Students who have successfully taken the Intermediate examination and who wish to extend their knowledge of Chemistry in preparation for the Final are advised to attend the special Post Part 1 Pharmacy Course.

See page 58.

PRINTING DEPARTMENT.

Course 18.—TYPOGRAPHY.

The Classes in Typography prepare students for the City and Guilds of London Institute Examinations.

The full Course comprises instruction on three evenings per week for four years. The subjects to be taken are as follows :—

1st and 2nd years. Composing, Machines and English.
Final Course. Composing, Machines and Commercial Art.
Full Technological Course.—Composing, Machines and Commercial Art.

Time Table, page 59.

COMMERCIAL DEPARTMENT.

Course 19.—SENIOR GENERAL COURSE.
Course 20.—SENIOR CLERICAL COURSE.
Course 21.—ADVANCED COURSES.

SENIOR COURSES (19 and 20).

The First and Second Years of Course 19 consists of **four** subjects, and for Course 20, of **three** subjects. Third Year Course consists of three subjects

In each Course (except the special ones specified later, which do not qualify for a Grouped Course Certificate), one or more subjects are obligatory ; others are generally optional.

From the latter subjects students may select the required number to make up their Course.

Before selecting a Course, students should **consult both the Time Table printed** (on pages 55 to 57), **and the tutors** who will be present to enrol on September 10th, 11th and 12th, 1941.

A student taking a course may, so far as his attainments and the Time Table permit, sit in a class and enter for an examination of a higher year than the remaining subjects of his course. Transfers from one class to another are not permitted after the first two weeks of the session. The detailed syllabuses of examinations in the subjects may be found complete in the Prospectus of the Lancashire and Cheshire Institutes.

Students are expected to take the Examinations of the Union of Lancashire and Cheshire Institutes.

ADVANCED COURSES.

This Course is intended to assist in preparing for the Professional, Secretarial and Accountancy Examinations. (See Course 21).

SENIOR COURSE (19).

General Course. (Four Subjects) :—

FIRST YEAR (S1).

OBLIGATORY : Commerce.

OPTIONAL : **Three** of the following Subjects :—

Commercial Arithmetic.
English.
Geography.
Book-keeping.
A Foreign Language (French, German or Spanish).
Cotton Spinning, or
Cotton Weaving.

General Course. (Four Subjects) :—

SECOND YEAR (S2).

OBLIGATORY : Commerce.

OPTIONAL : **Three** of the following Subjects :— *

Commercial Arithmetic.
English.
Geography.
Book-keeping.
A Foreign Language (French, German or Spanish).
Cotton Spinning or
Cotton Weaving.

* (A first year subject may be taken provided it has not been offered before).

General Course. (Three Subjects) :—

THIRD YEAR (S3).

OBLIGATORY : Commerce.

OPTIONAL : Any **two** of the following :—

Book-keeping.
Economics.
English Language and Literature.
Mercantile Law.
A Foreign Language (French or German).
Cotton Spinning, or
Cotton Weaving.

SENIOR COURSE (20).

Clerical Course A. (Three Subjects) :—

FIRST YEAR (S1).

(1) Shorthand (Grade I., Grade II. or Grade III.).
or
Typewriting (Grade I. or Grade II.).

(2) Arithmetic
or
Book-keeping (1st or 2nd year).

(3) English
or
Foreign Language (French, German, Spanish—Grade III.).

Clerical Course A. (Three Subjects) :—

SECOND YEAR (S2).

(1) Shorthand (Grade II. or III.).
or
Typewriting (Grade II. or III.).

(2-3) **TWO** of the following subjects :—
Commerce (1st year).
Book-keeping (1st or 2nd year).*
Arithmetic (1st or 2nd year).*
English **or** Foreign Language (French or German, Grade IV.).

Clerical Course B. (Three Subjects) :—

FIRST YEAR (S1).

(1) Shorthand (Grade I., Grade II. or Grade III.).
(2) Typewriting (Grade I. or Grade II).
(3) English
or
Foreign Language (French, German, Spanish.— Grade III.).

Clerical Course B. (Three Subjects) :—

SECOND YEAR (S2.)

(1) Shorthand (Grade II.—80 words, or Grade III.).
(2) Typewriting (Grade II. or III).
(3) **ONE** of the following subjects :—
Book-keeping (1st or 2nd year).
Commerce (1st year).
English.
Foreign Language (French or German, Grade IV.).

Shorthand.

In all grades the dictation tests will be of five minutes' duration.

Grade I. at 50 and 60 words per minute.
Grade II. at 70 and 80 words per minute, and
Grade III. at 90, 100, 120 and 140 words per minute

* If a subject chosen for the Second Year Course has been taken in the first year, then the next higher grade must be taken.

Students who have no knowledge of Shorthand will find it advisable during the first session to work for an internal examination. They should consult their tutors on the matter. The more advanced theory classes consist of :—Revision, Theory and Speed to 60 words per minute.

The Shorthand Theory Class for **beginners** does not prepare for the Examinations of the U.L.C.I. It is necessary for Group Course Candidates who wish to secure Scholarships that a speed examination be taken.

In Typewriting, students must consult the tutor on enrolment night as to which hour is available.

ADVANCED COMMERCIAL COURSES.

Course 21 (Three Subjects).

1st Year :—

Obligatory—Economics.

Optional—Two of the following subjects:—Accounting and Auditing ; Mercantile Law ; French (Grade V.).

2nd Year :—

Obligatory—Economics.

Optional—Two of the following subjects:—Accounting and Auditing ; Mercantile Law ; French (Grade VI.).

Time Table, page 57.

GENERAL EDUCATION AND MODERN LANGUAGES DEPARTMENT.

GENERAL AND COMMERCIAL CLASSES.

These classes are designed to meet the requirements of those who select an Arts subject as part of a course for the U.L.C.I., R.S.A., or other external examinations, and also to furnish a suitable medium of instruction for those who are not necessarily aiming at any particular examination but who desire to maintain and increase their familiarity with some non-technical branch of study.

Time Table on pages 55 to 57.

SCIENTIFIC AND TECHNICAL.

Students in the Scientific and Engineering Departments, especially those in the more advanced sections who may look forward to opportunities for research, are reminded that a foreign

language, especially German, may ultimately prove of great value in extending the scope of their work.

Time Tables on page 56.

Students, before joining these Classes, should consult the Head of the Department.

N.B.—SENIOR DAY CLASSES IN COMMERCIAL SUBJECTS.

Day Classes have been formed for persons over 16 years of age desirous of instruction in any of the following subjects :—

TYPEWRITING, SHORTHAND, COMMERCE, BOOK-KEEPING, ECONOMICS, COMMERCIAL CORRESPONDENCE, ENGLISH, FRENCH AND GEOGRAPHY.

See Course 5.—For Time Table see page 47.

TRADE COURSES.

Course 22.—ENGINEERING WORKSHOP PRACTICE.

Applicants for these classes must have attended a preliminary Technical Evening Course or be otherwise qualified.

This is a Three Years' Course, suitable for fitters, turners and machinists. For times of classes and subjects to be taken, see page 60. Students entering for this course are expected to sit for the examination set by the Union of Lancashire and Cheshire Institutes. The examinations take place about April, at the end of each year's course.

Course 23.—MOTOR MECHANICS COURSE.

This is a three years' Course, preparing Students for the examinations of the Union of Lancashire and Cheshire Institutes, or the examinations of the City and Guilds of London Institute.

The aim of the Course is to give sufficient knowledge of principles and their application to the construction and operation of motor vehicles, to enable the mechanic to deal with repairs, adjustments and general servicing.

See page 60 for times of classes.

Course 24.—MOTOR BODY BUILDING.

Students are prepared for the examinations of the City and Guilds of London Institute.

For Time Table see page 61.

Course 25.—ELECTRIC WELDING.

Students are prepared for the examinations of the City and Guilds of London Institute.

For Time Table, see page 61.

A Special Course is arranged for Motor Body Builders. See page 61.

Course 26.—SHEET AND PLATE METALWORK.

Students are prepared for the examinations of the Union of Lancashire and Cheshire Institutes and the examinations of the City and Guilds of London Institute.

For Time Table, see page 61.

Course 27.—ELECTRICAL INSTALLATION WORK.

The scheme of work and of certification in Electrical Installation Work is that recommended by the City and Guilds of London Institute, in conjunction with the Board of Education, and approved by the Electrical Contractors' Association. The course is intended for those who have attended a preliminary Technical Evening Course, or are otherwise qualified. It is designed to cover three years, at the end of which the student should have reached the standard of a journeyman.

In the final year of the course the examination will be set and marked by the City and Guilds of London Institute for the purpose of the award of the Electricians' Interim Certificate. An apprentice or learner employed by an Electrical Installation Contractor, or a candidate otherwise engaged in electrical installation work, who has obtained the Electrician's Interim Certificate and who is desirous of obtaining the Electrician's Certificate, must forward to the City and Guilds of London Institute a statement of his practical training and work. If approved, he will be awarded the Electrician's Certificate. For times of classes and subjects to be taken, see page 62.

Course 28.—RADIO SERVICE WORK.

This scheme of work has been devised by the advisory committee on Radio Service Work of the City and Guilds of London Institute, including the Radio Manufacturers' and Wireless Retailers' Associations to meet the present need for the training and certification of men engaged in Radio Service Work, and is intended for students actually engaged in the industry who will only be able to attend part-time courses.

It is designed to cover three years. In the final year the examination will be set and marked by the City and Guilds of London Institute and failure to obtain 50 per cent. of the possible marks for practical work will carry with it failure in the examination as a whole.

For Time Table, see page 62.

Course 29.—CARPENTRY AND JOINERY.

For Time Table, see page 64.

Course 30.—PLUMBING.

For Time Table, see page 63.

Course 31.—BRICKLAYERS.

For Time Table, see page 65.

Applicants for the above courses must have attended a preliminary Technical Evening Course, or produce evidence of attainments equivalent to the preliminary Technical Evening Course. Students taking these courses are expected to sit for the College examination for the first and second years of the course, and for the third year of the course to sit for the Union of Lancashire and Cheshire Institutes Examination.

Carpentry and Joinery students may after completing the third year proceed to prepare for the final examination in Carpentry and Joinery of the City and Guilds of London Institute, or for the Senior National Certificate in Building by entering the first year of the National Certificate Course.

Plumbing students, after the third year, may proceed to prepare for the final examination in Plumber's work of the City and Guilds of London Institute.

MISCELLANEOUS CLASSES AND SPECIAL COURSES.

The following classes are here indicated separately for the benefit of students who desire to take up the study of certain subjects for the Professional Entrance Examinations, and to assist students of an advanced grade to a higher standard of attainments.

A course consists of any three of the following subjects :—

Subject.	Class No.
Arithmetic	... 188, 208.
Book-keeping	... 222.
Chemistry	... 241.
English Language and Literature...	225.
French	... 203, 217, 226 and 236.
German	... 205, 220.
Mathematics	... 239.
Physics	... 240.
Geography	... 207, 218.
Shorthand	... 224.

An Internal Examination will be held in those subjects not otherwise provided for, and certificates will be given.

Gymnasium Classes will be held as follows :—

MON.	TUES.	WED.	THUR.	FRI.	SAT.
*7—8	†7—8	*7—8	†7—8	*7—8	*9-45—10-45
†8-15—9-15	*8-15—9-15	†8-15—9-15	*8-15—9-15	†8-15—9-15	†11—12

Classes for Men are indicated by a *.
Classes for Women are indicated by a †.

Fees : 5/- per session and 2/6 per session for students taking other classes in the institute.

JUNIOR COURSES.

(FULL TIME DAY).

COURSES:

JUNIOR TECHNICAL.

JUNIOR COMMERCIAL.

Classes begin on Tuesday, September 9th, 1941.
Autumn Term :—9th September, 1941—18th December, 1941.
Spring Term :—5th January, 1942—1st April, 1942.
Summer Term :—13th April, 1942—10th July, 1942.

(All dates inclusive).

FEE: £3 0s. 0d. per Session, or £1 per term.
TIME TABLES, see pages 68 to 75.

DAY JUNIOR SCHOOLS.

CONDITIONS OF ENTRY, Etc.

(1) Day Junior Technical School.
(2) Day Commercial School.

ENTRANCE AND SCHOLARSHIP EXAMINATIONS.

Each boy or girl admitted must not be less than 13 years old at the date of admission, and must pass the School Entrance Examination.

The Entrance Examination will be held on Saturday, the 2nd May, 1942, at the Technical College.

Entries must be made on a form which can be obtained from the Technical College and forwarded to the Principal, Harris Institute, Corporation Street, on or before the 2nd April, 1942.

Fee: £3 for Session, September to July. This may be paid by three instalments of £1.

Parents or Guardians will be required to sign an agreement form undertaking that the pupil attends regularly for two years, or in default pay the sum of £3 3s. 0d.

The Council of the Harris Institute offer a limited number of Scholarships (providing free tuition only) to boys and girls not less than 13 years of age on October 1st, 1942, and who for two years

prior to the date of the examination have been in regular attendance at a Day School within seven miles of the Preston Town Hall.

The Preston Local Education Committee award a number of Scholarships to the School. Book and Maintenance Allowances are given to Candidates residing in the County Borough of Preston, but these awards are dependent upon the financial circumstances of the parents.

The Lancashire County Council also award a limited number of Exhibitions on the result of this Entrance Examination (open to candidates residing in the Administrative County) subject to certain conditions. The Exhibitions provide free tuition, travelling expenses, and allowance for books and maintenance. Full particulars as to these Exhibitions may be obtained from the Director of Education, County Offices, Preston.

Leaving Certificates are given to all who satisfactorily conclude their period of training, and a certain number of free Scholarships to Evening Classes are granted to those whose attainments and conduct in the Day School have merited it.

The School Uniform is as follows :—

Girls.—Navy Tunic and Girdle, Navy Knickers, White Blouse, with polo collar and long sleeves in winter and short sleeves in summer ; School Tie, Velour Hat in winter, Straw Hats with School Bank in Summer, Fawn Stockings, Black Footwear, Navy Coat ; School Blazer.

Boys.—School Cap, Tie, and School Blazer.

The above should be purchased from the School Outfitters on the presentation of the Regulation Form, which may be obtained at the College Office.

Every endeavour is made at the end of the course to assist worthy students to obtain suitable posts. Many employers apply to the School for employees and apprentices.

DAY JUNIOR TECHNICAL SCHOOL.

The aim of the School is to provide a suitable education for boys who desire to enter Engineering, Building and other trades.

The curriculum is planned with the object of providing for the continuance of a general education, together with an education in all subjects which are necessary to boys about to enter industrial occupations.

The students are brought into close contact with their future occupation through teachers who have had experience in industry.

The students also have access to the Engineering laboratories an textile sheds, where they become acquainted with machinery and equipment which helps towards a thorough understanding of the application of scientific principles to industry.

The course of instruction extends over a period of two years, and the subjects taught include the following :—Mathematics, Engineering and Building Drawing, Geometry, Art, Science (including Applied Mechanics, Electricity, Magnetism, Heat and Chemistry) Metalwork, Woodwork, Geography, History, English, Physical Training and Organised Games.

DAY JUNIOR TECHNICAL SCHOOL.—ENTRANCE EXAMINATION.

Syllabuses.

Accuracy is of great importance. A thorough knowledge of the following will be required :—

Mathematics.

The fundamental rules. Vulgar and decimal fractions. Percentages and averages. Ratio, proportion, simple interest and simple profit and loss. Elementary mensuration, rectangles and triangles. Circumference and area of circle. Surface and volume of simple solids,—prism and cylinder (weights of simple solids, given weight per unit volume). Elementary algebra. Use of symbols. Addition, subtraction, multiplication and division.

English.

(1) An essay. (2) Condensation and expansion of passages. (3) The parts of speech and elementary parsing. (4) Easy analysis of sentences. (5) The use of words in sentences to illustrate their meaning. (6) Simple letters. (7) Correction of common grammatical errors. (8) A general knowledge of good literature suitable for children.

Candidates may also be given an opportunity in this section of showing their acquaintance with present-day affairs.

A reasonable proficiency in spelling is expected; and gross errors in the simpler, everyday words will be suitably penalised.

DAY JUNIOR COMMERCIAL SCHOOL.

The Course extends over a period of two years, and prepares boys and girls for clerical posts. The following subjects are taken : Arithmetic, Algebra, Accounts, Book-keeping, Commerce, Commercial Correspondence, Drawing, Physical Training, English, French, Games, Geography, History, Office Routine, Mathematics, Science, Shorthand and Typewriting.

DAY JUNIOR COMMERCIAL SCHOOL.—ENTRANCE EXAMINATION.

SYLLABUSES.

Accuracy is of great importance. A thorough knowledge of the following will be required :—

Arithmetic.

Simple rules, including the use of brackets. Money tables—Ordinary weights and measures (excluding Troy weight and Apothecaries weight). Reduction of money. The simple rules as applied to weights and measures. Simple vulgar fractions. Terminating decimals. Practice. Proportion by unitary method. Easy percentages. Simple interest. The Metric System. Areas.

English.

The syllabus is as prescribed for Junior Technical Entrance.

JUNIOR LIBRARY.

The Junior Library is reserved exclusively for the use of pupils in the two Junior Schools, and any of the books may be borrowed for home reading. There is a wide selection of good fiction, together with miscellaneous works on a variety of interesting subjects ; and pupils are advised to take full advantage of the opportunities which their own Library offers them. They are also informed that they are at liberty, if they so desire, to contribute suitable books to the library during or after their period in the School.

[ART SCHOOL]

ART SCHOOL.

OBJECTS OF THE SCHOOL.

The objects of the School are :—

(1) To give instruction in Art to those engaged in trades and professions in which the power of drawing and a knowledge of design are essential or helpful.

(2) To train those wishing to qualify to become teachers of Art in Secondary Schools, or in Schools of Art.

(3) To provide facilities to those desiring to study Art as a branch of general education, or as an accomplishment.

(4) To train those who are desirious of taking up Art as a career, and who intend to specialise as painters, sculptors, illustrators, designers, etc.

(5) To meet the requirements of those engaged in various industrial occupations.

(6) Junior Courses. To prepare young students between the ages of 14 and 16, in order that they may specialise later on, in any of the above courses.

The School is open for three terms, viz. :—

9th September, 1941 to 18th December, 1941.

5th January, 1942 to 1st April, 1942.

13th April, 1942 to 10th July, 1942.

FEES FOR SESSION (payable in advance).

Full Time Day Students	£3 3 0 (Games fee 5/-)
Students attending one day per week for Single Subjects	2 2 0
Ditto per term	0 17 6
Special Classes for Crafts (Tuesday afternoons)	1 1 0
Evening Classes	see page 24
Summer Courses (one day per week) ...	0 17 6
Summer Evening Classes	0 7 6

Classes begin on Tuesday, September 9th, 1941.

EXAMINATIONS IN ART.

INTERNAL.

Grouped Examinations will be held at the end of each term, comprising the subjects of the various Courses.

The Board of Education will hold Examinations in the following subjects of Art :—

(*a*) Drawing.

(*b*) Painting.

(*c*) Modelling.

(*d*) Pictorial Design for Reproduction in black and white or colour.

(*e*) Industrial Design for (i.) Handicrafts and
(ii.) Manufactures.

1. The Examination in Drawing will be of a standard suitable for candidates who, after a good general education, including some preliminary instruction in Drawing, up to the age of 16 or later, have devoted themselves to serious and continuous study of Drawing for, as a rule, not less than two years.

2. The Examinations in Painting, Modelling, and Pictorial Design will be of such a standard as could be attained, according to the capacity of the candidate, by two or more years of serious and continuous specialised study after passing the Examination in Drawing.

3. Examinations in Industrial Design will be of such a standard as could be attained through regular attendance at Evening or other Part Time Classes in the intervals of employment for a period of four years after the age of 16.

4. Candidates will not be admitted to the Examinations in Painting, Modelling, or Pictorial Design, unless they have previously passed the Examination in Drawing.

CITY AND GUILDS OF LONDON INSTITUTE.

Students are prepared for these Examinations in the following subjects :—Painting and Decorating, Embroidery, Design and Colour for Textiles.

UNION OF LANCASHIRE AND CHESHIRE INSTITUTES.

Students are prepared for the Examinations arranged by the U.L.C.I. Authority in the following subjects:—Junior Industrial Art, Painting and Decorating, Architecture, Embroidery, Leatherwork, Woodcarving, Textile Design, etc.

SCHOLARSHIPS.

Harris Art Scholarship.

One Scholarship, of the value of £7 10s. 0d. per annum, tenable for three years, will be awarded annually.

The Scholarship will be open to all Students of the School of Art, who have attended for not less than one year immediately preceding the award, and will be tenable at the Harris Institute.

The Scholarship will be awarded on the results of the annual examinations, in conjunction with the Student's work of the session.

Should one or more of these Scholarships fall vacant before the full period of three years, two or three (as the case may be), will be given instead of one, in the year when they lapse.

Free Studentships.

Free Studentships to the Day Classes are offered to Students of the School (Day or Evening), who are studying with a view to becoming designers, craft workers, or teachers.

Method of award, the same as for the Harris Art Scholarship.

Free Studentships to the Evening Classes are offered to students taking definite courses, and will be awarded on the result of marks given for homework, attendance, and internal examinations.

Special Scholarships are awarded to Students who have left or are about to leave Elementary Schools, who intend to follow occupations requiring an Art Training.

PRIZES : "STEELE" BEQUEST.

Three Prizes (one Day and two Evening) of £4 each are offered for the best work done by Students each Session.

TIME TABLE OF CLASSES. SESSION 1941-42.

T—*Technical College.* A—*Avenham Institute.*

TECHNICAL DAY CLASSES.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	PROFESSIONAL ENTRANCE, Etc.						
1	T English	H. H. Allen	3—4	...	...	2—3	1.45–2.45
2	T History	H. H. Allen	...	...	...	9.15–10.15	...
3	T French	H. H. Allen	2—3	2.45–3.45	...	3—4	...
4	T Mathematics	J. Bagot	9.30–10.30	9.30–11	...	...	9.30–11
5	T Physics	J. Bagot	10.30–11.30	11–12.30	...	3—4	...
6	T Chemistry	E. A. Marriott	...	...	9.15–11.15	10.30–12.30	...
7	T Geography	H. H. Allen	...	1.45–2.45	...	...	2.45–3.45
8	T Biology*	H. W. Edmunds	...	...	11.30–12.30	...	...
	* Practical class at times to be arranged.						
	INTER-B.Sc. (Science and Engineering.)						
9	T Pure Mathematics	J. Bagot	11.30–12.30	...	...	9.30–10.30	...
10	T Applied Mathematics	J. Bagot	...	...	...	...	9.30–11.30
11	T Heat and General Physics ...	J. Bagot	...	...	9.30–12.30	...	...
12	T Magnetism and Electricity ...	J. Bagot	...	...	...	...	2–4.30
13	T Sound and Optics	J. Bagot	...	2–4.30	...	...	...
14	T Engineering Drawing ...	J. E. Taylor	3—5	...	...	...	...
15	T Chemistry	E. Taylor	...	9.30–12.30	2–4.30	2–4.30	...
16	T Geology...	H. W. Edmunds	...	...	...	...	...
17	T Biology	H. W. Edmunds	9.30–12.30	...	...	9.30–12.30	9.30–12.30
18	T German	H. H. Allen	...	7.15–9.15	...	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	FINAL B.Sc. (Science and Engineering.)						
19	† Chemistry (Theory)	E. Taylor	7—9	8—9	...	9.30–10.30	...
20	† Chemistry, Inorg. (Practical)	E. Taylor	7—9	...	...		
21	† Chemistry, Org. (Practical) ...	... ...	...	...	7—9.30	10.30–12.30	
						2—5	...
22	† Physical Chemistry	W. H. Reece	...	...	...	7—9.30	...
23	† Physics	... ...	...	...	...	...	7—9.30
24	† Strength of Materials	J. E. Taylor	...	...	2—4.30	7.15–9.15	...
25	† Theory of Structures	E. M. Pearson	...	10—12.30	...	...	...
26	† Theory of Machines	J. S. Wrigley	...	...	9.30–12.0	...	...
27	† Applied Heat and Thermo-dynamics	J. S. Wrigley	...	7.15–9.15	2—4.30	...	...
28	† Mechanics of Fluids	J. E. Taylor	7.15–9.15	...	...	...	...
29	† Applied Electricity	A. Woods	...	...	...	9.30–12.0	...
30	† Mathematics (Pure)	G. O. Stephens	...	7—9	...	...	...
31	† Mathematics (Applied) ...	G. O. Stephens	...	...	...	7—9	...
32	† Engineering Tutorial	J. S. Wrigley	...	...	...	...	2—4.30
	PRELIMINARY SCIENTIFIC : Pharmacy, Dental, Medical, Dispensing.						
33	† Chemistry, Org. (Theory) ...	E. Taylor	2—3	...	...	...	...
34	† Chemistry, Inorg. (Theory) ...	E. Taylor	...	9.30–10.30	2—3	2—3	...
35	† Chemistry, (Practical)... ...	E. Taylor	3–4.30	10.30–12.30	3–4.30	3–4.30	...
36	† Physics (Theory)	J. Bagot	...	2—3	9.30–10.30	...	2—3
37	† Physics (Practical)	J. Bagot	...	3–4.30	10.30–12.30	...	3–4.30
38	† Biology (Theory)	H. W. Edmunds	9.30–10.30	...	...	9.30–10.30	9.30–10.30
39	† Biology (Practical)	H. W. Edmunds	10.30–12.30	...	...	10.30–12.30	10.30–12.30

	SCIENCE FOR HORTICULTURE.							
40	T Biology and Chemistry ...	H. W. Edmunds	2—4 (Sept. to March).	...	...	...	...	
41	T Park Management	A. V. Pearson	5.15–6.15	...	...	...	...	
	SENIOR DAY COMMERCIAL CLASSES.							
42	T Typewriting	D. Roberts	9.15–10.15	10.15–11.15	10.15–11.15	11.15–12.15	11.15–12.15	
43	T Shorthand	D. Roberts	11.15–12.15	9.15–10.15	11.15–12.15	10.15–11.15	9.15–10.15	
44	T Bookkeeping	W. Webster	10.15–11.15	11.15–12.15	...	...	...	
45	T Commerce	W. Webster	...	...	9.15–10.15	...	...	
46	T Commercial Correspondence ...	O. M. Coupland	...	...	...	...	10.15–11.15	
47	T Economics	W. Webster	...	...	...	9.15–10.15	...	
48	T English	H. H. Allen	3—4	...	...	2—3	1.45–2.45	
49	T French	H. H. Allen	2—3	2.45–3.45	...	3—4	...	
50	T Geography	H. H. Allen	...	1.45–2.45	...	...	2.45–3.45	
	PART TIME DAY ENGINEERING. (National Certificate Course) **S1**							
51	T Mathematics	F. W. Walker	9.30–11.30	...	...	...	...	
52	T Engineering Science	J. E. Taylor	3—5	...	...	...	...	
53	T Engineering Drawing ...	J. S. Wrigley	11.30–12.30 and 2–3	...	...	...	...	
54	T Motor Engineering	H. Hindley	...	...	7.15–9.15	...	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday	'Thursday.	Friday
	S2						
55	T Mathematics	F. W. Walker	11.30–12.30 and 2—3	...	...	...	...
56	T Mechanics and ... (A) ...	F. W. Walker	3—5	...	...	...	...
57	T Heat Engines ... (B) ...	J. S. Wrigley	11.30–12.30 and 2—3	...	...	...	...
58	T Engineering Drawing	J. E. Taylor	9.30–11.30	...	...	...	...
59	T Electrical Engineering Science.	G. H. Atkinson	7.15–9.15	...	...	...	...
60	T Motor Engineering	H. Hindley	...	...	...	7.15–9.15	...
	S2. (Electrical)						
61	T Mathematics	F. W. Walker	11.30–12.30 and 2–3	...	...	...	...
62	T Mechanical Engineering Science	J. S. Wrigley	3—5	...	...	...	...
63	T Electrical Engineering Science	G. R. Maxwell	9.30–11.30	...	...	...	...
	S3. (Electrical)						
64	T Mathematics	A. Jackson	7.15–9.15	...	...	...	...
65	T Electro-Technics	A. Woods	...	2–4.30	...	...	...
66	T Electrical Laboratory ...	A. Woods	...	...	...	2—4.30	...
	MECHANICAL ENGINEERING.						
	S3						
67	T Mathematics	A. Jackson	7.15–9.15	...	...	...	...
68	T Mechanics	F. W. Walker	...	...	2–4.30	...	...
69	T Heat Engines	F. W. Walker	...	...	9.30–12	...	...

	A1							
70	† Strength of Materials	J. E. Taylor	...	...	2–4.30	...	...
71	† Theory of Machines	J. S. Wrigley	...	...	9.30–12	...	...
72	† Mathematics	J. E. Taylor	...	...	...	...	7.15–9.15
	A2							
73	† Elec. Eng. for Mech. Engrs. ...	L. E. Birchall	...	...	...	7.15–9.15	...
74	† Machine Design	J. E. Taylor	...	...	9.30–12	...	...
75	† Heat Engines	J. S. Wrigley	...	...	2–4.30	...	...
	A3 1st and 2nd Terms*							
76	† Economics	W. Webster	...	...	...	9.15–10.15	...
77	† Chemistry	E. H. Marriott	...	...	...	10.15–12.30	...
78	† Physics	J. Bagot	...	...	...	2—4.30	...
79	† Chemistry (General)	E. H. Marriott	...	...	...	...	7—9.30
80	† Workshop Organisation and Management	W. Gregory	7.15–9.15	...	...	...	...
81	† German	H. H. Allen	...	7.15–9.15	...	...	...
82	† English Language and Literature	H. H. Allen	...	...	...	7.15–9.15	...

*3rd Term.—Advanced Engineering Laboratory.

	TEXTILE CLASSES.							
83	† Textile Testing (Theory) ...	D. Atkinson	...	...	...	...	9.30–10.45	...
84	† Textile Testing (Practical) ...	D. Atkinson	...	...	...	...	10.45–12.0	...
85	† Weaving Mechanism	D. Atkinson	9.30–10.45	...	...	...	...	...
86	† Weaving (Practical)	W. Dagger	10.45–12.0	...	...	...	...	10.45–12.0
87	† Weaving Calculations	D. Atkinson	...	...	9.30–10.45	...	...	...
88	† Cloth Dissection, Analysis ...	D. Atkinson	...	...	10.45–12.0	...	...	...
89	† Fabric Structure	D. Atkinson	...	9.30–10.45	...	...	...	...
90	† Practical Designing	D. Atkinson	...	10.45–12.0	...	...	...	...
91	† Yarn Preparation	D. Atkinson	...	...	...	...	...	9.30–10.45

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	PART TIME DAY BUILDING. (National Certificate Course) **S1**						
92	T Building Science	E. M. Pearson	...	2–3.30	...	...	...
93	T Mathematics	J. E. Taylor	...	9.30–10.30	...	...	...
94	T Geometry	E. M. Pearson	...	3.30—5.0	...	...	...
95	T Building Construction ...	E. M. Pearson	...	10.30–12.30	...	...	...
96	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...
	INTERMEDIATE R.I.B.A.						
97	T Structural Mechanics	E. M. Pearson	...	10–12.30	...	...	...
98	A Architecture and Design ...	G. A. Clucas	...	...	10–12.30	...	10–12.30
99	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...
100	A Architectural History ...	G. A. Clucas	...	...	...	...	7—9

Evening Classes.

N.B.—During the period of the War all Evening Classes will commence 15 minutes in advance of the times stated in these time tables.

	MECHANICAL ENGINEERING. (National Certificate Course)							
	S1							
101	T Mathematics	R. H. Wignall	...	...	...	...	7.15–9.15	...
102	T Engineering Drawing	F. Callow	...	...	...	...	...	7.15–9.15
103	T Engineering Science	F. W. Walker	...	7.15–9.15	...	...	...	...
	S2							
104	T Mathematics	... ...	...	...	...	...	7.15–9.15	...
105	T Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...	...
106	T Mechanics and Heat Engines...	G. E. Hall	...	...	...	...	...	7.15–9.15
	S3							
107	T Mathematics	G. E. Hall	...	7.15–9.15	...	...	...	...
108	T Mechanics	F. W. Walker	...	...	7.15–9.15	...	...	...
109	T Heat Engines	F. W. Walker	...	...	...	7.15–9.15	...	...
	A1							
110	T Mathematics	J. E. Taylor	...	...	...	...	...	7.15–9.15
111	T Theory of Machines	J. S. Wrigley	...	...	7.15–9.15	...	...	...
112	T Strength of Materials	J. E. Taylor	..	...	...	7.15–9.15	...	...
	A2							
113	T Heat Engines	J. S. Wrigley	...	7.15–9.15	...	...	...	...
114	T Machine Design	J. E. Taylor	7.15–9.15	...	...	...	...	...
115	T Electrical Engineering for Mechanical Engineers	L. E. Birchall	...	...	...	7.15–9.15	...	
	A3							
116	T Workshop Organisation and Management	W. Gregory	7.15–9.15	...	...	...	...	...
117	T Chemistry (General)	E. H. Marriott	...	...	...	...	...	7–9.30
118	T English (S3)	H. H. Allen	...	...	...	7.15–9.15	...	...
119	T German	H. H. Allen	...	7.15–9.15	...	...	...	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	ELECTRICAL ENGINEERING (National Certificate Course)						
	S1						
120	T Mathematics	T. Wilkinson...	7.15–9.15	...	...	...	...
121	T Engineering Drawing	F. Callow	...	7.15–9.15	...	...	...
122	T Engineering Science	J. H. Hulse	...	...	...	7.15–9.15	...
	S2						
123	T Mathematics	... ...	...	7.15–9.15	...	...	...
124	T Mechanical Engineering Science	A. Reed	...	...	...	7.15–9.15	...
125	T Electrical Engineering Science	G. H. Atkinson	7.15–9.15	...	...	...	...
	S3						
126	T Mathematics	A. Jackson	7.15–9.15	...	...	...	...
127	T Electro-Technics	J. M. Ashcroft	...	7.15–9.15	...	...	...
128	T Electrical Laboratory	J. M. Ashcroft	...	...	...	...	7.15–9.15
	A1						
129	T Mathematics	J. E. Taylor	...	...	...	...	7.15–9.15
130	T Electrical Technology, Sect. I.	L. E. Birchall	...	...	7.15–9.15	...	...
131	T Electrical Technology, Sect. II.	L. E. Birchall	7.15–9.15	...	...	...	...
	A2						
132	T Generation and Transmission of Electrical Energy ...	L. E. Birchall	7.15–9.15	...	...	...	...
133	T Distribution and Utilization of Electrical Energy ...	L. E. Birchall	...	...	7.15–9.15	...	...
134	T Heat Engines	F. W. Walker	...	...	...	7.15–9.15	...
	BUILDING.						
	S1						
135	T Building Science	W. Taylor	...	7.15–9.15	...	...	...
136	T Building Construction ...	A. E. R. Margerison ...	...	...	7.15–9.15	...	...
137	T Geometry	J. N. Walker	...	...	...	...	7.15–9.15

	S2							
138	† Mathematics	T. C. Nicholson	7.15–9.15	...	...	...	...	
139	† Building Construction ...	G. H. Broadbent	...	7.15–9.15	...	...	...	
140	† Building Science	J. Holt	...	...	...	7.15–9.15	...	
	S3							
141	† Building Construction ...	H. Walters	...	...	...	7.15–9.15	...	
142	† Quantities	H. D. Dodd	...	7.15–9.15	...	...	...	
143	† Geometry	J. N. Walker	7.15–9.15	...	...	...	...	
144	† Brickwork and Concreting ...	C. Shaw	...	...	7.15–9.15	...	...	
145	† Carpentry and Joinery ...	H. Allen	...	...	...	...	7.15–9.15	
146	† Mathematics	G. E. Hall	...	7.15–9.15	...	...	...	
147	† Building Science	E. M. Pearson	...	...	7.15–9.15	...	...	
	A1 and A2							
	Group 1.							
148	† Building Construction (A or B)	E. M. Pearson	...	...	...	7.15–9.15	...	
149	† Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...	
150	† Builders' Quantities and Estimating	T. Higginson	7.15–9.15	...	...	...	...	
151	† Structural Work	E. M. Pearson	...	...	...	...	7.15–9.15	
	Group 2.							
152	† Carpentry and Joinery ...	G. H. Broadbent	...	...	...	...	7.15–9.15	
153	† Architectural History (see Art School							
154	† Equipment of Buildings ...	E. M. Pearson	...	...	...	...	7.15–9.15	
	Group 3, Practice Class.							
155	† Building Construction (A or B)	H. Walters	...	...	7.15–9.15	...	...	
156	† Carpentry and Joinery ...							
157	† Structural Work							
	COTTON SPINNING.							
	S1							
158	† Cotton Spinning (Theory) ...	S. Jackson	...	...	...	...	7.15–9.15	
159	† Cotton Spinning (Practical) ...	C. Smith	...	...	7.15–9.15*	...	...	
160	† Textile Mathematics	J. Preston	...	...	7.15–9.15*	...	...	
161	† Textile Drawing	J. Preston	7.15–9.15	...	...	...	...	

N.B.—(1) Building Construction (A), together with Structural Work, and (2) Building Construction (B) with Equipment of Buildings are taken in alternate years. In 1941–42, Building Construction (B) with Equipment of Buildings will be given.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	COTTON MANUFACTURE (WEAVING).						
	S1						
162	T Mathematics	J. Preston	...	...	7.15–9.15*	...	...
163	T Drawing	J. Preston	7.15–9.15	...	...	...	...
164	T Cotton Weaving (Practical) ...	W. Dagger	...	...	7.15–9.15*	...	...
165	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...
	S2						
166	T Cotton Weaving (Theory) ...	W. Dagger	...	...	...	...	7.15–9.15
167	T Cotton Weaving (Practical) ...	W. Dagger	...	...	7.15–9.15*	...	...
168	T Mathematics	J. Preston	...	...	7.15–9.15*	...	...
169	T Textile Science	H. Dawson, G. O. Stephens	...	...	...	7–9.30	...
	S3						
170	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	...	7.15–9.15
171	T Cotton Weaving (Practical) ...	W. Dagger	...	...	7.15–9.15*	...	...
172	T Textile Science	H. Dawson, G. O. Stephens	...	...	...	7–9.30	...
173	A Textile Design and Colour ...	W. T. Garnar	...	...	7—9*	...	...
	A1						
174	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	7.15–9.15	...	...
175	T Cotton Weaving (Practical) ...	W. Dagger	7.15–9.15*	...	...	...	...
176	T Textile Technology I. ...	D. Atkinson	7.15–9.15*	...	...	...	...
177	A Textile Design I.	W. T. Garnar	...	...	7—9	...	...
	A2						
178	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	7.15–9.15	...	...
79	T Cotton Weaving (Practical) ...	W. Dagger	7.15–9.15*	...	...	...	...
180	T Textile Technology II.... ...	D. Atkinson	7.15–9.15*	...	...	...	...
181	A Textile Design II.	W. T. Garnar	...	...	7—9	...	...

*Alternate weeks.

	SPECIAL COURSES.						
182	T Textile Technology I. and II.	D. Atkinson	7.15–9.15	...	...	...	...
183	T Textile Microscopy	H. W. Edmunds	...	7.15–9.15	...	...	...
184	T Cotton Spinning	S. Jackson	7.15–9.15	...	...	...	7.15–9.15
	Special Classes.						
185	T Adult Cardroom	C. Smith	...	...	...	7.15—9	...
186	T Adult Spinners...	S. Jackson	7.15—9	...	...	...	...
187	T Adult Weavers	W. Dagger	...	7.15—9	...	...	...
	COMMERCIAL COURSES.						
	S1						
188	T Arithmetic	J. T. Horsley	7.15–8.15	...	...	...	...
189	T Arithmetic	J. T. Horsley	8.15–9.15	...	...	...	...
190	T Book-keeping	W. Webster	...	...	...	...	7.15–8.15
191	T Book-keeping	W. Webster	...	...	...	...	8.15–9.15
192	T Book-keeping	T. Bradshaw	...	...	7.15–8.15	...	...
193	T Book-keeping	T. Bradshaw	...	...	8.15–9.15	...	...
194	T Commerce	S. J. Williams	...	7.15–8.15	...	...	...
195	T English	H. Entwistle...	...	8.15–9.15	...	...	...
196	T English	H. Entwistle...	...	...	...	...	7.15–8.15
197	T Shorthand (Elementary) ...	F. M. Crawley	7.15–8.15	...	...	...	...
198	T Shorthand (More Adv. Theory)	F. M. Crawley	8.15–9.15	...	...	...	...
199	T Shorthand (50-60)	M. Nelson	...	...	...	7.15–9.15	...

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday	Wednesday.	Thursday.	Friday.
	COMMERCIAL COURSES.						
	S1—*continued.*						
200	T Typewriting	J. Hilton	...	6.15–7.15	...	...	...
201	T Typewriting	J. Hilton	...	7.15–8.15	...	...	...
202	T Typewriting	J. Hilton	...	8.15–9.15	...	...	...
203	T French (Beginners)	... ...	...	...	7.15–9.15	...	...
204	A Spanish	... ...	8.15–9.15	...	...	...	...
205	T German (Beginners)	T. C. Hayes	...	...	...	...	7.15–9.15
206	T German (Scientific and Technical)	H. H. Allen	...	7.15–9.15	...	...	...
207	T Geography	... ...	7.15–8.15	...	...	...	...
	S2						
208	T Arithmetic	W. L. Haydock	7.15–8.15	...	...	...	...
209	T Arithmetic	W. L. Haydock	8.15–9.15	...	...	...	...
210	T Book-keeping	H. A. Brown, W. Webster	...	...	7.15–9.15	...	...
211	T Commerce	S. J. Williams	...	8.15–9.15	...	...	...
212	T English	H. Entwistle	...	7.15–8.15	...	...	...
213	T English	H. Entwistle	...	...	...	...	8.15–9.15
214	T Shorthand (70 to 80 words) ...	E. Barnes	...	...	...	7.15–9.15	...
215	T Typewriting	J. Hilton	...	...	...	...	7.15–8.15
216	T Typewriting	J. Hilton	...	...	...	...	8.15–9.15
217	T French	H. H. Allen	7.15–9.15	...	...	...	...
218	T Geography	... ...	8.15–9.15	...	...	...	...
219	A Spanish	... ...	7.15–8.15	...	...	...	...
220	T German	H. H. Allen	...	7.15–9.15	...	...	...
	S3						
221	T Economics	W. Webster	7.15–9.15	...	...	...	...
222	T Book-keeping	T. Cunliffe	...	7.15–9.15	...	...	...
223	T Commerce	S. W. Williams	...	...	7.15–9.15	...	...
224	T Shorthand (from 80 words) ...	T. Ashworth	...	...	...	7.15–9.15	...
225	T English Language & Literature	H. H. Allen	...	...	...	7.15–9.15	...
226	T French	... ...	...	...	...	...	7.15–9.15
227	T Mercantile Law	A. Sample	...	...	8.15–9.15	...	...
228	T Cotton Spinning (Theory) ...	S. Jackson	...	...	...	...	7.15–9.15
229	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...

	A1 and 2							
230	T Accounting and Auditing (A1)	N. Hindley	...	7.15–9.15	...	...	...	
231	T Accounting and Auditing (A2)	N. Hindley	...	...	...	7.15–9.15	...	
232	T Mercantile Law (A1)	A. Sample	...	...	8.15–9.15	...	...	
233	T Mercantile Law (A2)	A. Sample	...	7.15–8.15	...	...	...	
234	T Economics (A1)	W. Webster	7.15–9.15	...	...	...	...	
235	T Economics (A2)	... ...	...	...	...	...	7.15–9.15	
236	T French	... ...	...	...	...	7.15–9.15	...	
237	T Cotton Spinning (Theory) ...	S. Jackson	...	...	...	...	7 15–9.15	
238	T Cotton Weaving (Theory) ...	D. Atkinson	...	...	...	7.15–9.15	...	
	CHEMISTRY. (National Certificate Course)							
	S1							
239	T Mathematics	H. W. Edmunds	7—9	...	...	...	...	
240	T Physics	J. Bagot	...	7–9.30	...	...	...	
241	T Inorganic Chemistry	E. H. Marriott	...	...	...	...	7–9.30	
	S2							
242	T Physics (Theory and Practical)	H. W. Edmunds	...	...	7–9.30	...	...	
243	T Organic Chemistry (Theory and Practical)	E. H. Marriott	...	7—9.30	...	...	...	
244	T Inorganic Chemistry (Theory and Practical)	E. H. Marriott	...	...	...	7–9.30	...	
	S3							
245	T Organic Chemistry (Theory and Practical) ...	E. Taylor, L. A. Airey ...	...	7–9.30	...	...	...	
246	T Inorganic Chemistry (Theory and Practical)	E. Taylor	...	...	7–9.30	...	...	
247	T Physical Chemistry	... ...	...	...	...	7–9.30	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday
	A Section I.						
248	† Organic Chemistry (Theory) ...	E. Taylor	7—8	...	...	...	...
249	† Organic Chemistry (Practical).	... ...	...	...	7–9.30	...	...
250	† Inorganic Chemistry (Theory)	E. Taylor	8—9	...	...	...	...
251	† Inorganic Chemistry (Practical)	W. H. Reece	...	...	...	7–9.30	...
	A Section II.						
252	† Organic Chemistry (Theory) ...	E. Taylor	7—8	...	...	...	...
253	† Organic Chemistry (Practical)	... ...	...	...	7–9.30	...	...
254	† Inorganic Chemistry (Theory)	E. Taylor	8—9	...	...	...	...
255	† Inorganic Chemistry (Practical)	W. H. Reece	...	...	...	7–9.30	...

N.B.—The Sections I. and II. of the Theory will be taken in alternate years.—Section II. in 1939–40.

	PHARMACY.						
	(Preliminary Course).						
256	† Biology	H. W. Edmunds	7—9	...	...	...	
257	† Physics	J. Bagot	...	7–9.30	...	...	...
258	† Chemistry	E. H. Marriott	...	...	...	...	...
							7–9.30
	(Revision Course).						
259	† Biology	H. W. Edmunds	7—9	...	...	...	
260	† Physics	J. Bagot	...	...	...	...	...
261	† Inorganic Chemistry (Theory and Practical)	E. Taylor	...	...	...	...	7–9 30
					7–9.30		
	POST COURSE (Part 1.)						
262	† Physical Chemistry	... ...	...	...	...	7–9.30	...
263	† Organic Chemistry	E. Taylor	...	7–9.30	...	...	...
264	† Inorganic Chemistry (Practical)	... ...	...	...	7–9.30	...	...

	INTER. B.Sc. AND 1ST YEAR A.I.C. COURSE.								
265	T Inorganic Chemistry	E. Taylor	...	...	7–9.30	...	...
266	T Pure Mathematics I.	J. Bagot	...	7—9	...	...	...
267	T Pure Mathematics II.	G. O. Stephens	...	7—9	...	...	...
268	T Applied Mathematics	G. O. Stephens	...	...	...	7—9	...
269	T Physics	J. Bagot	...	...	...	...	7–9.30
270	T Engineering Drawing	J. E. Taylor	7.15–9.15	...	...	...	...
	Alternative More Advanced Chemistry.								
271	T Physical Chemistry	... ...	...	...	...	7–9.30	...
272	T Inorganic Chemistry	E. Taylor	8—9	...	...	...	...
273	T Practical Chemistry	... ...	...	...	7–9.30	...	...
	B.Sc., A.I.C. COURSES and ADVANCED WORK (Practical)								
274	T Chemistry Theory	E. Taylor	...	8—9	...	...	...
275	T Physical Chemistry	W. H. Reece	...	...	...	7–9.30	...
276	T Inorganic Chemistry	E. Taylor	7—9	...	...	...	...
277	T Organic Chemistry	... ...	...	...	7–9.30	...	...
278	T Physics (Practical) ... ... *	J. Bagot	...	...	...	...	7–9.30
	TYPOGRAPHY. 1st Year.								
279	A Composing	E. Jones	...	...	7.15–9.15	...	...
280	A Machines	J. Taylor	...	7.15–9.15	...	...	...
281	T English	H. Entwistle	...	...	...	...	7.15–8.15
	2nd Year.								
282	A Composing	E. Jones	7.15–9.15	...	...	...	...
283	A Machines	J. Taylor	...	...	7.15–9.15	...	...
284	T English	H. Entwistle	...	7.15–8.15	...	...	...
	3rd and 4th Years.								
285	A Composing	E. Jones	...	7.15–9.15	...	...	...
286	A Machines	J. Taylor	7.15–9.15	...	...	...	...
287	A Commercial Art	G. A. Clucas	...	...	7.15–9.15	...	...

* For Languages see pages 55 to 57.

TRADE COURSES.

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class				
			Monday.	Tuesday.	Wednesday	Thursday.	Friday.
	ENGINEERING, WORKSHOP.						
	S1						
288	T Calculations and Science ...	T. C. Nicholson	...	7.15–9.15	...	...	...
289	T Engineering Drawing	S. Laraway	7.15–9.15	...	...	...	...
290	T Engineering Workshop Processes	O. Jones	...	...	7.15–9.15	...	...
	S2						
291	T Calculations and Science ...		...	...	...	...	7.15–9.15
292	T Engineering Drawing	F. Callow	...	...	7.15–9.15	....	...
293	T Engineering Workshop Processes	O. Jones	...	...	...	7.15–9.15	...
	S3						
294	T Engineering Workshop						
295	Processes	O. Jones	7.15–9.15	...	...	...	...
296	T Engineering Workshop Practice	O. Jones	...	7.15–9.15	...	...	...
297	T Engineering Drawing	F. Callow	...	...	7.15–9.15	...	...
	MOTOR MECHANICS COURSE.						
	S1						
298	T Calculations and Science ...	T. C. Nicholson	...	7.15–9.15	...	...	...
299	T Motor Engineering	H. Hindley	...	...	7.15–9.15	...	...
300	T Engineering Drawing	S. Laraway	7.15–9.15	...	...	...	...
	S2						
301	T Calculations and Science ...		...	...	...	...	7.15–9.15
302	T Engineering Workshop Processes and Practice ...	O. Jones	...	...	7.15–9.15	...	...
303	T Motor Engineering	H. Hindley	...	...	...	7.15–9.15	...

	S3								
304	T Engineering Workshop Processes and Practice ...	O. Jones	...	...	...	...	7.15–9.15	...
305	T Motor Eng. (Mech. Equip.) ...	H. Hindley	...	...	...	...	...	7.15–9.15
306	T Motor Eng. (Elect. Equip.) ...		7.15–9.15	...	...	...	...	...
	MOTOR BODY BUILDING.							
	S1							
307	T Technical Drawing	... ...	7.15–9.15	...	...	...	...	...
308	T Body Building	... ...	...	..	...	7.15–9.15	...	
309	T Calculations and Science ...	T. C. Nicholson	...	7.15–9.15	...	...	...	
	S2							
310	T Technical Drawing	... ...	7.15–9.15	...	...	...	...	
311	T Body Building	... ...	...	...	...	7.15–9. 5	...	
312	T Calculations and Science ...		...	...	...	...	7.15–9.15	
	ELECTRIC WELDING.							
313	T Electric Welding (I. and II.)...	S. H. Jones	...	7.15–9.15	...	...	...	
314	T Electric Welding (I.) ...	S. H. Jones	...	...	...	...	7.15–9.15	
315	T Electric Welding (II.)... ...	S. H. Jones	...	...	...	7.15–9.15	...	
316	T Welding for Motor Body Builders	S. H. Jones	...	...	...	...	7.15–9.15	
	SHEET AND PLATE METALWORK.							
	S1							
317	T Trade Processes and Materials	J. Royle	...	7—9	...	...	...	
318	T Calculations and Drawing ...	C. V. Case	...	...	...	7—9	...	
	S2							
319	T Trade Processes and Materials	J. Royle	...	...	7—9	...	...	
320	T Calculations and Drawing ...	C. V. Case	...	...	...	7—9	...	
	S3							
321	T Trade Processes and Materials	J. Royle	7—9	...	...	...	...	
322	T Calculations and Drawing ...	C. V. Case	...	7—9	...	...	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	ELECTRICAL INSTALLATION.						
	S1						
323	T Installation Rules, Theory and Calculations	S. Carroll	...	7.15–9.15	...	...	...
324	T Practical Work; Sketching and Drawing	S. Carroll	...	...	7.15–9.15	...	...
325	T Engineering Science	G. E. Hall	...	...	...	7.15–9.15	...
	S2						
326	T Installation Rules, Theory and Calculations	S. Garnett	...	...	7.15–9.15	...	...
327	T Practical Work; Sketching and Drawing	S. Garnett	...	...	...	7.15–9.15	...
328	T Electrical Engineering Science	G. H. Atkinson	7.15–9.15	...	...	...	...
	S3						
329	T Installation Rules, Theory and Calculations	S. Garnett	...	...	7.15–9.15	...	...
330	T Practical Work, Sketching and Drawing	S. Garnett	...	...	...	7.15–9.15	...
331	T Mathematics	... ...	...	7.15–9.15	...	...	...
	RADIO SERVICE WORK.						
	S1						
332	T Mathematics	T. Wilkinson	7.15–9.15	...	...	...	...
333	T Radio Theory	F. R. V. Schofield	...	...	7.15–9.15	...	...
334	T Calculations and Practical work	F. R. V. Schofield	...	...	...	...	7.15–9.15

	S2							
335	† Mathematics	... ...	...	7.15–9.15	...	...	...	
336	† Radio Theory	... ...	...	...	7.15–9.15	...	...	
337	† Calculations and Practical work	... ...	...	...	...	7.15–9.15	...	
	S3							
338	† Electrical Engineering Science	G. H. Atkinson	7.15–9.15	...	...	...	...	
339	† Radio Theory	... ...	...	...	7.15–9.15	...	...	
340	† Calculations and Practical work	... ...	...	...	...	7.15–9.15	...	
	PLUMBING.							
	S1							
341	† Plumbing (Theory)	F. Coupe	...	...	7.15–9.15	...	...	
342	† Plumbing (Practical)	H. Mason	7.15–9.15	...	...	...	...	
343	† Geometry and Calculations ...	J. N. Walker	...	7.15–9.15	...	...	...	
	S2							
344	† Plumbing (Practical)	F. Coupe	...	...	...	...	7.15–91'5	
345	† Plumbing (Theory)	F. Coupe	7.15–9.15	...	...	...	...	
346	† Plumbing Science & Calculation	A. E. R. Bill	...	7.15–9.15	...	...	...	
	S3							
347	† Plumbing (Practical)	R. Balshaw	...	7.15–9.15	...	...	...	
348	† Plumbing (Theory)	R. Balshaw	7.0–8.30	...	...	...	...	
349	† Plumbing (Science)	R. Balshaw	8.30–9.30	...	...	...	...	
350	† Building Construction	A. E. R. Margerison ...	...	...	...	7.15–9.15	...	
	A							
351	† Plumbing (Practical)	J. Dixon	...	...	7.15–9.15	...	...	
352	† Plumbing (Theory)	J. Dixon	7.0–9.30	...	...	...	...	
353	† Building Construction or ...	G. H. Broadbent	...	7.15–9.15	...	...	...	
354	† Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...	

Ref. No.	Course, Subject and Stage.	Teachers.	Day and Time of Class.				
			Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
	CARPENTRY AND JOINERY.						
	S1						
355	T Carpentry and Joinery (Theory) ...	R. James	7.15–9.15	...	...	...	...
356	T Carpentry and Joinery (Practical) ...	J. Smith	...	...	...	...	7.15–9.15
357	T Geometry and Calculations ...	J. N. Walker	...	7.15–9.15	...	...	...
	S2						
358	T Carpentry and Joinery (Theory) ...	R. James	...	...	7.15–9.15	...	...
359	T Carpentry and Joinery (Practical) ...	N. Douglas	7.15–9.15	...	...	...	...
360	T Science and Calculations ...	A. E. R. Bill	...	...	...	...	7.15–9.15
	S3						
361	T Carpentry and Joinery (Theory)	H. Allen	...	...	...	...	7.15–9.15
362	T Carpentry and Joinery (Practical)	N. Douglas	...	7.15–9.15	...	...	...
363	T Building Construction ...	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
	A						
364	T Carpentry and Joinery (Theory)	G. H. Broadbent	...	...	...	...	7.15–9.15
365	T Carpentry and Joinery (Practical)	N. Douglas	...	7.15–9.15	...	...	...
366	T Geometry	J. N. Walker...	7.15–9.15	...	...	...	...

	BRICKLAYERS.							
	S1							
367	T Building Construction ...	A. E. R. Margerison ...	...	...	...	7.15–9.15	...
368	T Geometry	J. N. Walker	...	7.15–9.15	...	...	...
369	T Science and Calculations ...	A. E. R. Bill...	...	...	...	...	7.15–9.15
	S2							
370	T Building Construction	G. H. Broadbent	...	7.15–9.15	...	...	...
371	T Geometry	J. N. Walker	...	...	...	...	7.15–9.15
372	T Brickwork and Masonry ...	C. Shaw	...	...	7.15–9.15	...	...
	S3							
373	T Building Construction ...	H. Walters	...	...	...	7.15–9.15	...
374	T Builders' Quantities	H. D. Dodd	...	7.15–9.15	...	...	...
375	T Brickwork and Concreting ...	C. Shaw	...	...	7.15–9.15	...	...
	GYMNASIUM CLASSES.							
376	T Ladies	... ...	8.15–9.15	7—8	8.15–9.15	7—8	8.15–9.15
377	T Men	F. Wilcock, A. Dunbill ...	7—8	8.15–9.15	7—8	8.15–9.15	7—8

ART SCHOOL (AVENHAM INSTITUTE).

DAY.	ROOM.	TIMES OF CLASSES.	SUBJECTS.	TEACHERS.
Monday ...	11 and Museum	9.30–12.30	General Drawing, Nature, Methods of Painting	G. A. Clucas
	11–12	2.0–4.30	Painting Still Life, Illustration, etc.	W. Rathbone
	2	7.0–9.0	Figure Drawing (Antique)	W. Rathbone
	8	7.0–9.0	Drawing—Commercial and Industrial Art	W. Rathbone and M. Duckett
Tuesday ...	1–2	9.30–12.30	Perspective	G. A. Clucas
	11–12	9.30–12.30	Design—Commercial and Industrial Art	G. A. Clucas
	2	9.30–12.30	History of Painting	W. Rathbone
	12	2.0–4.30	Figure Drawing and Figure Composition	W. Rathbone
	1	2.0–4.30	Design and Crafts	M. Duckett
	1	7.0–9.0	Design—Industrial (Embroidery, Dress Design, etc.) ...	M. Duckett
	1	7.0–9.0	Crafts	M. Duckett
	8	7.0–9.0	Design—Industrial (Painting and Decorating and Commercial Art)	G. A. Clucas
Wednesday...	1	9.30–12.30	Architectural Drawing, Elementary Figure Drawing ...	G. A. Clucas
	2	9.30–12.30	Drawing and Painting from Life	W. Rathbone
	1	2.0–4.30	Dress Design, General Drawing...	J. Laing
	2	2.0–4.30	Drawing and Painting from Life, Antique, etc.	W. Rathbone
	1	7.0–9.0	Drawing—Industrial (Painting and Decorating and Commercial Art)	G. A. Clucas
	1	7.0–9.0	Dress Design, Embroidery, etc....	J. Laing
	2	7.0–9.0	Drawing from Life	W. Rathbone and G. A. Clucas
	7	7.0–9.0	Modelling and Casting	W. Rathbone
	8	7.0–9.0	Junior Course (Form and Colour)	M. Duckett

Day.	Room.	Times of Classes.	Subjects.	Teachers.
Thursday ...	11–12	9.30–12.30	Drawing and Painting Still Life, etc.	W. Rathbone
	11	2.0–4.30	Object Drawing, Memory Drawing, Painting Still Life ...	W. Rathbone
	11	7.0–9.0	General Drawing, Still Life, Figure Drawing	W. Rathbone
	8	7.0–9.0	Junior Course (Design and Colour)	M. Duckett
	9	7.0–9.0	Practical Painting and Decorating	F. W. Sharples
Friday ...	1	9.30–12.30	Architectural Drawing—Schemes of Decoration	G. A. Clucas
	2	9.30–12.30	Illustration—Anatomy	W. Rathbone
	1	2.0–4.30	Design—Fabric Printing, etc.	M. Duckett
	7	7.0–9.0	Architectural History—General Drawing	G. A. Clucas
	8	7.0–9.0	Junior Course (English)	F. Allen

DAY JUNIOR TECHNICAL SCHOOL.—TIME TABLE.

Monday—	9.15—10.15	10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1A. ..	Maths. & Geometry	Science	History	Gymnasium	Workshop	
		10.15—10.45	10.45—12.15	1.45—2.45	2.45—4.45	
1*a*. ..	Geography	Gymnasium	Workshop	Maths. & Geometry	Science	
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2A. ..	Science	Gymnasium	English	Workshop	Maths. & Geometry	
	9.15—10.45	10.45—12.15	1.45—3.15	3.15/3.45	3.45—4.45	
2*a*. ..	Workshop	Maths. & Geometry	Science	Gymnasium	English	
Tuesday—	9.15—10.15	10.15—10.45	10.45—12.15	1.45—2.45	2.45—4.45	
1A. ..	English	Gymnasium	Technical Drawing	Maths. & Geometry	Workshop	
		10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1*a*. ..	Maths. & Geometry	Workshop	English	Gymnasium	Art	
		10.15—11.15	11.15—12.15	1.45—3.15	3.15—3.45	3.45—4.45
2A. ..	History	English	Maths. & Geometry	Applied Mechanics	Gymnasium	Geography
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2*a*. ..	Maths. & Geometry	Gymnasium	Geography	Art	Chemistry	
Wednesday—	9.15—10.15	10.15—12.15				
1A. ..	Maths. & Geometry	Science	} 2.0—4.15			
			} Organised Games			
1*a*. ..	English	Workshop				
	9.15—10.45	10.45—12.15	Organised Games			
2A. ..	Science	Maths. & Geometry	11.15—12.15			
	9.15—10.15	10.15—11.15	Maths. & Geometry			
2*a*. ..	History	English				
Thursday—	9.15—10.15	10.15—12.15	1.45—3.15	3.15—4.45		
1A. ..	English	Workshop	Maths. & Geometry	Art		
		10.15—12.15	1.45—2.45	2.45—3.15	3.15—4.45	
1*a*. ..	Maths. & Geometry	Science	History	Gymnasium	Technical Drawing	
		10.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45	
2A. ..	Maths. & Geometry	Gymnasium	Technical Drawing	Chemistry	Workshop	
	9.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45		
2*a*. ..	Technical Drawing	Applied Mechanics	Workshop	Maths. & Geometry		
Friday—	9.15—10.15	10.15—10.45	10.45—12.15	1.45—2.45	2.45—3.45	3.45—4.45
1A. ..	Geography	Gymnasium	Technical Drawing	Maths. & Geometry	English	1A }
	9.15—10.45		10.45—12.15	1.45—2.45	2.45—3.45	& } Civics.
1*a*. ..	Maths. & Geometry		Technical Drawing	English	Maths. & Geometry	1*a* }
	9.15—10.45	10.45—12.15	1.45—3.15	3.15—4.45		
2A. ..	Technical Drawing	Workshop	Art	Maths. & Geometry		
	9.15—10.45	10.45—11.15	11.15—12.15	1.45—3.15	3.15—4.45	
2*a*. ..	Science	Gymnasium	Maths. & Geometry	Workshop	Technical Drawing	

DAY JUNIOR TECHNICAL SCHOOL.

TIME TABLE ANALYSIS (FIRST YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Mathematics and Geometry	G. E. Hall	9.15–10.15 (A)	1.45–2.45 (A)	9.15–10.15 (A)	...	1.45–2.45 (A)
	E. H. Marriott	1.45–2.45 (a)	9.15–10.15 (a)	...	9.15–10.15 (a)	9.15–10.45 (a)
	F. W. Walker	...	...	...	1.45–3.15 (A)	2.45–3.45 (a)
						...
Science	E. M. Pearson	10.15–12.15 (A)	...	10.15–12.15 (A)	10.15–12.15 (a)	...
		2.45–4.45 (a)	...	...	...	...
Technical Drawing ...	E. M. Pearson	...	...	...	3.15–4.45 (a)	10.45–12.15 (A)
	J. E. Taylor	...	10.45–12.15 (A)	...	...	10.45–12.15 (a)
Art	G. A. Clucas	...	3.15–4.45 (a)	...	3.15–4.45 (A)	...
Workshop ...	J. H. Hulse	10.45–12.15 (a)	10.15–12.15 (a)	10.15–12.15 (a)	10.15–12.15 (A)	...
		3.15–4.45 (A)	2.45–4.45 (A)	...	...	...
English	O. M. Coupland	...	9.15–10.15 (A)	9.15–10.15 (a)	...	2.45–3.45 (A)
		...	1.45–2.45 (a)	...	9.15–10.15 (A)	1.45–2.45 (a)
History ...	O. M. Coupland	1.45–2.45 (A)	...	...	1.45–3.15 (a)	...
Geography ...	H. H. Allen	9.15–10.15 (a)	...	...	...	9.15–10.15 (A)
Organised Games	A. Woods	...	...	2.0–4.15	...	...
Gymnasium ...	... ...	10.15–10.45 (a)	10.15–10.45 (A)	...	...	10.15–10.45 (A)
	... ...	2.45–3.15 (A)	2.45–3.15 (a)	...	...	...
Civics	O. M. Coupland	...	...	...	...	3.45–4.45 A.& a.

DAY JUNIOR TECHNICAL SCHOOL.

(SECOND YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS				
		Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Mathematics and Geometry	G. E. Hall	10.45–12.15 (a)	{ 9.15–10.45 (a) 11.15–12.15 (A)	10.45–12.15 (A)	3.15–4.45 (a)	3.15–4.45 (A)
	F. W. Walker	...	...	...	9.15–10.15 (A)	11.15–12.15 (a)
	E. H. Marriott	3.15–4.45 (A)	...	11.15–12.15 (a)	...	...
Science	A. Woods	9.15–10.45 (A) 1.45–3.15 (a)	...	9.15–10.45 (A)	...	9.15–10.45 (a)
Applied Mechanics ...	F. W. Walker	...	1.45–3.15 (A)	...	10.45–12.15 (a)	...
Chemistry ...	E. H. Marriott	...	3.15–4.45 (a)	...	1.45–3.15 (A)	...
Technical Drawing ...	J. S. Wrigley	...	...	...	10.45–12.15 (A)	9.15–10.45 (A)
	J. E. Taylor	...	...	...	9.15–10.45 (a)	3.15–4.45 (a)
Art	G. A. Clucas	...	1.45–3.15 (a)	...	...	1.45–3.15 (A)
Workshop ...	J. H. Hulse	9.15–10.45 (a) 1.45–3.15 (A)	... ...	... ...	1.45–3.15 (a) 3.15–4.45 (A)	10.45–12.15 (A) 1.45–3.15 (a)
English ...	O. M. Coupland	11.15–12.15 (A) 3.45–4.45 (a)	10.15–11.15 (A) ...	... 10.15–11.15 (a)	... ...	... ...
History	E. M. Birkett	...	9.15–10.15 (A)	9.15–10.15 (a)	...	...
Geography ...	H. H. Allen	... ...	11.15–12.15 (a) 3.45–4.45 (A)	...	...	...
Organised Games	A. Woods	...	...	2.0–4.15	...	...
Gymnasium ...	... ...	10.45–11.15 (A) 3.15–3.45 (a)	10.45–11.15 (a) 3.15–3.45 (A)	...	10.15–10.45 (A)	10.45–11.15 (a)

DAY JUNIOR COMMERCIAL SCHOOL.

TIME TABLE.

	9.15—10.15	10.15—11.0	INTERVAL.	11.15—12.15	1.45—2.45	2.45—3.45	3.45—4.30
Monday—			11.0–11.15	Arithmetic	Typewriting	Shorthand	Geography
1A. ..	Commercial Correspondence	History		Typewriting	Shorthand	Mathematics	Shorthand
1B. ..	Geography	French		11.30–12.15			
		10.15–11.15	11.15–11.30	Gymnasium (B)	English	Art	Gymnasium (G)
2A. ..	Geography	Typewriting		Geography (G)	Art	Commerce	Bookkeeping (B)
2B. ..	Shorthand	Arithmetic					
Tuesday—	9.15–10.15	10.15–11.0		11.15–12.15	1.45–2.45	2.45–3.45	3.45–4.30
1A. ..	Shorthand	French	11.0–11.15	English	English	Geography	Gymnasium (B)
1B. ..	English	Commercial Correspondence		Typewriting	Mathematics	Arithmetic	Arithmetic (G)
2A. ..	Shorthand	English	11.0–11.15	Commerce	Typewriting	English	Bookkeeping
2B. ..	French	Bookkeeping		Arithmetic	Mathematics	Typewriting	English
Wednesday—	9.15—10.15	10.15—11.0		11.15—12.15	1.45—2.45	2.45—3.45	3.45—4.30
1A. ..	Typewriting	French	11.0–11.15	Commerce	Arithmetic	Science	Gymnasium (G)
1B. ..	French	English		Geography	Science	Shorthand	Shorthand (B)
2A. ..	Shorthand	Gymnasium (B)	11.0–11.15	Arithmetic	Commerce	History	Typewriting
2B. ..	Geography	Bookkeeping (G)		Typewriting	English	Arithmetic	Shorthand
Thursday—	9.15—10.15	10.15—11.0		11.15—12.15	2.0—4.15		
1A. ..	Mathematics	English	11.0–11.15	Art	Games		
1B. ..	Typewriting	Arithmetic		Commerce	Games		
		10.15—11.15		11.30—12.15			
2A. ..	English	Arithmetic	11.15–11.30	Gymnasium (G)	Games		
2B. ..	Shorthand	Typewriting		Geography (B)	Games		
Friday—	9.15—10.15	10.15—11.15		11.30—12.15	1.45—2.45	2.45—3.30	3.30—4.30
1A. ..	Mathematics	Typewriting	11.15–11.30	Gymnasium (G)	Shorthand	Gymnasium (B)	Typewriting
1B. ..	Typewriting	English		Arithmetic (B)	History	Shorthand (G)	Art
		10.15—11.0		11.15—12.15		2.45—3.45	3.45—4.30
2A. ..	Arithmetic	Bookkeeping	11.0–11.15	French	Mathematics	Science	Shorthand
2B. ..	Commerce	English		Bookkeeping	Science	History	English

(B)—Boys. (G)—Girls.

DAY JUNIOR COMMERCIAL SCHOOL.

TIME TABLE ANALYSIS (FIRST YEAR).

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday	Thursday.	Friday.
Arithmetic ...	O. M. Coupland	...	2.45–3.45 (B)		10.15–11.0 (B)	
	E. M. Birkett	11.15–12.15 (A)	3.45–4.30 (Girls)	1.45–2.45 (A)		11.30–12.15 (Boys)
Art	G. A. Clucas	...	...	...	11.15–12.15 (A)	3.30–4.30 (B)
Commercial Correspondence	O. M. Coupland	9.15–10.15 (A)	...	11.15–12.15 (A)	...	...
Commerce ...	E. M. Birkett	...	10.15–11.0 (B)	...	11.15–12.15 (B)	...
English	P. M. W. Morecombe ...	...	9.15–10.15 (B)	...	...	...
			1.45–2.45 (A)	...	...	...
	E. M. Birkett	...	11.15–12.15 (A)	10.15–11.0 (B)	10.15–11.0 (A)	10.15–11.15 (B)
French	H. H. Allen	10.15–11.0	10.15–11.0 (A)	10.15–11.0 (A)	...	...
		...	...	9.15–10.15 (B)	...	...
Geography ...	E. M. Birkett	3.30–4.15 (A)	2.45–3.45 (A)	...	...	...
		...	...	11.15–12.15 (B)	...	...
History	E. M. Birkett	10.15–11.0 (A)	...	...	...	1.45–2.45 (B)

Mathematics ...	... ...	...	...	...	9.15–10.15 (A)	9.15–10.15 (A)
	E. M. Birkett	2.45–3.45 (B)	1.45–2.45 (B)	...	...	...
Shorthand ...	... ...	1.30–2.30	9.15–10.15 (A)	...	...	...
	E. Barnes	3.30–4.15 (B)	...	2.45–3.45 (B)	...	1.45–2.45 (A)
		...	...	3.45–4.30 (Boys)	...	2.45–3.30 (Girls)
Typewriting ...	D. Roberts	1.45–2.45 (A)	...	...	...	3.15–4.15 (A)
	D. Lockwood	11.15–12.15 (B)	11.15–12.15 (B)	9.15–10.15 (A)	9.15–10.15 (B)	9.15–10.15 (B)
						10.15–11.15 (A)
Science	H. W. Edmunds ...	...	...	2.45–3.45 (A)	...	...
		...	...	1.45–2.45 (B)	...	...
Gymnasium ...	P. M. W. Morecombe ...	...	...	3.45–4.30 (Girls)	...	11.30–12.15 (Girls)
	... ...	...	3.45–4.30 (Boys)	...	...	2.45–3.30 (Boys)
Organised Games	P. M. W. Morecombe ...	...	...	...	2.0–4.15 (Girls)	...
	D. Roberts					
	A. Woods	...	...	...	2.0–4.15 (Boys)	...
Interval ...	——	11.0–11.15	11.0–11.15	11.0–11.15	11.0–11.15	11.15–11.30

DAY JUNIOR COMMERCIAL SCHOOL.

SECOND YEAR.

SUBJECT.	TEACHERS.	DAY AND TIME OF CLASS.				
		Monday.	Tuesday.	Wednesday	Thursday	Friday.
Arithmetic ...	P. W. M. Morecombe ...	... 10.15–11.15 (B)	... 11.15–12.15 (B)	11.15–12.15 (A) 2.45–3.45 (B)	10.15–11.15 (A) ...	9.15–10.15 (A) ...
Art	G. A. Clucas	1.45–2.45 (B) 2.45–3.45 (A)	... ...	... ...	... ...	... ...
Commercial Correspondence Commerce ...	O. M. Coupland	2.45–3.45 (B) ...	11.15–12.15 (A) ...	1.45–2.45 (A) ...	... ...	9.15–10.15 (B) ...
English ...	P. M. W. Morecombe ...	1.45–2.45 (A)	10.15–11.0 (A) 2.45–3.45 (A) 3.45–4.30 (B)	... ... 1.45–2.45 (B)	9.15–10.15 (A)	... 10.15–11.0 (B) 3.45–4-30 (B)
French	H. H. Allen	... ...	... 9.15–10.15 (B)	... ...	... ...	11.15–12.15 (A) ...
Geography ...	P. M. W. Morecombe ... O. M. Coupland	9.15–10.15 (A) 11.30–12.15 (Girls) ...	... ...	9.15–10.15 (B)	... ... 11.30–12.15 (Boys)	... ...
History	E. M. Birkett	...	...	2.45–3.45 (A)	...	2.45–3.45 (B)
Mathematics ...	E. H. Marriott	...	1.45–2.45 (B)	...	...	1.45–2.45 (A)
Shorthand ...	D. Roberts	9.15–10.15 (B) ...	9.15–10.15 (A) ...	3.45–4.30 (B) 9.15–10.15 (A)	... 9.15–10.15 (B)	3.45–4.30 (A) ...

Typewriting ...	D. Roberts ... ... W. Webster	10.15–11.15 (A) ...	1.45–2.45 (A) 2.45–3.45 (B)	3.45–4.30 (A) 11.15–12.15 (B)	... 10.15–11.15 (B)	... ...
Bookkeeping ...	W. Webster	... 3.45–4-30 (Boys)	10.15–11.0 (B) 3.45–4.30 (A)	... 10.15–11.0 (Girls)	... ...	10.15–(11.0 (A) 11.15–12.15 (B)
Science	H. W. Edmunds ...	...	...	...	...	1.45–2.45 (B) 2.45–3.45 (A)
Gymnasium ...	P. M. W. Morecombe	3.45–4.30 (Girls) 11.30–12.15 (Boys)	... ...	... 10.15–11.0 (Boys)	11.30–12.15 (Girls) ...	... ...
Organised Games	P. M. W. Morecombe ... D. Roberts ... ... A. Woods	... ...	... ...	... ...	2.0–4.15 (Girls) 2.0–4.15 (Boys)	... ...
Intervals ...	——	11.15–11.30	11.0–11.15	11.0–11.15	11.15–11.30	11.0–11.15

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