Harris College 1967–68

**Harris College, Corporation Street, Preston, Lancashire**
**Telephone: Preston 51831–5**

*Foundation.* On the 4th April, 1956, the Minister of Education made a scheme for the establishment of the Harris College of Further Education, formerly the Harris Institute (comprising the Harris Technical College and the School of Art). In the terms of this scheme, and a later amendment to it, the College is housed in premises provided and maintained by the County Borough of Preston and is governed by the Harris Council of twenty-eight members; namely nine members of Preston Education Committee, nine members appointed by Lancashire Education Authority, nine members representative of industry and commerce, and one member representative of the Universities.

**The Harris Council**

*President:* Alderman W. Beckett, O.B.E., J.P.

*Vice-President:* Councillor J. Hargreaves

*Members:*

Alderman J. Atkinson
Alderman Mrs D. M. Dewhurst, J.P.
Alderman J. F. Gray
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker, J.P. (The Right Worshipful the Mayor of Preston)
Councillor Mrs K. E. Crozier
Councillor T. Dewhurst
Councillor Mrs R. Lytton

Alderman Sir Fred Longworth (Vice-Chairman of Lancashire County Council)
Alderman J. Bradley, M.B.E., J.P.
Councillor T. V. Brown
Councillor C. W. Eastwood
F. Ley
Councillor A. J. Whittall
Councillor Mrs W. Winn
Councillor G. Woods

F. D. Crowe, B.SC.(ENG)., A.F.R.AE.S.
Professor E. Roland Dobbs
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., A.M.I.MECH.E.
P. D. Oakley, B.SC., F.R.I.C.
H. Rogan, O.B.E., B.SC., PH.D., F.R.I.C.
Alderman J. W. Taylor, J.P., F.C.I.S.
J. W. Walker

*Clerk to the Council:* W. R. Tuson, B.SC., Chief Education Officer, Preston

**Research Council**

The research council is a sub-committee of the Harris Council charged with the promotion of research and the administration of research funds.

*Chairman:*
Alderman W. Beckett, O.B.E., J.P., *President of the Harris Council*

*Members:*
Councillor J. Hargreaves, *Vice-President of the Harris Council*
Professor E. Roland Dobbs, *University of Lancaster*
J. Jones, A.M.I.MECH.E.
Dr P. R. Lancaster, *University of Bradford*
W. J. R. Merren, M.A., B.SC., *Director of Research, Pilkington Research Laboratories*
Dr K. Morgan, *University of Lancaster*
P. D. Oakley, B.SC., F.R.I.C., *Member of the Harris Council*
Dr H. Wilkinson, *Principal of the Harris College*
Dr S. Skidmore, *Vice-Principal of the Harris College*

**Principal**: H. Wilkinson, M.SC.TECH., PH.D., A.INST.P.

**Vice-Principal**: S. Skidmore, B.SC., PH.D.(LONDON), F.R.I.C.

*Registrar:* J. Barnacle, D.M.A., F.C.C.S.

*The Harris College* is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. It provides a wide range of full-time, sandwich, block release and part-time courses in its eight departments.

Strong links exist between the College, Industry and Commerce and these have helped the development of sandwich courses leading to professional qualifications. Extension of these courses into other professional fields of activity is planned.

Short courses on specialist and advanced topics are arranged regularly in all departments of the College. Lecture meetings of societies and professional bodies are frequently held in the College.

Research and consultancy are important features of the work of the College, and the recent appointment of an Industrial Liaison Officer is expected to increase and widen the range of these activities.

An outline of courses offered by each department will be found on the following pages; a full account of the courses is given in the separate prospectus issued by each department. Notes on entry requirements and fees etc., will be found on pages 35 to 37.

Correspondence on specific academic matters should be addressed to the Head of Department concerned. General enquiries should be addressed to the Registrar.

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## School of Art and Design

Telephones: Corporation St., Preston 51831, ext. 23
Avenham Annexe, Preston 53093

| | |
|---|---|
| *Head of the School* | T. Metcalfe, A.R.C.A. |
| *Senior Lecturers* | J. W. Bailey, D.F.A.(LOND.) |
| | L. Penrice, A.R.C.A. |
| *Lecturers* | D. F. Bates, A.R.C.A. |
| | D. Glen |
| | Miss P. Harrison, A.T.D. |
| | K. Hicks, A.R.C.A. |
| | S. Hogg, M.I.PTG.M. |
| | G. F. Hollingworth |
| | D. Q. King, M.A.(PITTSBURGH) |
| *Assistant Lecturers* | J. Ditchfield, F.I.B.D. |
| | R. V. Flitcroft |
| | S. Good, A.R.C.A. |
| | A. E. Parkinson |
| | A. D. Powell, CERT.R.A.S. |
| | Mrs. M. G. Stockdale, DES.R.C.A. |
| | A. H. Thompson, A.R.C.A. |
| | Mrs. J. M. Thompson, DES.R.C.A. |
| *Studio Technician* | D. H. Roberts |
| *Studio Assistant* | K. Mackenzie |

SANDWICH COURSES

**Advanced Specialist Designer's Course in Dress Design and Manufacture**

**Advanced Specialist Designer's Course in Graphic Design** with specialisation in either Book Design and Production or Advertising and General Publicity Design.

*Full-time foundation courses* in preparation for entry to Licentiateship courses and courses leading to the Diploma in Art and Design, or direct entry into industry as trainee designers.

*A full-time course* for first year printing trade apprentices.

*Part-time courses* in Compositors' Work, General Graphic and Publicity Design, Letterpress Machine Work, Painting, Decorating and Signwriting, Photography, Window Display, The General Certificate of Education in Art.

The School of Art and Design offers three-year sandwich courses leading to the Licentiateship of the Society of Industrial Artists and Designers in Dress Design and Manufacture and in Graphic Design. It co-operates with the Department of Mechanical and Production Engineering in offering a Higher National Diploma in Mechanical Engineering with an Industrial Design option.

The licentiateship courses are intended to equip students for employment as designers in industry and commerce and are registered with the Society of Industrial Artists and Designers under its direct admission scheme. The letters L.S.I.A. are awarded by the Society to students who are successful in a final examination assessed by an examiner nominated by the Society in consultation with the College. The periods Easter to September in each of the first two years of the course are spent working with selected firms as trainee designers and the College normally assists in finding suitable training places.

Students wishing to prepare for admission to licentiateship courses, or to courses leading to the Diploma in Art and Design, may enrol into a two-year foundation course at age 16 plus. This course provides a general education in Art and Design, meets the requirements of the National Council for Diplomas in Art and Design for admission to Diploma

courses, and is suitable for those students who wish to enter industry as trainee designers after a comparatively short period of full-time training.

A one-year foundation course in preparation for admission to Diploma in Art and Design courses is available to students who have obtained not fewer than 5 passes in the General Certificate of Education, at least two of which are at 'A' level.

A variety of part-time day and evening courses are available exclusively to students who are working in the appropriate industries.

## Department of Building

Telephone: Preston 51831, ext. 33

| | |
|---|---|
| *Head of Department* | J. G. V. Proudman, A.M.C.T., A.I.O.B. |
| *Senior Lecturer* | K. Redhouse, A.I.O.B., M.R.S.H. |
| *Lecturers* | S. R. Cardwell, A.I.A.S., A.I.O.B. |
| | W. S. Hunter, A.I.O.B. |
| *Assistant Lecturers* | R. Abrahams, A.M.INST.W.H.S. |
| | W. Bell, L.I.O.B. |
| | T. H. Bower, A.B.I.C.C., A.R.S.H. |
| | B. Coyne |
| | T. H. Crisp, M.I.B.S.M., A.M.INST.W.H.S. |
| | J. Cross, A.B.I.C.C. |
| | J. Lindley |
| | L. J. Pulford, M.R.S.H., M.R.P.A. |
| *Technicians* | W. A. Crossley |
| | B. L. Lush |
| *Steward* | J. W. Swarbrick |

FULL-TIME AND SANDWICH COURSES

**Ordinary National Diploma in Building** leading eventually to qualifications for employment as Builders' Manager, Agent, Surveyor, Estimator, Building Inspector, Architectural Technician.

**Pre-Diploma in Building**

PART-TIME COURSES

**Higher National Certificate in Building**

**Ordinary National Certificate in Construction**

*Part-time Courses* to meet the needs of the Construction Industry and leading to qualifications for entry to the courses listed above, including: Construction Technicians' Certificate, the General Course in Construction, the Associateship of the Institute of Works and Highways Superintendents, building trade crafts courses and the Full Technological Certificate of the City and Guilds of London Institute in Building Crafts.

*Block Release Courses* in Gas Fitting and Gas Utilisation.

*Short Specialist Courses* in the application of new techniques are arranged. Topics offered include the use of plastics in plumbing, domestic central heating, supervision of concreting work etc.

## Department of Business and Administration

Telephone: Preston 51831, ext. 17

| | |
|---|---|
| *Head of Department* | G. W. Cobham, B.COM., M.SC.(ECON), L.C.P., F.C.I.S., A.M.B.I.M. |
| *Senior Lecturers* | W. E. Evison, B.SC., PH.D. |
| | J. R. Meredith, B.COM.(LOND.), A.M.B.I.M. |
| *Lecturers* | J. L. Bullas |
| | P. J. Gaule, B.COMM. (DUBLIN) |
| | R. J. Hudson, B.SC.(ECON.), A.A.C.A. |
| | E. Newell, DIP. JOURNALISM |
| | E. Schofield, B.A.(COM.), A.C.I.S. |
| | J. R. Topping, B.SC.(ECON.), F.R.G.S., A.C.C.S. |
| | J. E. Varley, B.A.ADMIN. |
| | G. Woods, F.I.M.T.A., A.C.W.A. |
| *Assistant Lecturers* | Mrs E. J. G. Bairsto, B.A., F.R.G.S. |
| | Mrs B. D. Cave, F.S.C.T., F.F.T.COM. |
| | A. G. Cottom, A.C.W.A. |
| | J. Isherwood, A.I.B. |
| | D. Jones, B.SC.(ECON.) |
| | B. Mellody, F.C.A. |
| | Miss I. Parsonage, A.C.I.S. |
| | Miss E. M. Rigg, B.A. |
| | Mrs T. M. Stableford, F.S.C.T. |
| *Technician* | B. Parker |

FULL-TIME COURSE

**B.Sc.(Economics): University of London External Degree.** A three year course with specialisation in economics, analytical and descriptive, *or* industry and trade, *or* accounting and finance.

SANDWICH COURSE

**Higher National Diploma in Business Studies** with a bias towards cost accountancy, company secretaryship or personnel management.

OTHER FULL-TIME COURSES

**Ordinary National Diploma in Business Studies**, as a preliminary to either the Higher National Diploma course or to the final examinations of professional associations. The Ordinary National Diploma in Business Studies is also an acceptable entrance qualification to numerous British Universities.

**Secretarial Course**, which includes the study of a modern foreign language and training in the office arts.

BLOCK RELEASE COURSES

**Institute of Chartered Accountants**: several courses, each of four weeks' duration, are organised to include induction courses and pre-examination courses by arrangement with the local section of the Institute.

**Journalists' Training Courses**, each consisting of eight weeks' full-time study, are arranged throughout the year to follow the scheme sponsored by the National Council for the Training of Journalists.

*Part-time Courses* leading to qualifications of the following bodies:
Association of Certified and Corporate Accountants, Sections 1, 2, and 3
Institute of Bankers, Diploma in Banking, Parts 1 and 2
Institute of Cost and Works Accountants, Parts 1 to 5
Institute of Municipal Treasurers and Accountants, Intermediate and Final
Diploma in Municipal Administration, Intermediate and Final
Institute of Hospital Administrators, Intermediate
Chartered Institute of Secretaries, Intermediate and Final
Corporation of Secretaries, Intermediate and Final

Institute of Legal Executives, Associate and Fellowship
Institute of Transport, Graduateship 1 and 2 and Associateship
Chartered Insurance Institute, Parts A, B and C

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*Part-time courses* for:
Diploma in Works Management
Diploma in Marketing, Parts 1, 2 and 3
Industrial Administration
Certificate in Supervisory Studies
Certificate in Office Studies
Ordinary National Certificate in Business Studies
Certificate in Works Management
United Commercial Travellers' Association Diploma
Teachers' Certificates in Shorthand and in Typewriting
Shorthand Typists' Proficiency Certificate
Private Secretarial Diploma
Office Skills: shorthand, typewriting, office practice and audio-typing

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*Special courses* of an intensive and practical nature are held on a selection of topics related to management, office organisation, accounting, data processing, work study, cost reduction, budgetary control and other techniques.

## Department of Chemistry and Biology

Telephone: Preston 51831, ext. 9

| | |
|---|---|
| *Head of Department* | J. J. Betts, B.SC.(LOND.), PH.D.(CANTAB.), PH.D.(BIRM), F.R.I.C. |
| *Senior Lecturers* | J. Donnelly, B.SC. |
| | H. E. G. Emmett, B.SC., A.R.C.S., M.I.BIOL. |
| | J. L. Latham, B.SC., PH.D., F.R.I.C. |
| | D. J. Marks, B.SC., PH.D. |
| | F. Ramsden, F.I.M.L.T., F.R.S.H. |
| | C. A. Russell, M.SC., PH.D., F.R.I.C. |
| *Lecturers* | S. Blake, B.A., PH.D., A.R.I.C. |
| | K. Edgar, M.SC., A.R.I.C. |
| | D. Mason, B.SC., PH.D., A.R.I.C. |
| | G. Newton, B.SC., PH.D. |
| | A. Ottewell, B.SC., A.I.M. |
| | W. H. Rothwell, B.SC. |
| | J. Taylor, B.SC., PH.D. |
| *Assistant Lecturers* | N. G. Allen, B.SC. |
| | S. Britland, B.SC. |
| | L. G. Morton, B.SC., L.I.BIOL. |
| | A. Sherrington, A.R.I.C. |
| *Research Assistants* | A. Jones, GRAD.R.I.C. |
| | J. T. Nicholson, B.SC. |
| | D. Steel, M.A. |
| *Technicians* | T Nicol (*Senior*) |
| | G. R. Cunliffe (*Research*) |
| | A. B. Fazackerley |
| | H. Smith, F.R.S.H. |
| | J. L. Stoker |
| | B. A. Thomas |
| | C. Tracey |
| *College Glassblower* | D. R. Evans |

SANDWICH COURSES

**Graduateship of the Royal Institute of Chemistry**

**Licentiateship of the Royal Institute of Chemistry** and **Higher National Diploma** with specialist studies in analytical chemistry.

FULL-TIME COURSE

**Graduateship of the Royal Institute of Chemistry**

PART-TIME COURSES

**Graduateship of the Royal Institute of Chemistry**

**Licentiateship of the Royal Institute of Chemistry** and **Higher National Certificate in Chemistry**: a three-year part-time course with specialist studies in analytical chemistry.

**Associateship and Fellowship of the Institute of Medical Laboratory Technology** with specialisation in either bacteriological techniques or haematology and blood transfusion.

*A full-time G.C.E. Advanced level course* is offered for students requiring a year of intensive study.

*Part-time courses* leading to qualifications for entry to the above courses: O.N.C. Sciences; O.N.C. Medical Laboratory Sciences; Institute of Medical Laboratory Technology (Intermediate); G.C.E. 'O' and 'A' level subjects.

*Part-time courses* for Pharmaceutical Technicians' Certificates, Horticultural Certificates and Physical Metallurgy (H.N.C. Engineering endorsement).

POST GRADUATE RESEARCH

Full-time research facilities for Graduates are available in the fields of reaction kinetics, surface properties of cells, radiation chemistry, heterocyclic syntheses. The accommodation of the department includes six well equipped research laboratories. The Governing Body of the College offers each year several Research Assistantships which are supplemented by Science Research Council Studentships.

Suitable candidates may work for higher degrees of their own university or in approved cases for higher degrees of the University of Lancaster.

*The Royal Institute of Chemistry* is the acknowledged professional organisation for chemists and there are three grades of corporate membership: the Licentiateship (L.R.I.C.), the Associateship (A.R.I.C.), and the Fellowship (F.R.I.C.). Qualifications acceptable for the Licentiateship grade are generally a Higher National Certificate or Higher National Diploma in Chemistry together with a pass in an approved endorsement subject. The endorsement subject offered by the department is Advanced Analytical Chemistry. To become an associate member it is necessary to pass the Grad.R.I.C. examination. The standard of the examination is equivalent to that of a good honours degree in chemistry and is recognised by Universities as a qualification for entry to their research schools and subsequent awards of higher degrees. The Grad R.I.C. course will appeal to students with strong interests in experimental chemistry.

*The Institute of Medical Laboratory Technology*, which is the acknowledged professional organisation for medical laboratory workers, offers two grades of corporate membership: the Associateship (A.I.M.L.T.) and the Fellowship (F.I.M.L.T.). The Associateship is awarded upon passing the I.M.L.T. Intermediate examination together with an advanced examination in one medical technology subject at the final level. The Fellowship is awarded upon passing the intermediate examination together with two subjects at the final level. The Institute of Medical Laboratory Technology and the Department of Education and Science have formed a Joint Committee for Medical Laboratory Sciences and are awarding National Certificates. The Ordinary National Certificate awarded by this body will replace the I.M.L.T. Intermediate qualification, and the Higher National Certificate will replace the I.M.L.T. Final qualification.

*Service facilities to industry.* The department houses a number of items of advanced teaching and research equipment which on request and subject to availability may be used by qualified technologists in industry. The items include i.r. and u.v. spectrophotometers, various items of electrochemical measuring equipment, and Geiger and Scintillation counters. Special training courses on the techniques associated with the equipment will be given as required. Collaboration with industry on technical problems is welcomed.

## Department of Electrical Engineering

Telephone: Preston 51831, ext. 8

| | |
|---|---|
| *Head of Department* | A. Palmer, B.SC.TECH., C.ENG., M.I.E.E. |
| *Principal Lecturer* | M. F. McKenna, B.SC., PH.D., C.ENG., M.I.E.E., M.I.E.E.E. |
| *Senior Lecturers* | R. O. Hall, B.SC.TECH., A.M.C.T., C.ENG., M.I.E.E. |
| | H. C. Parker, B.SC.(ENG), C.ENG., M.I.E.E., A.M.I.MECH.E. |
| | N. T. Slater, B.SC., C.ENG., M.I.E.E. |
| *Lecturers* | R. N. Abbott, B.SC., C.ENG., M.I.E.E. |
| | J. A. Askew, DIP.TECH.(ENG.)., M.SC. |
| | D. Baxter, A.I.E.R.E., M.I.S.M., A.M.INST.E. |
| | H. Duckworth, C.ENG., M.I.E.E. |
| | W. S. Kirkpatrick, C.ENG., M.I.E.E. |
| | J. K. Moss, B.SC., M.I.E.E. |
| | R. J. Simpson, B.SC. |
| *Assistant Lecturers* | J. M. Berry |
| | K. Blencowe, B.SC. |
| | K. Bowker |
| | T. H. Cowperthwaite |
| | F. H. Downham |
| | R. Duddle |
| | S. E. Egerton |
| | F. Walmsley, A.M.A.S.E.E., A.M.I.T.E. |
| | J. Wilson, M.A. |
| | C. Yates, A.I.E.E., A.M.I.T.E. |
| *Technicians* | G. Gibson, A.M.A.S.E.E., A.M.I.T.E. (*Chief*) |
| | J. Bannerman |
| | J. R. D. Davies |
| | N. Faulkner |

SANDWICH COURSES

**Higher National Diploma in Electrical and Electronic Engineering**

**Associate Membership of the Institution of Electrical Engineers** and **Graduate Membership of the Institution of Electronic and Radio Engineers** with specialisation in fields selected from: electronic engineering, telecommunication engineering, radio communication, control systems, electricity supply and electrical machines.

FULL-TIME COURSE

**Part III Examinations of the Institution of Electrical Engineers** with specialisation in advanced electrical engineering, electronics, instrumentation and control, radio communication, electricity supply, utilisation of electrical plant.

BLOCK RELEASE COURSE

**Ordinary National Certificate in Engineering** providing an entry qualification for the sandwich courses above.

PART-TIME COURSES

**Associate Membership of the Institution of Electrical Engineers–I.E.E. Part III Examinations** for which the following subjects are offered: advanced electrical engineering, electricity supply, utilisation of electrical plant, applied electronics.

**Higher National Certificate in Electrical and Electronic Engineering** with specialisation in either electrical power or electronic engineering.

**Post Higher National Certificate Courses** in electronic engineering, control systems, and telecommunication engineering.

**Advanced Telecommunication Technicians' and Electrical Technicians' Courses** offering subjects in specialist fields required for the award of a Full Technological Certificate of the City and Guilds of London Institute.

**Colour Television Principles Course** for students who possess a Radio and Television Servicing Certificate or suitable equivalent qualification.

*Part-time courses* leading to the qualifications necessary for entry to the sandwich courses and leading to the Higher National Certificate Course: General Engineering; Ordinary National Certificate in Engineering.

*Part-time Technicians' and Craft Courses* for: electrical technicians, telecommunication technicians, radio and television servicing technicians, electronics servicing technicians, motor vehicle electricians, electrical installation craftsmen.

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*The Council of Engineering Institutions* representing nine institutions, including the Institution of Electrical Engineers and the Institution of Electronic and Radio Engineers, holds the sole authority to confer the title 'Chartered Engineer' on members of the profession.

The Department offers a four-year sandwich course for students wishing to satisfy the academic requirements for election as an Associate Member of the Institution of Electrical Engineers, and also for election as a Graduate Member of the Institution of Electronic and Radio Engineers. The course offers students the benefit of both full-time study and practical experience in industry, and is arranged to give a sound basic training in general engineering with later specialisation in electrical or electronic engineering. Successful completion of the first three years of the course qualifies a student for the award of the Higher National Diploma in Electrical and Electronic Engineering, giving exemption from the Part 1 Examinations of the Council of Engineering Institutions.

Specialist endorsement subjects are available in the final year of the course which provide suitable introduction to those students wishing to undertake the Council of Engineering Institutions Part 2 Examinations. If success in these examinations is followed by a period of approved experience in the field of electrical or electronic engineering, a candidate may apply for Corporate Membership and also obtain the status of Chartered Engineer (C.ENG.). The standard of the final examination is equivalent to that of a degree in electrical engineering. It is therefore recognised by many Universities as a suitable qualification for entry to a higher degree course.

In each of the first three years of the course, students will spend alternate periods of six months in industry and in full-time study at the College. The final year will be spent in full-time study at the College. The College will assist where necessary in the placing of students in industry for suitable industrial training.

Suitably qualified students may join the fourth year of the course, which for the year 1967–68 will continue to lead to the Part III Examinations of the Institution of Electrical Engineers.

## Department of Language and Social Studies

Telephone: Preston 51831, ext. 37

| | |
|---|---|
| *Head of Department* | To be appointed |
| *Senior Lecturers* | D. Swift, B.A. |
| | H. Bowden, B.A., DIP. IN PUBLIC AND SOCIAL ADMINISTRATION, DIP. IN APPLIED SOCIAL WORK |
| *Lecturers* | R. Anderson, B.A. |
| | T. Douglas, B.SC. ECON. (LOND.), CERT. PSYCHIATRIC SOCIAL WORK (MANCHESTER) |
| | D. Feachnie, DIP. ED., DIP. E.S.N. |
| | Miss R. H. Gibbins, B.SC., CERT. IN CHILD CARE |
| | A. Hardman, DIP. ED., DIP. E.S.N. |
| | R. H. Hodson, S.T.A.C., F.I.A.L. |
| | R. G. Hornby, DIP. TEACHERS OF E.S.N. (BIRMINGHAM), DIP. ED. |
| | Mrs J. Hughes, B.A. |
| | J. M. McMaster, DIP. ED., DIP. P.E., DIP. REM. ED. |
| *Assistant Lecturers* | Miss J. B. Barker, CERTIFICATE IN PSYCHIATRIC SOCIAL WORK |
| | K. C. Bodfish, B.A. |
| | M. Brogden, B.SC. |
| | G. T. Eddy, B.A. |
| | Mrs D. M. Gibson |
| | W. J. N. Hackl, F.I.L. |
| | D. Maddox |
| | J. S. B. McCord, B.A., DIP.ED. |
| | R. Sandbach, A.R.C.M. |

FULL-TIME COURSES

**London University Diploma in Social Studies.** A basic academic qualification for students contemplating a career in professional social work such as Probation, Child Care, Family Casework, Medical Social Work and Moral Welfare Work. The Diploma is also relevant for workers in other branches of the Social Services such as Youth Employment, Welfare and Mental Welfare Work and for those engaged in administration within the Social Services and in voluntary organisations.

**Home Office Letter of Recognition in Child Care.** A two-year full-time course, recognised by the Central Training Council in Child Care of the Home Office, leading to the Home Office Letter of Recognition which is the recognised qualification for Child Care Officers who are the field workers of the Child Care Service. The course involves theoretical study and practical work arranged concurrently, three short periods of residential practical work and a final block placement in a Children's Department towards the end of the course.

**Diploma of the Training Council for Teachers of the Mentally Handicapped** with specialisation in either the teaching of children or adults. The Training Council for Teachers of the Mentally Handicapped awards its Diploma to those who have successfully completed a recognised course of training and satisfied the examiners in theoretical studies and teaching practice. Two year courses are arranged for teachers of children and one year courses for experienced teachers of children and adults. Qualified teachers may obtain positions as assistants in hospital schools and training centres for the sub-normal and severely subnormal.

PART-TIME COURSES

London University Diploma in Social Studies; preparatory course for the London University Diploma in Social Studies; preparatory course for serving Child Care Officers; Casework Seminar for qualified social workers; study course for serving teachers of mentally handicapped adults.

Language courses; intensive language courses designed for the needs of particular industries; teachers' courses in language laboratory practice. These studies are intended to furnish the student with a sound practical knowledge of the language with an emphasis on conversational or com-

mercial (and, in special cases, technical) ability developed by language laboratory techniques and visual aids. The courses are graded up to and including Associateship of the Institute of Linguists in French, German, Spanish and Russian.

## Department of Mechanical, Civil and Production Engineering

Telephone. Preston 51831, ext. 11

| | |
|---|---|
| *Head of Department* | T. D. Walshaw, D.L.C.ENG., B.SC., C.ENG., F.I.MECH.E., F.I.PROD.E., A.M.I.C.E. |
| *Principal Lecturer* | N. A. Butterworth, C.G.I.A., C.ENG., M.I.MECH.E., F.I.PROD.E. |
| *Senior Lecturers* | J. Briscoe, B.SC., C.ENG., M.I.MECH.E. |
| | D. M. Clapp, B.SC., PH.D., C.ENG., A.M.I.C.E., M.I.MECH.E. |
| | M. J. Manning, B.SC.(ENG.)., C.ENG., A.F.R.AE.S. |
| | H. Ogden, C.ENG., M.I.MECH.E., M.I.PROD.E., A.M.I.E.I. |
| | A. G. Parker, B.SC.(ENG.), M.SC. |
| | H. Roberts, DIPL.ING., C.ENG., M.I.MECH.E. |
| | J. Tirrell, DIP.TECH.(ENG.), A.C.T.(BIRM.) |
| *Lecturers* | R. Ashworth, B.SC. |
| | K. Bennett, C.ENG., M.I.MECH.E. |
| | E. L. Bibby, C.ENG., M.I.MECH.E., M.I.PROD.E., A.M.I.W.M. |
| | J. A. Burton, C.ENG., M.I.MECH.E., M.I.PROD.E. |
| | F. W. Grimshaw, C.ENG., M.I.MECH.E., M.I.E.D. |
| | B. P. Mann, M.I.M.I. |
| | J. E. Meadows, C.ENG., M.I.MECH.E. |
| | A. B. Morrison, B.SC., C.ENG., M.I.MECH.E. |
| | J. R. Nuttall, M.SC. |
| | M. A. Wahhab, B.A., B.SC., D.I.C., C.ENG., M.I.PROD.E., A.M.INST.FUEL. |
| | R. Wood, C.ENG., M.I.MECH.E., M.I.PROD.E. |
| *Assistant Lecturers* | J. A. Barker, B.SC. |
| | J. Braddock, M.INST.W. |
| | J. Brennand, C.ENG., M.I.PROD.E. |
| | J. Caunce |
| | A. Dickson, A.S.E. |
| | A. Diggles |
| | L. J. Eccles |
| | R. Greenhalgh |
| | C. P. R. Gunstone |
| | W. G. Hanson |
| | R. Hatton, C.ENG., M.I.MECH.E. |
| | T. A. Hulton, A.M.I.M.I. |
| | G. E. S. Jepson |
| | I. J. Lund, A.M.I.E.I. |
| | R. H. Mason |

| | |
|---|---|
| *Assistant Lecturers (contd.)* | J. McRory |
| | A. Murray |
| | F. K. Pearson, A.M.I.M.I. |
| | G. T. Ramsden |
| | G. B. Rowbottom, C.ENG., M.I.MECH.E. |
| | W. H. Sharples |
| | K. Walker |
| | F. Whelan |
| | K. E. Wilder |
| *Technicians* | J. H. Dickens (*Chief*) |
| | T. E. Dean (*Research*) |
| | C. E. Dickens (*Senior*) |
| | W. E. Duxbury (*Senior*) |
| | A. H. Ormerod (Storekeeper-in-Charge) |
| | B. Duckworth (Storekeeper) |
| | W. Hargreaves |
| | J. E. J. Helme |
| | J. St. Romaine |
| | J. T. Slater |
| | M. J. Wade |
| | P. Young |

SANDWICH COURSES

**Higher National Diploma in Mechanical Engineering** with specialisation in one of the following: General Mechanical Engineering; Mechanical Engineering with emphasis on Production; Aero-Mechanical Engineering; Industrial Design (Engineering).

**Post Higher National Diploma in Mechanical Engineering** with emphasis on Engineering Design, Control Systems and Management. This course prepares students for the C.E.I. Part 2 Examinations as well as for endorsements to the Higher National Diploma.

PART-TIME COURSES

**Higher National Certificate in Mechanical Engineering** with specialisation in one of the following: Aeronautics; Mechanical Engineering; Production Engineering.

**Post Higher National Certificate Course in Industrial Administration.**

**Post Higher National Certificate Courses in Mechanical Engineering** with specialisation in Production or Aeronautics.

*Part-time courses* leading to qualifications for entry to the courses listed above: General Engineering; Ordinary National Certificate in Engineering.

*Part-time Technicians' and Craft Courses* for: mechanical engineering technicians; motor vehicle technicians; motor vehicle mechanics; sheet-metal workers; welders; mechanical engineering craftsmen.

Following the setting up of the Council of Engineering Institutions (C.E.I.), which holds the sole authority to confer the title 'Chartered Engineer' (C.ENG.) to members of the profession, the academic requirements for election into membership of individual Professional Institutions and Societies have been revised. In future, all those aspiring to such membership must either take or be exempt from examinations set by the Council, and examinations will no longer be held by individual Institutions. The Ordinary National Certificate in Engineering will continue to be regarded as a qualification for entry to professional courses, as well as being a valuable technician qualification in its own right. However, the

Higher National Certificate will not (after a period of concession to existing students) give exemption from any part of the C.E.I. examinations. The Council therefore recommends that holders of good Ordinary National Certificates wishing to become Chartered Engineers should in future pursue their advanced studies through full-time or sandwich courses, such as that for the Higher National Diploma. This will give complete exemption from Part 1 of the C.E.I. Examinations. On the award of the Diploma the student may proceed to the 4th year of study for Part 2 Examinations or, in approved cases, go forward to a University to study for the M.SC. degree.

Students who hold a good Ordinary National Certificate are therefore advised to consult their employers with a view to seeking admission to a Higher National Diploma (or Degree) Course if they intend to seek professional status. (The Higher National Certificate will not, in any case, be available in its present form after 1969).

## Department of Physics and Mathematics

Telephone: Preston 51831, ext. 7

| | |
|---|---|
| *Head of Department* | J. Bagot, B.SC., A.INST.P. |
| *Principal Lecturer* | W. Woodcock, B.SC., F.I.M.A. |
| *Senior Lecturers* | G. R. Marr, M.SC., A.INST.P. |
| | J. S. Moorman, B.SC. |
| | J. D. Rimmer, B.SC. |
| | J. Unsworth, M.SC., A.INST.P. |
| *Lecturers* | J. Ashworth, M.SC.TECH., A.M.C.T., A.T.I., F.C.S. |
| | G. J. Blackledge, B.SC. |
| | T. Davies, M.SC., A.INST.P. |
| | F. R. Dean, M.SC., A.INST.P. |
| | A. R. Howells, B.SC., A.INST.P. |
| | L. R. Peace, M.A., A.F.I.M.A. |
| | M. A. S. Sweet, B.SC., PH.D. |
| | J. B. Wignall, B.A., A.F.I.M.A. |
| *Assistant Lecturers* | P. R. Bissell, B.SC., GRAD.INST.P. |
| | R. T. Egerton, B.SC. |
| | J. S. Fisher, B.SC. |
| | S. B. Lucas, B.SC. |
| | D. K. Monk, B.SC. |
| | A. Payne, B.SC. |
| | J. C. Phillips, B.SC. |
| | E. Webster, PH.D., B.SC. |
| | J. Weeks, B.SC.(ENG.), GRAD.R.AE.S. |
| *Research Assistant* | M. Whittam, M.SC., GRAD.INST.P. |
| *Technicians* | A. M. Kent (*Senior*) |
| | P. Floate (*Photographic*) |
| | V. Odehnal |

FULL-TIME AND SANDWICH COURSES

**Graduateship of the Institute of Physics**

**Higher National Diploma in Applied Physics**

PART-TIME COURSES

**Licentiateship of the Institute of Physics**

**Higher National Certificate in Mathematics Statistics and Computing**

**Higher National Certificate in Applied Physics**

*Full-time Course* for the General Certificate of Education at Advanced level.

*Part-time Courses* for the General Certificate of Education and Ordinary National Certificate in Sciences.

*Evening Courses* for the Higher National Certificate in Mathematics, Statistics and Computing, and for the Associateship of the Institute of Statisticians.

POST GRADUATE RESEARCH

Full-time research facilities for Graduates are available in the fields of low temperature physics, solid state and super-conducting devices. Research is also conducted in X-ray crystallography and in medical physics. The accommodation of the department includes well equipped research laboratories. The governing body of the College offers each year several Research Assistantships which are supplemented by Science Research Council Studentships.

Following the formation in 1964 of the Institute of Mathematics and its Applications, a joint committee was set up to administer Higher National Certificates in Mathematics, Statistics and Computing. The department provides a course which ensures that successful students can apply their subjects with understanding to the problems of industry and commerce. The department is equipped with facilities for the production and processing of computer programs.

The Institute of Physics and the Physical Society is the acknowledged professional organisation for physicists in this country. Its members are

engaged in the advancement, teaching and practice of physics and its applications in industry and the public service. Success in the Graduateship examination is recognised by many universities as a qualification for entry to their research schools and the subsequent award of a higher degree.

Special courses in computing techniques are arranged and facilities are available for the production and processing of computer programs.

*Service facilities to industry.* The department houses a number of items of advanced teaching and research equipment which on request and subject to availability may be used by qualified technologists in industry. Items include i.r. and u.v. spectrographs, various items of radiological dose measuring devices, and acoustic noise measuring equipment. Special training courses on the techniques associated with the equipment will be given as required. Collaboration with industry on technical problems will be welcomed.

## Calendar

| | | |
|---|---|---|
| 1967 | Thursday, 14th September | General Staff Meeting |
| | ENROLMENT PERIOD | |
| | Monday, 18th September | Enrolment, first day |
| | Tuesday, 19th September | Enrolment, second day |
| | Wednesday, 20th September | Enrolment, last day |
| | AUTUMN TERM | |
| | Monday, 25th September | All day and evening classes commence for the Autumn term |
| | Wednesday, 20th December | All departments close for Christmas after evening classes |
| | SPRING TERM | |
| 1968 | Thursday, 4th January | All classes re-open for the Spring term |
| | Tuesday, 13th February | Foundation Address and Distribution of Awards: all evening classes closed |
| | Friday, 5th April | All departments close for Easter after evening classes |
| | SUMMER TERM | |
| | Monday, 22nd April | All classes re-open for the Summer term |
| | Friday, 31st May | All departments close for Whitsuntide after evening classes |
| | Monday, 10th June | All classes re-open |
| | Friday, 5th July | All classes close: end of session |
| | Friday, 12th July | End of term: submission of reports |

## Admission to Courses and Examinations

Courses will be provided subject to adequate enrolment; they may be discontinued at the discretion of the Principal at any time during the session should the numbers attending fall below a reasonable level.

The acceptance of a student into a course must have the approval of a Head of Department, and the student must produce satisfactory evidence that he has the necessary qualifications to enter the course.

Full-time and sandwich course students should make application well before the commencement of the session on the form obtainable from the Registrar.

At enrolment each student will receive an admission form bearing an admission number. This form must be shown to the class lecturer when the student attends each class for the first time in the session. Students will not be permitted to attend classes until they have completed the enrolment procedure.

**Examinations**

All students are required to take prescribed internal or external examinations at the end of each year of the course. Each student is responsible for his own entry to external examinations.

Examination fees must be paid by students at the time of entry to examinations: accounts cannot be sent to employers or grant-aiding Authorities. Students who take the examinations of an external examining body must pay the examination fees of these bodies.

**Examination Results**

Sessional Reports, which include examination results, will be issued to all students. Some reports cannot be completed until after results are received from external examining bodies. Copies of external examination pass lists will be made available for scrutiny on the College notice board as soon as possible after they are received.

## Tuition Fees

Sessional tuition fees must be paid at the time of enrolment and are returnable only in exceptional cases. Cheques should be made payable to the Corporation of Preston and crossed.

Fees are graded in groups I, II and III corresponding to the academic level of the course, in terms of introductory, intermediate, and advanced stages. The appropriate grade number will be found in departmental prospectuses in brackets after the course title, or year of the course.

A student whose employer undertakes to pay the fee on his behalf must produce at enrolment a letter from his employer to that effect.

Part-time students from the administrative counties of Lancashire and Westmorland and from Wigan County Borough under age 18 on the 1st September will be enrolled without payment of the tuition fee.

| **Full-time Courses** | Students under age 18 on 1st September | | | Students age 18 and over on 1st September | | |
|---|---|---|---|---|---|---|
| | £ | s. | d. | £ | s. | d. |
| Group I (introductory level) | 18 | 2 | 6 | 19 | 10 | 0 |
| Group II (intermediate level) | 30 | 2 | 6 | 31 | 10 | 0 |
| Group III (advanced level) | 55 | 2 | 6 | 56 | 10 | 0 |

**Sandwich Courses**

Fees are approximately two-thirds of the corresponding full-time fee for those years of the course in which the student is required to attend College for approximately six months. For those years in which attendance is required for a full session the full-time course fee is payable. Actual fees are detailed in departmental prospectuses.

**Block Release Courses**

Fees vary from £3. 10s. 0d. to £13. 10s. 0d. according to the grade and duration of the course. Actual fees are detailed in departmental prospectuses.

| Part-time Courses | Students under age 21 on 1st September | Students age 21 and over on 1st September |
|---|---|---|
| | £ s. d. | £ s. d. |
| Group I (introductory level) | 1 7 6 | 2 12 6 |
| Group II (intermediate level) | 1 17 6 | 2 17 6 |
| Group III (advanced level) | 2 12 6 | 3 2 6 |

OVERSEAS STUDENTS

Students from outside the United Kingdom attending full-time and sandwich courses are required to pay special fees. Details of these can be obtained from the Registrar.

RESIDENTIAL LIBERAL STUDIES COURSES

As an integral part of their studies, students in certain advanced full-time and sandwich courses will normally attend each year a three-day residential course. The fee is approximately £3. 10s. 0d. which must be paid by the student. Students in receipt of Local Authority grants will in most cases be reimbursed all or part of the cost by their supporting authorities.

GRANTS

Full-time or College-based Sandwich Course students may apply to the Local Education Authority for the area in which they permanently reside for a grant of fees and maintenance. Works-based Sandwich Course students may also be eligible for financial assistance where the employer does not pay fees or wages during the College periods of a course, or where only partial financial support is offered by the employer.

NOTE TO LOCAL AUTHORITIES

The course grade designation (III NP) in departmental prospectuses indicates an advanced course which is not poolable under D.E.S. regulations. In respect of these courses the normal recoupment procedure will apply.

## Enrolment

Students will be enrolled between the times: 10.0 a.m. to 12.30 p.m., 1.30 p.m. to 4.30 p.m. and 5.30 p.m. to 8.30 p.m. on the following days:

Monday, 18th September, 1967
Tuesday, 19th September, 1967
Wednesday, 20th September, 1967

Students must enrol during the times and on the dates stated; those who fail to enrol on these dates will be charged a late fee of 10s. 0d. The busiest enrolment periods are in the evenings; students who can enrol during the morning or afternoon periods will help the College and save themselves an appreciable amount of time.

Postal enrolments cannot be accepted. Enrolment into Special Courses takes place separately from the procedure outlined on this page.

A student who wishes to enrol into a course demanding entry qualifications must produce documentary evidence at or before enrolment. Documentary evidence is not required in respect of students who have gained their qualifications at the Harris College.

PERMISSION VOUCHERS: All students resident in the County Borough of Preston or in the administrative area of Lancashire County, and part time students resident in the County Borough of Wigan, will be admitted without the production of an inter-authority voucher. All other students must obtain permission vouchers each year and present them at enrolment.

## Communal Facilities

The Communal Block provides facilities for the educational, social and recreational enjoyment of the students and staff. Besides administrative accommodation and a fully equipped theatre for both lectures and drama, there is a dining room and coffee foyer, a students' common room, students' union office and meeting rooms. The library is situated in this building.

An unusual feature is the Recreation Hall. The hall will be reserved at certain times for examinations, and occasionally for ceremonies or exhibitions, but at other times it is available to student groups, societies, and individuals for games and a very wide variety of physical activities. The bridge over the North courtyard leading to the hall contains changing rooms and showers.

## The Library

Telephone: Preston 51831, ext. 15

| | |
|---|---|
| *Librarian* | A. Lawrence, A.L.A. |
| *Assistant Librarians* | Mrs M. Pye, A.L.A. |
| | Mrs S. M. Hunt |
| *Library Assistants* | Miss J. E Bamford |
| | Mrs I. M. Fuller |

The College library is available to all students for reference purposes. 360 technical journals are received annually in addition to the development of the book stock. An up-to-date set of British Standard Specifications is maintained.

The library is open from Monday to Friday at the following times:

*During term time:* 9.00 a.m. to 9.00 p.m.
*During vacations:* 9.00 a.m. to 5.30 p.m.

The library has facilities for photocopying, and students may obtain copies of pages of books and periodicals subject to the law of copyright. A charge is made for this service.

The library is a local agent for the National Lending Library of Science and Technology, a member of ASLIB and the North Western Regional Library System, and may be able to obtain through these organisations items not in its own stock.

## Physical Education and Recreation

Telephone: Preston 51831, ext. 27

*Lecturer* C. M. Robinson, D.L.C.
*Assistant Lecturers* J. Gridley, A.G.A.
Mrs B. J. Harrison, DIP.P.E., DARTFORD COLLEGE

The Recreation Hall is equipped with fixed apparatus which, together with portable apparatus and equipment the College possesses, allows the pursuit of the following activities: athletics, badminton, basket ball, canoeing and sailing, cricket, dance, fencing, five-a-side football, golf, judo, mountaineering, netball, olympic gymnastics, padder tennis, soccer and rugby training, table tennis, trampolining, volley ball, weight training and lifting.

The recreational facilities of the College are available to all students enrolled into an academic course without payment of a further fee. Anyone interested in any of the activities detailed should contact the Lecturer in Physical Education at enrolment or as soon as possible afterwards. College sports clubs, affiliated to the students' union, are given priority in the evenings.

Lectures and films on a variety of activities, and inter-departmental and inter-College tournaments and competitions, are arranged throughout the session.

The mountaineering club arranges visits to the Lake District and North Wales for rock climbing, rambling and canoeing. For full-time students one week courses in mountain activities are arranged. From time to time arrangements are made for parties to engage in outdoor activities in vacation periods, for example ski-ing, rock climbing, canoeing, pony trekking, etc.

### REGIONAL AND NATIONAL SPORTS ACTIVITIES

The College is a centre for regional and national sports tournaments in badminton, table tennis and trampolining. It is also an Olympic Gymnastics Centre; the College gymnastic team competes in the National Team Championships of Great Britain and has also competed abroad.

## Harris Students' Union

Telephone: Preston 53852

B. Hayes, *President*
A. England, *Vice-President*
Miss S. Standing, *Vice-President* (*female students*)
A. Kimm, *Secretary*
I. Horne, *Student Treasurer*
D. Swift, *Honorary Treasurer*

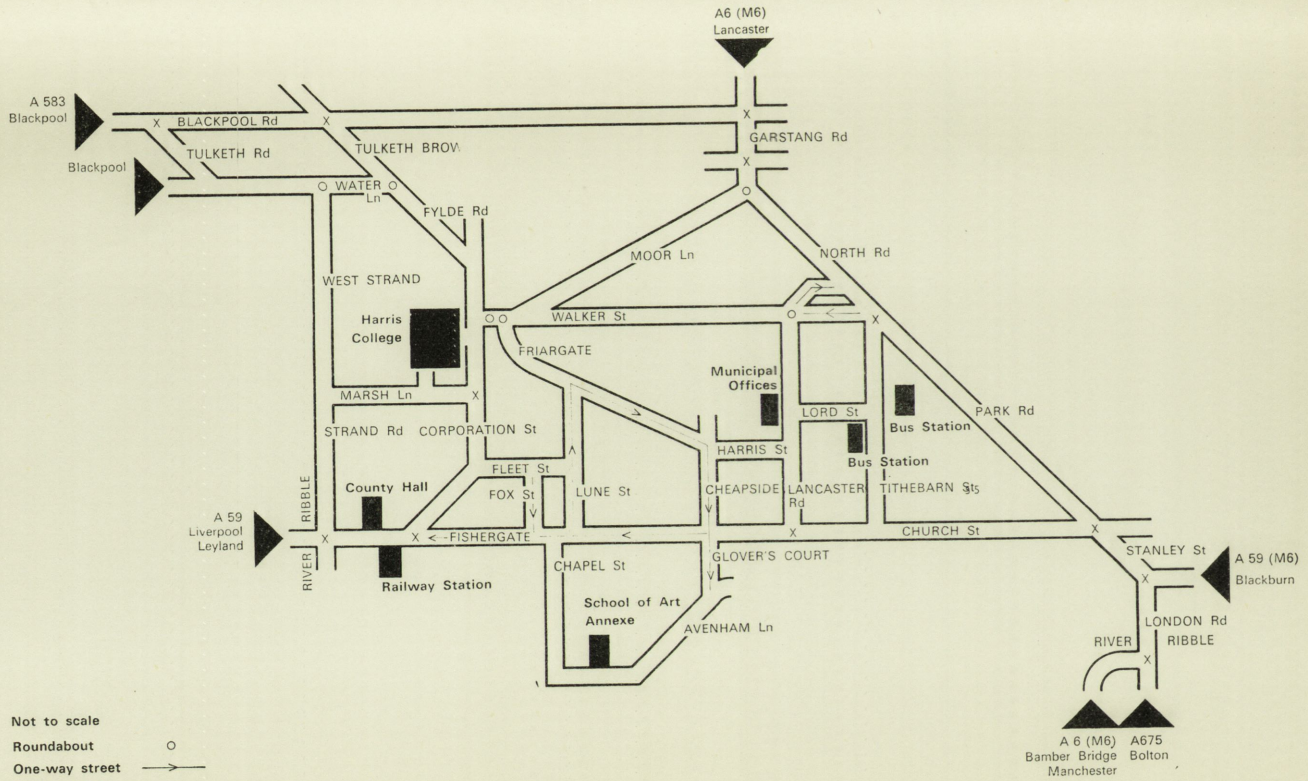
The Harris Students' Union is organised and governed by students, and is affiliated to the National Union of Students. It arranges general social activities, provides a means of helping the formation of student societies, and maintains contact with the students of other colleges. The union is financed by a grant from the Harris Council.

All students other than those enrolled in special courses are automatically admitted to membership of the students' union. A membership card will be issued at enrolment entitling students to participate in all social activities, to join any student society or club, and to vote in the election of members to the Executive Committee.

All clubs and societies in the College are affiliated to the Students' Union, and special subscriptions may be required for membership of particular clubs and societies. A Students' Union Handbook, issued free to members, describes the activities of the union.

Dances and other social events are regularly arranged in the College and in the town. A common room and an office are allocated exclusively for the use of students and recreational facilities are available elsewhere by arrangement with the Lecturer in Physical Education.

Enquiries concerning student activities should be addressed to the Secretary, Harris Students' Union, Corporation Street, Preston.


A6 (M6)
Lancaster
A 583
Blackpool
BLACKPOOL Rd
TULKETH Rd
TULKETH BROW
Blackpool
WATER Ln
FYLDE Rd
GARSTANG Rd
MOOR Ln
NORTH Rd
WEST STRAND
Harris College
WALKER St
FRIARGATE
Municipal Offices
MARSH Ln
LORD St
Bus Station
PARK Rd
STRAND Rd
CORPORATION St
HARRIS St
Bus Station
FLEET St
County Hall
FOX St
LUNE St
CHEAPSIDE
LANCASTER Rd
TITHEBARN St
A 59
Liverpool
Leyland
RIBBLE
RIVER
FISHERGATE
CHURCH St
STANLEY St
A 59 (M6)
Blackburn
Railway Station
CHAPEL St
GLOVER'S COURT
School of Art Annexe
AVENHAM Ln
LONDON Rd
RIVER
RIBBLE
A 6 (M6)
Bamber Bridge
Manchester
A675
Bolton
Not to scale
Roundabout
One-way street
Traffic lights

Harris College **School of Art and Design 1967–68**

**Harris College, Corporation Street, Preston, Lancashire**
**Telephone: Preston 51831–5**

*Foundation.* On the 4th April, 1956, the Minister of Education made a scheme for the establishment of the Harris College of Further Education, formerly the Harris Institute (comprising the Harris Technical College and the School of Art). In the terms of this scheme, and a later amendment to it, the College is housed in premises provided and maintained by the County Borough of Preston and is governed by the Harris Council of twenty-eight members; namely nine members of Preston Education Committee, nine members appointed by Lancashire Education Authority, nine members representative of industry and commerce, and one member representative of the Universities.

**The Harris Council**

*President:* Alderman W. Beckett, O.B.E., J.P.

*Vice-President:* Councillor J. Hargreaves

*Members:*

Alderman J. Atkinson
Alderman Mrs D. M. Dewhurst, J.P.
Alderman J. F. Gray
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker, J.P. (The Right Worshipful the Mayor of Preston)
Councillor Mrs K. E. Crozier
Councillor T. Dewhurst
Councillor Mrs R. Lytton
Alderman Sir Fred Longworth (Vice-Chairman of Lancashire County Council)
Alderman J. Bradley, M.B.E., J.P.
Councillor T. V. Brown
Councillor C. W. Eastwood
F. Ley
Councillor A. J. Whittall
Councillor Mrs W. Winn
Councillor G. Woods

F. D. Crowe, B.SC.(ENG)., A.F.R.AE.S.
Professor E. Roland Dobbs
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., A.M.I.MECH.E.
P. D. Oakley, B.SC., F.R.I.C.
H. Rogan, O.B.E., B.SC., PH.D., F.R.I.C.
Alderman J. W. Taylor, J.P., F.C.I.S.
J. W. Walker

*Clerk to the Council:* W. R. Tuson, B.SC., Chief Education Officer, Preston

**Research Council**

The research council is a sub-committee of the Harris Council charged with the promotion of research and the administration of research funds.

*Chairman:*
Alderman W. Beckett, O.B.E., J.P., *President of the Harris Council*

*Members:*
Councillor J. Hargreaves, *Vice-President of the Harris Council*
Professor E. Roland Dobbs, *University of Lancaster*
J. Jones, A.M.I.MECH.E.
Dr P. R. Lancaster, *University of Bradford*
W. J. R. Merren, M.A., B.SC., *Director of Research, Pilkington Research Laboratories*
Dr K. Morgan, *University of Lancaster*
P. D. Oakley, B.SC., F.R.I.C., *Member of the Harris Council*
Dr H. Wilkinson, *Principal of the Harris College*
Dr S. Skidmore, *Vice-Principal of the Harris College*

**Principal**: H. Wilkinson, M.SC.TECH., PH.D., A.INST.P.

**Vice-Principal**: S. Skidmore, B.SC., PH.D.(LONDON), F.R.I.C.

*Registrar:* J. Barnacle, D.M.A., F.C.C.S.

*The Harris College* is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are eight teaching departments in the College: the School of Art, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical Engineering, Language and Social Studies, Mechanical Civil and Production Engineering, Physics and Mathematics. All are newly housed, and the facilities include a combined Lecture Hall and Theatre, a Recreation Hall, Student Common Rooms, Library and Refectory.

Strong links exist between the College, Industry and Commerce and these have helped the development of sandwich courses leading to professional qualifications. Extension of these courses into other professional fields of activity is planned. Short courses on specialist or advanced topics are arranged regularly in all departments of the College. Research and consultancy are important features of the work of the College, and the recent appointment of an Industrial Liaison Officer is expected to increase and widen the range of these activities.

*The School of Art and Design* offers full-time courses which enable students to qualify for entry to Diploma in Art and Design Courses, and to other courses in art and design of equivalent standard. Advanced full-time courses are offered in Dress Design, Book Design (Typography) and General Graphic and Publicity Design which lead to the Licentiateship of the Society of Industrial Artists and Designers. The department co-operates with the department of Mechanical Engineering in offering a Higher National Diploma course with specialisation in industrial design.

Advanced courses are arranged on a 'sandwich' basis, students spending alternate periods of approximately six months in the College and in Industry. The College normally assists in finding suitable training places for students taking sandwich courses.

A variety of part-time day courses are arranged to meet the needs of apprentices in Painting and Decorating, Printing, Window Display, etc.

## Contents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39 Library
40 Physical Education and Recreation
42 Students' Union

## School of Art and Design

Telephones: Corporation St., Preston 51831, ext. 23
Avenham Annexe, Preston 53093

| | |
|---|---|
| *Head of the School* | T. Metcalfe, A.R.C.A. |
| *Senior Lecturers* | J. W. Bailey, D.F.A.(LOND.) |
| | L. Penrice, A.R.C.A. |
| *Lecturers* | D. F. Bates, A.R.C.A. |
| | D. Glen |
| | Miss P. Harrison, A.T.D. |
| | K. Hicks, A.R.C.A. |
| | S. Hogg, M.I.PTG.M. |
| | G. F. Hollingworth |
| | D. Q. King, M.A.(PITTSBURGH) |
| *Assistant Lecturers* | J. Ditchfield, F.I.B.D. |
| | R. V. Flitcroft |
| | S. Good, A.R.C.A. |
| | A. E. Parkinson |
| | A. D. Powell, CERT.R.A.S. |
| | Mrs. M. G. Stockdale, DES.R.C.A. |
| | A. H. Thompson, A.R.C.A. |
| | Mrs. J. M. Thompson, DES.R.C.A. |
| *Studio Technician* | D. H. Roberts |
| *Studio Assistant* | K. Mackenzie |
| *Visiting Lecturers* | C. Hogarth |
| | J. MacDonald |
| | Mrs S. Platt |
| | Mrs M. Penrice, A.R.C.A. |
| | D. Roberts |
| | S. Sartin, A.T.D. |
| | J. Southworth |
| | N. Tudor Thomas |

## List of Courses


FULL-TIME AND SANDWICH

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*The Society of Industrial Artists and Designers* is the representative association for professional designers in this country, and is closely linked with similar associations in other parts of the world. It is represented on most of the principal national and regional bodies concerned with design education and training and on the Federation of British Industries. It maintains a close association with the Royal Society of Arts, the Council of Industrial Design and the Design, and Industries Association. Members are admitted in each of the following categories: Design for craft based industries; Textiles and Dress Design; Display, Furniture and Interior design; Graphic design; and Television, Film and Theatre design. Licentiates are young designers who have not had the opportunity to produce work for industrial or commercial reproduction, but who show that they can be reasonably expected to produce such work to Membership standard within the period of seven years after which Licentiateship normally terminates. Members are designers who have satisfied the examining board of the Society that their work is of a high aesthetic, creative and technical standard. Fellows are eminent designers elected by the council. The affixes L.S.I.A., M.S.I.A., and F.S.I.A. are granted by the Society. A number of courses throughout the country have now been accepted for registration by the Society, the Licentiateship being awarded on the basis of a final assessment of course work by an examiner nominated or approved by the Society in consultation with the College.

## ADVANCED SPECIALIST DESIGNERS COURSES

Three year sandwich courses leading to the Licentiateship of the Society of Industrial Artists and Designers (L.S.I.A.) are offered in: Dress Design and Manufacture, and Graphic Design. The periods Easter to September in each of the first two years of the course are spent working with selected firms as trainee designers. In most cases the College assists in finding suitable industrial training places, though employers may second suitable junior members of their staff to the course. Grants are not paid to students during the periods of industrial training, but employers have agreed to pay students expenses at an equivalent rate. Students must enrol as student members of the Society of Industrial Artists and Designers before the start of the second year of the course.

*Qualifications for entry:* applicants must have obtained 5 passes at 'O' level

in the General Certificate of Education (or their equivalent), must be 18 years of age on 1st October of the year of entry, and must either (*a*) have completed satisfactorily an appropriate foundation course in a recognised school or college of art, *or* (*b*) have taken two subjects to 'A' level standard and obtained a pass in at least one of them, *or* (*c*) have had suitable industrial experience since taking 'O' levels.

**Dress Design and Manufacture** (III)

*Course adviser:* Mrs J. M. Thompson

The course prepares students for employment as designers or designer-cutters in the wholesale (mass-production) sector of the garment manufacturing industry. The imaginative and creative aspects of the course work are complemented by a study of the mass-production techniques currently used in industry, together with supplementary studies in marketing and business organisation.

**1st Year.** *Tutor:* Mrs J. M. Thompson. *Curriculum:* dress design, basic design, drawing and human anatomy, methods of production, pattern-cutting and garment assembly, business studies, English, French, human physiology, history of art, history of costume.

*College course:* September to April (24 weeks)

*Examinations:* internal

**2nd Year.** *Tutor:* Mrs M. G. Stockdale. *Curriculum:* dress design, textile design and embroidery, drawing and human anatomy, pattern-cutting and garment assembly, methods of production, business studies, French, human physiology, history of art, history of costume.

*College course:* September to April (24 weeks)

*Examinations:* internal

*Final qualification:* Licentiateship of the Society of Industrial Artists and Designers. (To be taken after completing a third year which will be offered for the first time in September, 1968)

**Graphic Design** (III)

*Course adviser:* L. Penrice

The course provides for specialisation in either (*a*) Book Design and Production or (*b*) Advertising and General Publicity Design, certain studies being common to both specialisations. Students specialising in Book Design and Production will, for the most part, find employment with publishing houses in London and elsewhere, though some will work as typographic designers in advertising agencies, the promotions departments of manufacturing industries, etc. Those specialising in Advertising and General Publicity Design will find employment in advertising agencies, commercial design studios, the promotions departments of manufacturing and public service organisations, and in graphic design studios generally.

**1st Year (Book Design and Production).** *Tutor:* D. Glen. *Curriculum:* English studies A, a second language, history of art and design, analysis of bookwork, typographic theory, production technology, methods of graphic reproduction, publishing practice, design for bookwork.

*College course:* September to April (24 weeks)

*Examinations:* internal

**1st Year (General Graphic and Publicity Design).** *Tutor:* G. F. Hollingworth.

*Curriculum:* English studies B, a second language, history of art and design, typographic theory, methods of graphic reproduction, production technology A, psychology, advertising, photography, graphic design.

*College course:* September to April (24 weeks)

*Examinations:* internal

**2nd Year (Book Design and Production).** *Tutor:* D. Glen. *Curriculum:* English studies, a second language, history of art and design, analysis of bookwork, typographic theory, production technology A, publishing practice, visual communication studies, design for bookwork, illustration.

*College course:* September to April (24 weeks)

*Examinations:* internal

**2nd Year (General Graphic and Publicity Design).** *Tutor:* G. F. Hollingworth. *Curriculum:* English studies, a second language, history of art and design, typographic theory, visual communication, production technology A, statistics, marketing, advertising, photographic theory, drawing, graphic design.

*College course:* September to April (24 weeks)

*Examinations:* internal

*Final qualification:* Licentiateship of the Society of Industrial Artists and Designers. (To be taken after completing a third year which will be offered for the first time in September 1968)

## FOUNDATION COURSES

*Course adviser:* J. W. Bailey

These full-time courses provide a foundational education and training for (*a*) students wishing to proceed to advanced specialist courses in one or other of the various branches of design for industry, or (*b*) those wishing to pursue courses leading to the Diploma in Art and Design, or (*c*) for those wishing to obtain employment as trainee designers at the end of a comparatively short period of training.

**Two-year Foundation Course**

*Course adviser:* J. W. Bailey

The course will consist of 30 hours per week of directed study, in addition to which students will attend for a further 5 hours per week of private study in the studio.

The curriculum provides for a degree of specialisation in one of the following areas: Dress Design and Manufacture, Graphic Design,or Three Dimensional Design. Students will opt for a particular area of study at enrolment, but they will not be expected to make a final decision until the end of the first year.

*Qualifications for entry:* Students must be not less than 16 years of age on the 1st of October of the year of entry, and should have a minimum of 4 'O' level passes in the G.C.E. (one of which must give evidence of ability in English) or any other qualification deemed to be equivalent. Students are reminded that a minimum of 5 'O' levels (or their equivalent in 'O' and 'A' levels) are required of applicants for Diploma in Art and Design courses.

**1st Year** (I). *Tutor:* A. D. Powell. *Curriculum:* English, a second language, history and appreciation of art and design, design analysis, basic design, drawing, photography, psychology of perception, psychology, science of colour and optics, biology, specialist studies.

*Examinations:* internal

**2nd Year** (II). *Tutor:* Miss P. Harrison. *Curriculum:* Studies common to all students: English, history of art and design, a second language, business studies, basic design, drawing. Specialisations; Dress: history of fashion, dress production, dress design, theory of production, human anatomy; Graphics: history of graphics, printing technology, graphic design, photography, photographic theory; Three dimensional design: philosophy of design, technical drawing, interior design, display, building construction.

*Examinations:* internal

**One-year Foundation Course** (II)

*Tutor:* Mrs M. Penrice

The course will consist of 30 hours per week of directed study in addition to which students will attend for a further 5 hours per week of private study in the studio. The course has been designed to offer students who have already achieved a relatively high standard in art, design and academic subjects an opportunity to prepare for entry to colleges offering courses leading to the Diploma in Art and Design after one year of study.

*Qualifications for entry:* Students must have a minimum of 5 passes in the G.C.E. one of which must give evidence of ability in English, and two of which must be at 'A' level.

*Curriculum:* basic design, drawing, history of art and design, design analysis, printmaking, painting.

*Examinations:* internal

**Integrated 1st Year Printing Course** (1)

*Tutor:* S. Hogg

This is a full-time course for printing trade apprentices who have been sponsored by their employers. In the second and subsequent years of apprenticeship students proceed to part-time day and evening courses in either Compositors' Work or Letterpress Machine Work. (See page 20). A total of 10 weeks is spent working in industry during the course.

*Qualifications for entry:* Boys hoping to obtain printing trade apprenticeships (which would enable them to enter this course) should apply in the first instance to their Youth Employment Officer, who will submit their names to the College. Before enrolment an applicant must have passed a College examination in English, arithmetic and general knowledge and must have been nominated as a prospective apprentice by a recognised printing trade employer.

*Curriculum:* English, arithmetic, general science, physical education, basic design, lithography, printing theory, history of printing, practical printing, design for printing.

*Examinations:* U.L.C.I. 279–1

**Advertising Design** (U.L.C.I. 273)

*Course adviser:* G. F. Hollingworth

These courses are for trainees and apprentices working in commercial design studies or advertising agencies.

**Stage I** (I). *Curriculum:* technique, drawing, design, lettering, photography, typography.

*Examinations:* U.L.C.I. 273–1

*Attendance:* one day and one evening per week

**Stage II** (I). *Curriculum:* technique, drawing, design, lettering, photography.

*Attendance:* one day and one evening per week

*Examinations:* U.L.C.I. 273–2

*Final qualification:* Union of Lancashire and Cheshire Institutes' Certificate in Advertising Design

## GENERAL CERTIFICATE OF EDUCATION IN ART

*Course adviser:* S. Good

Students are prepared for the N.U.J.M.B. 'A' level papers IIb, IIIa, and IV (1) and (5) and for 'O' level papers I (a) and II (a)

**'O' level Course** (I)

*Curriculum:* drawing, pictorial composition.

*Attendance:* two evenings per week or one half day and one evening per week.

*Examinations:* G.C.E. 'O' level in Art

**'A' level Course** (II)

*Curriculum:* drawing, pictorial composition, history of art.

*Attendance:* three evenings per week or one half day and two evenings per week

*Examinations:* G.C.E. 'A' level in Art

**Painting, Decorating and Signwriting: Advanced Craft Certificate**

*Course adviser:* J. Ditchfield

This is a four or five-year course leading to the City and Guilds of London Institute's final examination in Decorative Painting. The examinations of the Union of Lancashire and Cheshire Institutes will be taken in the 1st and 2nd years of the course, the C.G.L.I. Basic Craft Certificate in the 3rd year, and the C.G.L.I. Final examination in the 4th. Students joining the course after leaving school at 16 omit the introductory year.

**Introductory Year** (I). *Curriculum:* technology, drawing, workshop practice, English.

*Attendance:* one day and one evening per week

*Examinations:* U.L.C.I. 291–0

**1st Year** (I). *Curriculum:* technology, design, workshop practice, drawing.

*Attendance:* one day and one evening per week

*Examinations:* U.L.C.I. 291–1

**2nd Year** (I). *Curriculum:* technology, design, craft science, workshop practice.

*Attendance:* one day and one evening per week

*Examinations:* U.L.C.I. 291–2

**3rd Year** (I). *Curriculum:* design, craft science, workshop practice.

*Attendance:* one day and one evening, or three evenings per week

*Examinations:* C.G.L.I. 85 (Craft Course)

**4th Year** (II). *Curriculum:* craft science, workshop practice, design.

*Attendance:* one day and one evening, or three evenings per week

*Examinations:* C.G.L.I. 85 (Advanced Craft Course)

*Final qualification:* City and Guilds of London Institute's Advanced Craft Certificate in Painters' and Decorators' Work

**Painting; Decorating and Signwriting: Full Technological Certificate** (III NP)

*Curriculum:* building science, colour in decoration, elements of supervision.

*Attendance:* three evenings per week

*Final qualification:* City and Guilds of London Institute's Full Technological Certificate in Painters' and Decorators' work

## COURSES IN PHOTOGRAPHY

*Course adviser:* A. H. Thompson

These courses are for trainee photographers wishing to obtain a recognised qualification.

City and Guilds of London Institute Course 107 (Photography) is being replaced by Course 344 (General Photography). Students who have passed the Intermediate examination in Course 107 will proceed to the Final examination in Course 107 in 1968. All other students will be enrolled into the first or second year of the three-year Course 344 in General Photography. The third year of the course will be offered in 1969.

**Photography** (C.G.L.I. 107: Final) (II)

*Curriculum:* theory of photography, practical photography.

*Attendance:* one day and one evening per week

*Examination:* C.G.L.I. 107 (Final)

**General Photography** (C.G.L.I. 344)

**1st Year** (I). *Curriculum:* equipment and materials, processing, studio work, processing techniques, printing, maintenance of equipment.

*Attendance:* one day and one evening per week

*Examinations:* internal

**2nd Year** (II). *Curriculum:* equipment and materials, processing, sensitometry, colour photography, studio work, processing techniques, printing, retouching and finishing, maintenance of equipment.

*Attendance:* one day and one evening per week

*Examinations:* internal

## PRINTING COURSES

*Course adviser:* S. Hogg

These courses are for printing trade apprentices and lead to the City and Guilds of London Institute's Final Certificate in Compositors' Work and the Intermediate Certificate in Letterpress Machine Work. Students take U.L.C.I. examinations in the first and second years of the course. There is an alternative full-time day course for first year apprentices (see page 17).

**Compositors' Work** (C.G.L.I. 201)

*Tutor:* S. Hogg

**1st Year** (I). *Curriculum:* general printing theory, general printing practice, arithmetic and elementary applied science, lettering and colour. English.

*Attendance:* one day and one evening per week

*Examinations:* U.L.C.I. 279–1

**2nd Year** (I). *Curriculum:* compositors' and letterpress machine work general theory, compositors' work theory, compositors' work practice, typographic design, English.

*Attendance:* one day and one evening per week

*Examinations:* U.L.C.I. 279–2

**3rd Year** (I). *Curriculum:* practical composing, general printing theory, composing theory, applied science, English, typographic design.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. 201 (Intermediate)

**4th Year** (II). *Curriculum:* typographic design, composing theory, general printing theory, practical composing, Monotype operation.

*Attendance:* one day and one evening per week

*Examinations:* internal

**5th Year** (II). *Curriculum:* typographic design, composing theory, general printing theory, practical composing, Monotype operation.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. 201 (Final)

*Final qualification:* City and Guilds of London Institute's Final Certificate in Compositors' Work

**Letterpress Machine Work** (C.G.L.I. 205)

*Tutor:* A. E. Parkinson

**1st Year** (I). *Curriculum:* general printing theory, machine printing techniques, applied mathematics and science, letterpress machine work practice, English.

*Attendance:* one day and one evening per week

*Examinations:* U.L.C.I. 289–1

**2nd Year** (I). *Curriculum:* general printing theory, machine printing techniques, applied science, letterpress machine work practice, English.

*Attendance:* one day and one evening per week

*Examinations:* U.L.C.I. 289–2

**3rd Year** (I). *Curriculum:* general printing theory, machine printing techniques, applied science, letterpress machine work practice.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. 205 (Intermediate)

*Final qualification:* City and Guilds of London Institute's Intermediate Certificate in Letterpress Machine Work.

## WINDOW DISPLAY COURSE

*Course adviser:* D. Q. King

These courses leading to the examinations of the British Display Society are provided for retail trades employees. The Part A Certificate is taken in the 1st year, Part B in the 2nd year, and Part C after a further two years.

**1st Year** (I). *Tutor:* J. Southworth. *Curriculum:* drawing, practical,, theory.

*Attendance:* two evenings and one half day per week

*Examination:* B.D.S. Part A

**2nd Year** (I). *Tutor:* J. Southworth. *Curriculum:* drawing, practical,, theory.

*Attendance:* two evenings and one half day per week

*Examinations:* B.D.S. Part B

**3rd Year** (I). *Tutor:* J. Southworth. *Curriculum:* drawing, practical,, theory.

*Attendance:* two evenings and one half day per week

*Examinations:* B.D.S. Part C

*Final qualification:* The British Display Society's Certificate in Display

## Recreational Courses

*Course adviser:* S. Good

These courses provide an opportunity for beginners and more experienced students to pursue one or more of the subjects offered. Each course is self contained and occupies one evening, one afternoon, or one day per week.

**General Painting** (I)

*Curriculum:* still life, composition, figure painting, drawing, use of media.

*Attendance:* one full day, one half day or one evening per week

**Portrait Painting** (I)

*Curriculum:* drawing and painting from the model, use of media.

*Attendance:* one evening per week

**Still Life Painting** (I)

*Curriculum:* still life painting, object drawing, pictorial composition, use of media.

*Attendance:* one evening per week

**Pottery** (I)

*Curriculum:* preparation of clay, throwing, wedging, coiling pots, preparation of glazes, decoration, firing.

*Attendance:* one afternoon, or one or more evenings per week

**Jewellery and Silversmithing** (I)

*Curriculum:* design for jewellery and silversmithing, draft techniques.

*Attendance:* one or more evenings per week

## Administrative Staff

| | |
|---|---|
| *Registrar* | J. Barnacle, D.M.A., F.C.C.S. |
| *Senior Clerks* | E. D. Hardman (Finance and Accounts) |
| | B. Stott (Examinations and Records) |
| *Secretary to the Principal* | Miss F. M. Jones |
| *Section Clerks* | Mrs K. M. Glynn (Accommodation) |
| | Miss E. Stobbart (Services) |
| *Clerks* | Mrs P. K. Hall |
| | Mrs K. Howarth |
| | Mrs D. Hurst |
| | Miss K. Lucas |
| | Mrs B. Metcalf (Secretary to the Industrial Liaison Officer) |
| | Mrs M. A. Simpson |
| | Miss J. H. Slee |
| | Mrs D. M. Sturzaker |
| | Mrs P. Tinsley |
| | Miss C. Tyrer |
| | Miss J. K. Watt |
| *Telephonists* | Mrs B. J. Baker |
| | Mrs P. B. Bamford |
| *Cashiers* | Mrs R. Doherty |
| | Mrs M. Marland |
| *Equipment Maintenance* | E. Goodson (Chief Engineer) |
| | E. Davis |
| | R. Holmes |
| *Refectory* | Mrs M. Hamlyn White (Catering Manageress) |
| | Miss E. Grunshaw (Assistant) |
| *Custodian of Premises* | W. H. Hatton |
| *Caretaker* | L. Whalley (Avenham premises) |
| *Assistant Caretakers* | V. Baron |
| | W. J. Butler |
| | G. Holden |
| | H. Mee |
| | H. Nicholls |
| | W. Pullan |

| | |
|---|---|
| *Assistant Caretakers* | W. Saunders |
| (*contd.*) | J. Walton |
| | T. K. Wharton |
| *Groundsman* | G. Cowell |
| *Watchmen* | S. Dixon |
| | F. Miller |
| | D. Postlethwaite |

## Calendar

| | | |
|---|---|---|
| 1967 | Thursday, 14th September | General Staff Meeting |
| | ENROLMENT PERIOD | |
| | Monday, 18th September | Enrolment, first day |
| | Tuesday, 19th September | Enrolment, second day |
| | Wednesday, 20th September | Enrolment, last day |
| | AUTUMN TERM | |
| | Monday, 25th September | All day and evening classes commence for the Autumn term |
| | Wednesday, 20th December | All departments close for Christmas after evening classes |
| | SPRING TERM | |
| 1968 | Thursday, 4th January | All classes re-open for the Spring term |
| | Tuesday, 13th February | Foundation Address and Distribution of Awards: all evening classes closed |
| | Friday, 5th April | All departments close for Easter after evening classes |
| | SUMMER TERM | |
| | Monday, 22nd April | All classes re-open for the Summer term |
| | Friday, 31st May | All departments close for Whitsuntide after evening classes |
| | Monday, 10th June | All classes re-open |
| | Friday, 5th July | All classes close: end of session |
| | Friday, 12th July | End of term: submission of reports |

*Note:* There are other important dates with which students must be familiar, for example closing dates for receipt of examination entries, commencement and termination of sandwich and block release courses. These will be found in the appropriate sections of the prospectus.

## Admission to Courses and Examinations

Courses will be provided subject to adequate enrolment; they may be discontinued at the discretion of the Principal at any time during the session should the numbers attending fall below a reasonable level.

The acceptance of a student into a course must have the approval of a Head of Department, and the student must produce satisfactory evidence that he has the necessary qualifications to enter the course.

Full-time and sandwich course students should make application well before the commencement of the session on the form obtainable from the Registrar.

At enrolment each student will receive an admission form bearing an admission number. This form must be shown to the class lecturer when the student attends each class for the first time in the session. Students will not be permitted to attend classes until they have completed the enrolment procedure (see page 32).

To qualify for certificates and to pass on to higher years of a course it is necessary that students should have:

(*a*) reached a prescribed standard of attainment, tested by examinations held at the end of the session, and

(*b*) made satisfactory attendance and progress during the session.

### EXAMINATIONS

All Students are required to take prescribed internal or external examinations at the end of each year of the course.

Examination fees must be paid by students at the time of entry to examinations: accounts cannot be sent to employers or grant-aiding Authorities. There are no fees for purely internal examinations of the College.

Students who take the examinations of external examining bodies (*e.g.* the Union of Lancashire and Cheshire Institutes, the Royal Society of Arts, the City and Guilds of London Institute) or General Certificate of Education examinations, must pay the examination fees of these bodies.

Each student entering the final examination for Ordinary or Higher National Diplomas and Certificates must pay an entry fee of 7s. 6d. per

subject, in addition to the examination fee charged by the external examining body whose examinations are adopted. In the event of a Joint Committee agreeing to the re-examination of a student in a subject, the student will be required to pay the full cost of the re-examination, or to share the cost proportionately should more than one student be involved in the same re-examination.

Each student is responsible for his own entry to external examinations and must complete the appropriate entry form and present it with the fee to the College office. Students will not be informed individually of the last dates of entry or of timetables of examinations, but these will be published on notice boards. The last dates of entry for the undermentioned examinations are:

Assessed papers for National Diplomas and Certificates, including endorsements: 15th December, 1967

City and Guilds of London Institute: 19th January, 1968

Union of Lancashire and Cheshire Institutes, series B and C: 2nd February, 1968

General Certificate of Education papers (N.U.J.M.B.): 9th February, 1968

Institute of Linguists: 1st March, 1968

Pitmans: 15th March, 1968

Training Council for Teachers of the Mentally Handicapped: 5th April, 1968

Royal Society of Arts, Summer Series: 26th April, 1968

Students who do not enter by these dates may well be excluded from taking the examinations, and even if accepted late fees are payable ranging from 10s. to £10. 0s. 0d.

### EXAMINATION RESULTS

Sessional Reports will include examination results, but they cannot be completed until after the results are received from external examining bodies. Reports are then sent to each student as soon as possible. It is regretted that in the meantime enquiries cannot be answered. Copies of external examination pass lists will be made available for scrutiny on the College notice board as soon as possible after they are received.

## Tuition Fees

Sessional tuition fees must be paid at the time of enrolment and are returnable only in exceptional cases. Cheques should be made payable to the Corporation of Preston and crossed.

A student whose employer undertakes to pay the fee on his behalf must produce at enrolment a letter from his employer to that effect.

Part-time students from the administrative counties of Lancashire and Westmorland and from Wigan County Borough under age 18 on the 1st September will be enrolled without payment of the tuition fee.

| **Full-time and Sandwich Courses** | | Students under age 18 on 1st September £ s. d. | Students age 18 and over on 1st September £ s. d. |
|---|---|---|---|
| Advanced Specialist Designers Course: | 1st year | 36 17 6 | 38 5 0 |
| | 2nd year | | 38 5 0 |
| | 3rd year | | 56 10 0 |
| Two-year Foundation Course: | 1st year | 18 2 6 | 19 10 0 |
| | 2nd year | 30 2 6 | 31 10 0 |
| One-year Foundation Course | | 30 2 6 | 31 10 0 |
| Integrated 1st-year Printing Course | | 18 2 6 | |

| **Part-time Courses** | Students under age 21 on 1st September £ s. d. | Students age 21 and over on 1st September £ s. d. |
|---|---|---|
| Group I (introductory level) | 1 7 6 | 2 12 6 |
| Group II (intermediate level) | 1 17 6 | 2 17 6 |
| Group III (advanced level) | 2 12 6 | 3 2 6 |

OVERSEAS STUDENTS

Students from outside the United Kingdom attending full-time and sandwich courses are required to pay special fees. Details of these can be obtained from the Registrar.

RESIDENTIAL LIBERAL STUDIES COURSES

As an integral part of their studies, students in certain advanced full-time and sandwich courses will normally attend each year a three-day residential course. The fee is approximately £3. 10s. od. which must be paid by the student. Students in receipt of Local Authority grants will in most cases be reimbursed all or part of the cost by their supporting authorities.

GRANTS

Full-time or College-based Sandwich Course students may apply to the Local Education Authority for the area in which they permanently reside for a grant of fees and maintenance. Works-based Sandwich Course students may also be eligible for financial assistance where the employer does not pay fees or wages during the College periods of a course, or where only partial financial support is offered by the employer.

NOTE TO LOCAL AUTHORITIES

The course grade designation (III NP) indicates an advanced course which is not poolable under D.E.S. regulations. In respect of these courses the normal recoupment procedure will apply.

## Enrolment

Students will be enrolled between the times: 10.0 a.m. to 12.30 p.m., 1.30 to 4.30 p.m. and 5.30 to 8.30 p.m. on the following days:

Monday, 18th September, 1967
Tuesday, 19th September, 1967
Wednesday, 20th September, 1967

Students must enrol during the times and on the dates stated; those who fail to enrol on these dates will be charged a late fee of 10s. 0d. The busiest enrolment periods are in the evenings; students who can enrol during the morning or afternoon periods will help the College and save themselves an appreciable amount of time.

Postal enrolments cannot be accepted.

Enrolment into special courses takes place separately from the procedure detailed on this page.

A student who wishes to enrol into a course demanding entry qualifications must produce documentary evidence at or before enrolment. Documentary evidence is not required in respect of students who have gained their qualifications at the Harris College.

PERMISSION VOUCHERS: all students resident in the County Borough of Preston or in the administrative area of Lancashire County, and part-time students resident in the County Borough of Wigan, will be admitted without the production of an inter-authority voucher. *All other students* must obtain permission vouchers each year from their Local Education Authorities and present them at enrolment.

**Enrolment procedure**
Students should first report to the department in which they wish to enrol. The plan of the College on the opposite page shows the blocks in which departments are situated. The rooms in which enrolment takes place in each department are shown in brackets below, *viz:*

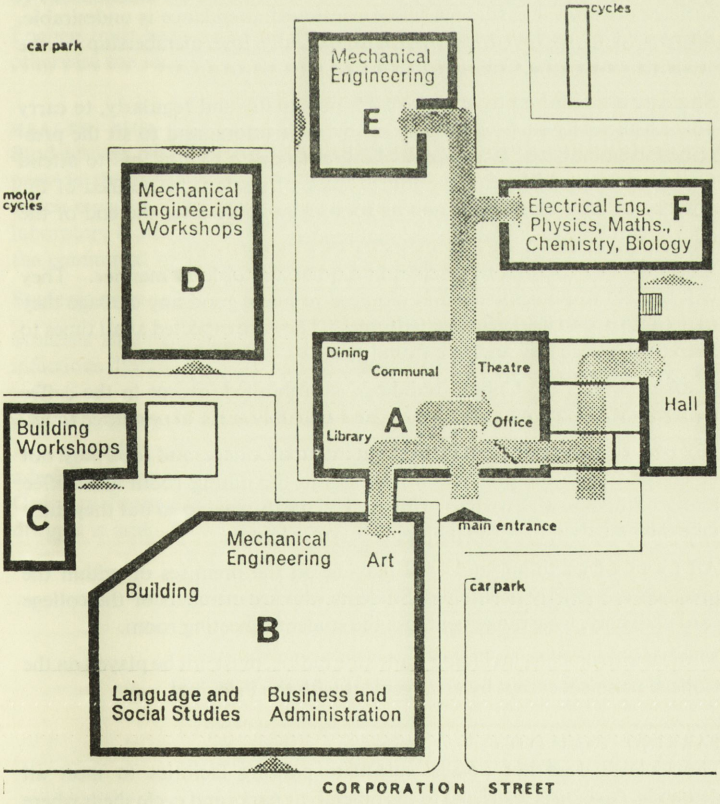
B BLOCK
School of Art (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52 and B55)

E BLOCK
Mechanical, Civil and Production Engineering Department (new students E1, former students E9)

F BLOCK
Chemistry and Biology Department (F37)
Electrical Engineering Department (F8, F9 and F10)
Physics and Mathematics Department (courses which include chemistry F35 and F37: other courses F26)

A BLOCK
College Office and enquiries

*When details of his future course have been determined in the department the student must present his enrolment forms at the Hall (A Block) for enrolment and payment of fees.*



## Regulations

### DISCIPLINE

Students are accepted into College courses on the understanding that they abide by the regulations herein and from time to time in force.

The Principal has the authority to suspend students from attendance for any cause which he considers adequate. The Council will exclude from the College premises any student whose continued attendance is undesirable. Suspended or excluded students automatically lose membership of the students' union and College societies.

Students are required to attend classes punctually and regularly, to carry out satisfactorily such work as is set by their tutors, and to sit the prescribed examinations. Employers who grant release to students to attend College courses will, after the fourth week of session, be notified of the absence of their employees, and as soon as possible after the end of the course will receive copies of sessional reports.

Students must conduct themselves in a quiet and orderly manner. They will be held responsible for and required to make good any damage they may cause due to negligence or wilfulness. They are expected at all times to keep the College tidy and free from litter.

Smoking within the College buildings is prohibited, except in the coffee lounge, staff rooms, common rooms, and assembly areas at permitted times.

Hot cooked foods must not be brought into the College, and food must not be consumed on the premises other than in the dining room and coffee lounge. Students who wish to bring packed meals may do so but they must take their meals at the fixed tables in the coffee lounge.

All forms of gambling and card playing on the premises or within the precincts are strictly prohibited. Students who are members of the college card club may, by arrangement, use the students' meeting room.

Musical instruments, including transistor radios, must not be played on the College premises except by arrangement with the Principal.

### PARKING FACILITIES

The College does not possess adequate parking facilities to meet all demands. Parking is restricted to the official car parks and cycle sheds where vehicles may be left at the owners' risk.

Students must travel very slowly in the College precincts, and should use the entrance nearest to the point of parking. They must not drive around or within the College premises in break periods. Roadways must be kept clear in case of emergencies.

### PERSONAL PROPERTY

The Council cannot accept responsibility for the safety of students' property. Property found on the premises will be handed to the Custodian of Premises, and students wishing to reclaim lost property should address enquiries to the Custodian.

Cloak lockers are available in all departments for students' use. Full-time, sandwich and block release course students may be allocated lockers for the duration of the course. Part-time students may use a locker during the day and/or evening spent in the College but must remove locker contents and padlocks when leaving the College for the day. Lockers should be secured by the students' own padlocks.

Lockers must be left empty and unlocked at the end of a course or session, otherwise the locks and contents will be removed.

### HEALTH AND SAFETY

Students are required in the interests of cleanliness, health and safety to provide themselves with the recommended kind of protective clothing which must be worn in workshop and laboratory classes. Workshop and laboratory clothes must not be worn whilst attending lectures or whilst in the communal block.

Students must use all protective devices provided.

Students should not attend the College from a house in which there is infectious illness. Cases should be promptly reported to the Registrar.

### FLOOR PROTECTION

It is regretted that ladies wearing stiletto heels will have to be refused admission to parts of the premises where damage to the floor would result. Ordinary footwear will be permitted in the Hall only when the floor drugget is laid.

COMMUNAL FACILITIES

The Communal Block provides facilities for the educational, social and recreational enjoyment of the students and staff. Besides administrative accommodation and a fully equipped theatre for both lectures and drama, there is a dining room and coffee foyer, a students' common room, students' union office and meeting rooms. The library is situated in this building.

An unusual feature is the Recreation Hall. The hall will be reserved at certain times for examinations, and occasionally for ceremonies or exhibitions, but at other times it is available to student groups, societies, and individuals for games and a very wide variety of physical activities. The bridge over the North courtyard leading to the hall contains changing rooms and showers.

REFECTORY

The dining room is open from 12.15 to 1.30 p.m. for lunch. A selection of courses at various prices is available. Tea or coffee after lunch may be taken in the adjacent coffee foyer.

Light teas or cooked meals are normally available from 4.30 to 7.00 p.m.

In addition to meals, tea or coffee or soft drinks will be available in the coffee foyer during set periods to cover mid-morning and mid-afternoon breaks between classes. Service from trolleys is available elsewhere at the same times.

Staff and students are requested to observe any restrictions on smoking in the refectory premises.

Requests for any special catering should be made in the first instance to the Registrar, well in advance of the occasion.

STATIONERY

The College stationery shop is open on three occasions during the day, namely 8.50 to 9.15 a.m., 1.00 to 2.00 p.m., and 6.45 to 7.15 p.m. Students may purchase the usual items of stationery, and also special laboratory and note books necessary for many courses.

## SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of societies and professional bodies are frequently held in the College.

Notice of the lectures will be displayed in the main entrance foyer during the session. Individual students and members of staff are welcome to attend. Application for groups to attend should be made through the Principal to the local secretary of the organisation.

## NATIONAL DIPLOMA AND CERTIFICATE COURSE REQUIREMENTS

An Ordinary National Diploma is awarded at the end of a two-year senior course of full-time study. A Higher National Diploma is awarded at the end of a further three year advanced course of full-time study.

Ordinary National Certificates and Higher National Certificates are corresponding awards following courses of part-time study.

Awards in each case are made by the Department of Education and Science in conjunction with one or more Professional Institutions. To receive an award a candidate must normally:

(*a*) make not less than 80% of the possible attendances in each subject in each year of the course for the award of a diploma, or 60% for the award of a certificate,

(*b*) obtain not less than 40% of the possible marks in each subject in the examinations held at the end of each year,

(*c*) obtain not less than 40% 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, and

(*d*) obtain not less than 50% of the grand total of marks obtainable in the final year. Of this total the possible marks in the examinations constitute 70% and the remaining 30% will be the possible marks for home work, class work, laboratory work, etc.

A 'Distinction' may be awarded to any candidate qualified to receive a diploma or certificate who, in the opinion of the examiners, has shown special merit in the final examination. His certificate will be specially endorsed with the name(s) of the subject(s) in which he has thus distinguished himself.

## CHANGE IN STUDENT PARTICULARS

Changes during the session should be notified immediately to the Registrar on the form available from the College office, for example: change of address, change of employer, change of name on marriage.

## ABSENCES

In the event of absences from classes because of illness or other unavoidable causes a note of explanation should be sent to the Head of Depart-

ment. A student who absents himself for a continuous period of four weeks without the approval of the Head of Department will be deemed to have left the course and his name will be removed from the register.

### OUTSIDE ACCOMMODATION

Shortage of accommodation makes it necessary for some classes to be held in the following premises: Avenham (School of Art Annexe); Blackburn and East Lancashire Royal Infirmary; Blood Transfusion Unit, Lancaster; Cheviot Street Workshop (off Strand Road); Deepdale County Secondary School; Lancashire County Institute of Agriculture, Hutton; N.W.G.B. Training Centre, Moor Lane, Preston; Preston Royal Infirmary; G.P.O. Telephone House, Moor Lane, Preston; and Trinity County Secondary School.

## The Library

Telephone: Preston 51831, ext. 15

| | |
|---|---|
| *Librarian* | A. Lawrence, A.L.A. |
| *Assistant Librarians* | Mrs M. Pye, A.L.A. |
| | Mrs S. M. Hunt |
| *Library Assistants* | Miss J. E Bamford |
| | Mrs I. M. Fuller |

The College library is available to all students for reference purposes. 360 technical journals are received annually in addition to the development of the book stock. An up-to-date set of British Standard Specifications is maintained.

The library is open from Monday to Friday at the following times:

*During term time:* 9.00 a.m. to 9.00 p.m.
*During vacations:* 9.00 a.m. to 5.30 p.m.

The library has facilities for photocopying, and students may obtain copies of pages of books and periodicals subject to the law of copyright. A charge is made for this service.

The library is a local agent for the National Lending Library of Science and Technology, a member of ASLIB and the North Western Regional Library System, and may be able to obtain through these organisations items not in its own stock.

## Physical Education and Recreation

Telephone: Preston 51831, ext. 27

| | |
|---|---|
| *Lecturer* | C. M. Robinson, D.L.C. |
| *Assistant Lecturers* | J. Gridley, A.G.A. |
| | Mrs B. J. Harrison, DIP.P.E., DARTFORD COLLEGE |
| *Visiting Lecturers* | A. Lewis |
| | R. Poole |
| | A. Spavin |
| | D. Stokes |
| | B. Strettle, B.J.A. |
| | G. Wilson, N.A.B.B.A. |
| | S. Wright, B.J.A. |

The Recreation Hall is equipped with fixed apparatus which, together with portable apparatus and equipment the College possesses, allows the pursuit of the following activities: athletics, badminton, basket ball, canoeing and sailing, cricket, dance, fencing, five-a-side football, golf, judo, mountaineering, netball, olympic gymnastics, padder tennis, soccer and rugby training, table tennis, trampolining, volley ball, weight training and lifting.

The recreational facilities of the College are available to all students enrolled into an academic course without payment of a further fee. Anyone interested in any of the activities detailed should contact the Lecturer in Physical Education at enrolment or as soon as possible afterwards. College sports clubs, affiliated to the students' union, are given priority in the evenings.

Lectures and films on a variety of activities, and inter-departmental and inter-College tournaments and competitions, are arranged throughout the session.

The mountaineering club arranges visits to the Lake District and North Wales for rock climbing, rambling and canoeing. For full-time students one week courses in mountain activities are arranged. From time to time arrangements are made for parties to engage in outdoor activities in vacation periods, for example ski-ing, rock climbing, canoeing, pony trekking, etc.

### REGIONAL AND NATIONAL SPORTS ACTIVITIES

The College is a centre for regional and national sports tournaments in badminton, table tennis and trampolining. It is also an Olympic Gym-

nastics Centre; the College gymnastic team competes in the National Team Championships of Great Britain and has also competed abroad.

### RESEARCH

The Physical Education Section in conjunction with the Department of Chemistry and Biology is undertaking research into the effects of different types of exercise on the heart and lungs, and a number of volunteer groups of students are co-operating.

### SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's eight academic departments. Persons not registered as students for academic courses may be admitted to certain scheduled classes in physical education, so far as places are available.The tuition fee payable is £1. 7s. 6d. if under age 21 on the 1st September or £2. 12s. 6d. if age 21 or over.

In order to give academic course students priority, persons who wish to enrol for physical education classes alone are not accepted until the fourth week in the session. No person may be admitted to these classes who is less than 16 years of age on the 1st September.

## Harris Students' Union

Telephone: Preston 53852

B. Hayes, *President*
A. England, *Vice-President*
Miss S. Standing, *Vice-President* (*female students*)
A. Kimm, *Secretary*
I. Horne, *Student Treasurer*
D. Swift, *Honorary Treasurer*

The Harris Students' Union is organised and governed by students, and is affiliated to the National Union of Students. It arranges general social activities, provides a means of helping the formation of student societies, and maintains contact with the students of other colleges. The union is financed by a grant from the Harris Council.

All students other than those enrolled in special courses are automatically admitted to membership of the students' union. A membership card will be issued at enrolment entitling students to participate in all social activities, to join any student society or club, and to vote in the election of members to the Executive Committee.

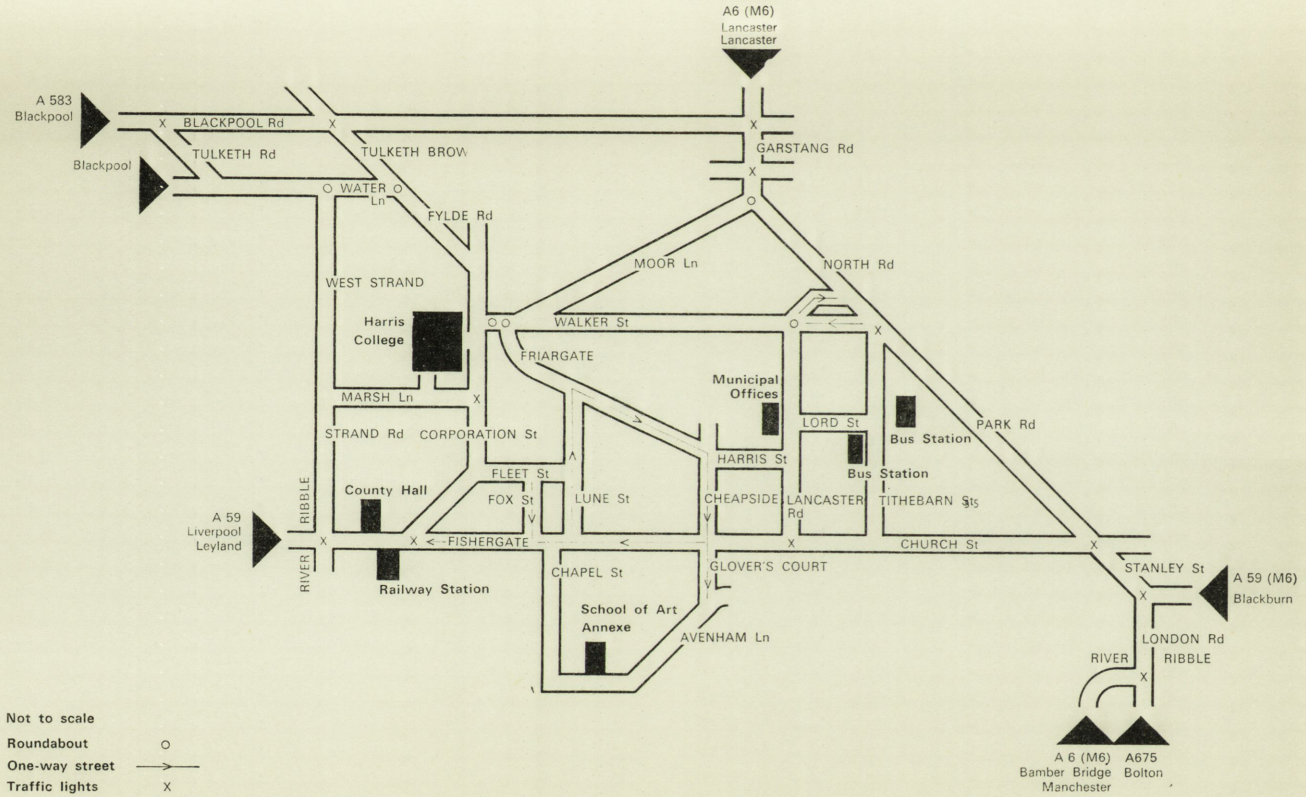
All clubs and societies in the College are affiliated to the Students' Union, and special subscriptions may be required for membership of particular clubs and societies. A Students' Union Handbook, issued free to members, describes the activities of the union.

Dances and other social events are regularly arranged in the College and in the town. A common room and an office are allocated exclusively for the use of students and recreational facilities are available elsewhere by arrangement with the Lecturer in Physical Education.

Enquiries concerning student activities should be addressed to the Secretary, Harris Students' Union, Corporation Street, Preston.

**College Colours**

A Harris College blazer badge, scarf and tie, designed by the School of Art and Design and approved by the College Governors, are on sale at Messrs. Hellewells, Lune Street, Preston. Prices: 8s. 11d., 28s. 6d. and 8s. 6d. each respectively.


A6 (M6)
Lancaster
Lancaster
A 583
Blackpool
Blackpool
BLACKPOOL Rd
TULKETH Rd
TULKETH BROW
GARSTANG Rd
WATER Ln
FYLDE Rd
MOOR Ln
NORTH Rd
WEST STRAND
Harris College
WALKER St
FRIARGATE
Municipal Offices
MARSH Ln
LORD St
PARK Rd
STRAND Rd
CORPORATION St
Bus Station
HARRIS St
FLEET St
Bus Station
County Hall
FOX St
LUNE St
CHEAPSIDE
LANCASTER Rd
TITHEBARN St
A 59
Liverpool
Leyland
RIBBLE
RIVER
FISHERGATE
CHURCH St
STANLEY St
A 59 (M6)
Blackburn
Railway Station
CHAPEL St
GLOVER'S COURT
School of Art Annexe
AVENHAM Ln
LONDON Rd
RIVER
RIBBLE
A 6 (M6)
Bamber Bridge
Manchester
A675
Bolton
Not to scale
Roundabout
One-way street
Traffic lights

Harris College **Department of Business and Administration 1967–68**

**Harris College, Corporation Street, Preston, Lancashire**
**Telephone: Preston 51831–5**

*Foundation.* On the 4th April, 1956, the Minister of Education made a scheme for the establishment of the Harris College of Further Education, formerly the Harris Institute (comprising the Harris Technical College and the School of Art). In the terms of this scheme, and a later amendment to it, the College is housed in premises provided and maintained by the County Borough of Preston and is governed by the Harris Council of twenty-eight members; namely nine members of Preston Education Committee, nine members appointed by Lancashire Education Authority, nine members representative of industry and commerce, and one member representative of the Universities.

**The Harris Council**

*President:* Alderman W. Beckett, O.B.E., J.P.

*Vice-President:* Councillor J. Hargreaves

*Members:*

Alderman J. Atkinson
Alderman Mrs D. M. Dewhurst, J.P.
Alderman J. F. Gray
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker, J.P. (The Right Worshipful the Mayor of Preston)
Councillor Mrs K. E. Crozier
Councillor T. Dewhurst
Councillor Mrs R. Lytton

Alderman Sir Fred Longworth (Vice Chairman of Lancashire County Council)
Alderman J. Bradley, M.B.E., J.P.
Councillor T. V. Brown
Councillor C. W. Eastwood
F. Ley
Councillor A. J. Whittall
Councillor Mrs W. Winn
Councillor G. Woods

F. D. Crowe, B.SC.(ENG)., A.F.R.AE.S.
Professor E. Roland Dobbs
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., A.M.I.MECH.E.
P. D. Oakley, B.SC., F.R.I.C.
H. Rogan, O.B.E., B.SC., PH.D., F.R.I.C.
Alderman J. W. Taylor, J.P., F.C.I.S.
J. W. Walker

*Clerk to the Council:* W. R. Tuson, B.SC., Chief Education Officer, Preston

**Research Council**

The research council is a sub-committee of the Harris Council charged with the promotion of research and the administration of research funds.

*Chairman:*
Alderman W. Beckett, O.B.E., J.P., *President of the Harris Council*

*Members:*
Councillor J. Hargreaves, *Vice-President of the Harris Council*
Professor E. Roland Dobbs, *University of Lancaster*
J. Jones, A.M.I.MECH.E.
Dr P. R. Lancaster, *University of Bradford*
W. J. R. Merren, M.A., B.SC., *Director of Research, Pilkington Research Laboratories*
Dr K. Morgan, *University of Lancaster*
P. D. Oakley, B.SC., F.R.I.C., *Member of the Harris Council*
Dr H. Wilkinson, *Principal of the Harris College*
Dr S. Skidmore, *Vice-Principal of the Harris College*

**Principal**: H. Wilkinson, M.SC.TECH., PH.D., A.INST.P.

**Vice-Principal**: S. Skidmore, B.SC., PH.D.(LONDON), F.R.I.C.

*Registrar:* J. Barnacle, D.M.A., F.C.C.S.

*The Harris College* is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are eight teaching departments in the College: the School of Art, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical Engineering, Language and Social Studies, Mechanical Civil and Production Engineering, Physics and Mathematics. All are newly housed, and the facilities include a combined Lecture Hall and Theatre, a Recreation Hall, Student Common Rooms, Library and Refectory.

Strong links exist between the College, Industry and Commerce and these have helped the development of sandwich courses leading to professional qualifications. Extension of these courses into other professional fields of activity is planned. Short courses on specialist or advanced topics are arranged regularly in all departments of the College. Research and consultancy are important features of the work of the College, and the recent appointment of an Industrial Liaison Officer is expected to increase and widen the range of these activities.

*The Department of Business and Administration:* The world of business and administration offers attractive careers for suitably qualified men and women who develop an interest in organisation, management, the processes of buying and selling, and the finance and insurance that are their concomitants.

The department offers courses to prepare students for the final qualifications in the major business professions, for the Ordinary and Higher National Diplomas covering general business studies, and for a University degree in Economics.

Courses offered include full-time, sandwich, block release and day release courses. Evening only courses are confined to those in professions in which day release is impracticable.

Close co-operation is maintained with both large and small companies in the North Lancashire region. This co-operation covers the recruitment of students and the arrangements for periods of practical business training either during the alternating periods of the sandwich course or between the years of the sessional courses. In addition, experts in the various professions and in business management form a team of visiting lecturers in both normal courses and special courses each year.

Education authorities will consider awarding grants to students admitted to various courses held in the Department. Students must make application direct to their own Local Education Authority. Works based students may be assisted by their employers.

The full-time staff of the Department takes a lively interest in the activities of the local branches of the professional societies connected with business. Meetings of these professional societies take place on the College premises.

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## Department of Business and Administration

Telephone: Preston 51831, ext. 17

| | |
|---|---|
| *Head of Department* | G. W. Cobham, B.COM., M.SC.(ECON), L.C.P., F.C.I.S., A.M.B.I.M. |
| *Senior Lecturers* | W. E. Evison, B.SC., PH.D. |
| | J. R. Meredith, B.COM.(LOND.), A.M.B.I.M. |
| *Lecturers* | J. L. Bullas |
| | P. J. Gaule, B.COMM. (DUBLIN) |
| | R. J. Hudson, B.SC.(ECON.), A.A.C.A. |
| | E. Newell, DIP. JOURNALISM |
| | E. Schofield, B.A.(COM.), A.C.I.S. |
| | J. R. Topping, B.SC.(ECON.), F.R.G.S., A.C.C.S. |
| | J. E. Varley, B.A.ADMIN. |
| | G. Woods, F.I.M.T.A., A.C.W.A. |
| *Assistant Lecturers* | Mrs E. J. G. Bairsto, B.A., F.R.G.S. |
| | Mrs B. D. Cave, F.S.C.T., F.F.T.COM. |
| | A. G. Cottom, A.C.W.A. |
| | J. Isherwood, A.I.B. |
| | D. Jones, B.SC.(ECON.) |
| | B. Mellody, F.C.A. |
| | Miss I. Parsonage, A.C.I.S. |
| | Miss E. M. Rigg, B.A. |
| | Mrs T. M. Stableford, F.S.C.T. |
| *Technician* | B. Parker |
| *Visiting Lecturers* | A. Allen, B.A.(ECON.) |
| | F. R. Anderton |
| | W. M. Balmer, LL.B. |
| | J. G. R. Barker, M.I.P.M., A.M.B.I.M. |
| | J. D. Blackburn, A.C.W.A. |
| | W. Bone, A.M.I.MECH.E., A.M.I.PROD.E. |
| | Mrs E. F. Bradshaw |
| | J. S. Brindle |
| | J. H. Brooks, A.R.I.C., A.M.B.I.M. |
| | Mrs J. B. Bushnell, P.C.T. |
| | G. Carter, A.C.I.I. |
| | G. A. Chapman |
| | R. Cocker, A.C.W.A. |
| | Mrs O. M. Cork |
| | D. C. Y. Dickson |

*Visiting Lecturers (contd.)*

P. T. Eagle, A.M.I.MECH.E.
A. F. Fell, A.C.C.S.
C. Foster, A.C.A.
S. Graham, A.A.C.C.A.
P. Hancock, A.C.A.
J. R. Hartley, B.A., A.I.M.T.A.
R. K. Harwood, F.C.I.I.
G. W. Heywood, A.I.S.
E. Hindle, C.ENG., A.M.I.MECH.E.
Mrs C. Higgins
C. Hill
Miss L. R. S. Houldsworth
D. J. Hussey, A.I.B.
F. D. Jones, B.A.
I. H. Kay, F.INST.L.EX.
D. Lyon, A.C.A.
T. B. Maund, A.M.INST.T.
Mrs E. Moon
C. Musgrave, B.SC.
Mrs B. Pierce
W. E. Pritchard, B.SC.(ECON.)
B. Ridgway, A.C.I.S.
C. H. Riley, A.I.B.
Mrs. F. Roberts
P. K. Robinson, A.C.I.I.
A. E. Roper
B. A. Sharples, A.M.INST.T.
P. W. Stanford, M.I.M.S.M.
M. J. Stewart, B.COMM.
R. Sumner, A.C.C.S.
B. Taberner
T. S. Thomas
M. Watkins
Mrs. F. Westwood
F. V. Willcox
J. G. R. Wilson, A.C.I.I.
Mrs. C. Woods

## List of Courses


FULL-TIME AND SANDWICH

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16 Higher National Diploma in Business Studies
17 Ordinary National Diploma in Business Studies
18 Day Secretarial

BLOCK RELEASE

page 19 Journalists
20 Chartered Accountants: Introductory Course for Articled Clerks
20 Chartered Accountants: Pre-examination Course for Articled Clerks

PART-TIME DAY

page 21 Association of Certified and Corporate Accountants
21 Institute of Bankers
22 Institute of Cost and Works Accountants
22 Institute of Municipal Treasurers and Accountants
23 Diploma in Municipal Administration
23 Institute of Hospital Administrators
23 Chartered Institute of Secretaries
23 Corporation of Secretaries
24 Institute of Legal Executives
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21 Institute of Bankers
22 Institute of Cost and Works Accountants
23 Chartered Institute of Secretaries
23 Corporation of Secretaries


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27 Certificate in Works Management
28 Diploma in Marketing
28 United Commercial Travellers' Association Diploma
28 Industrial Administration
31 Teachers' Certificates in Shorthand and Typewritin ;
31 Office Skills
32 Shorthand Typists' Proficiency Certificate
32 Secretarial Diploma

SPECIAL COURSES

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33 Economics for the Businessman
33 Legal Aspects of Business
33 Work Study
33 Sales and Marketing Policy
33 Personnel Management
33 Financial Control
33 Job Analysis
33 Planned Maintenance
34 Systems Analysis
34 Modern Management Techniques

**Bachelor of Science (Economics) external degree of the University of London** (III)

*Course adviser:* J. R. Topping

This is a three-year full-time course of study in which Part I will be covered in the first year, and Part II in the second and third years.

*Qualifications for entry:* Candidates must be able to satisfy the general entry requirements of the University of London, which may be summarised as follows:
(1) Candidates must hold a General Certificate of Education in at least five subjects, of which at least two must be passed at Advanced level, *or*
(2) a General Certificate of Education in at least four subjects, of which at least three must be passed at Advanced level.
(3) In each of the above cases the Advanced level subjects must have been passed at certain minimum grades and be taken from an approved list of subjects.
(4) No subject can be counted at both Ordinary and Advanced levels.

Full particulars concerning entry requirements can be obtained from the Secretary, University Entrance Requirements Department, University of London, Senate House, London, W.C.1.

**1st Year (Part I).** *Curriculum:* economics, English legal institutions, British Government, an introduction to politics, economic history, basic mathematics, elementary statistical theory.

**2nd and 3rd Years (Part II).** *Curriculum:* special subjects: either economics analytical and descriptive *or* industry and trade *or* accounting and finance.

Copies of the full syllabuses, regulations for registration with the University and admission to the examinations can be obtained from the External Registrar, University of London, Senate House, London, W.C.1.
The course will require attendance at the College for thirty hours per week at lectures, seminars and tutorials.

Some assistance can be offered to students seeking living accommodation during term time.

All students who have the required entry qualifications, or who expect to obtain them before the beginning of the session, should complete the special

application form obtainable from the College Registrar and return it to him An interview will then be arranged at the College for qualified applicants as soon as possible.

**Higher National Diploma in Business Studies** (III)

*Course adviser:* E. Schofield

This is a three-year sandwich course which links alternate periods of full-time college studies with periods of practical training within a business house. These periods will each be of approximately six months' duration. The college periods will also include at least two residential weekends of special study.

*Qualifications for entry:* candidates must: (1) be not less than eighteen years of age, (2) hold the General Certificate of Education at 'O' level in English and in three other subjects from mathematics, geography, history, a language other than English, science, commerce, and (3) hold the General Certificate of Education at 'A' level in at least one subject, *or* hold a good standard Ordinary National Diploma or Certificate in Business Studies.

Works based students will be those already employed in business or those recruited by companies for secondment to the course. In such cases the employer will provide each period of internal business training.

College based students will be those joining the course on their own initiative straight from school. Help will be given to them in finding suitable internal business training, and this may be undertaken with more than one company to widen the students' experience.

The award of the Diploma will be based upon: (1) success in the examinations in each year in each subject, (2) making not less than 80% of the possible attendances in each year, (3) the submission of a theses of approximately 5,000 words upon an approved business topic, and (4) the passing of an oral examination on the subject of the theses.

The award of the Diploma carries with it exemption from the intermediate examinations and exemption from certain subjects in the final examinations of a large number of professional associations in business. The course itself covers the major part of the work required for the final examinations of the Association of Certified and Corporate Accountants, the Institute of Cost and Works Accountants, the Chartered Institute of Secretaries and the Corporation of Secretaries.

Grants from local authorities, similar to those given to university students, may be available to assist students during their full-time attendance at the College.

Candidates for admission to this course should apply for a form of application to the College Registrar. An interview will be arranged after the completed form has been received by the Head of Department.

**1st Year.** *Tutor:* R. J. Hudson. *Curriculum:* economics, business organisation, statistics, general law, accounting, liberal studies.

*College course:* September to March (26 weeks)

*Examinations:* internal

**2nd Year.** *Tutor:* J. R. Topping. *Curriculum:* applied economics I, advanced accounting, mercantile law, costing *or* human relations, office organisation *or* application of statistics, liberal studies.

*College course:* September to March (26 weeks)

*Examinations:* internal

**3rd Year.** *Tutor:* P. J. Gaule. *Curriculum:* applied economics 2, company law *or* industrial law, business finance, costing *or* secretarial and administrative practice, human relations or personnel administration, liberal studies, and a research project.

*College course:* September to March (26 weeks)

*Examinations:* internal, externally assessed

*Final qualification:* the Higher National Diploma in Business Studies

**Ordinary National Diploma in Business Studies** (II)

*Course adviser:* Mrs E. J. G. Bairsto

This is a two-year full-time course designed to give students a thorough and practical business training, covering the basic subjects of accounting, law and economics, and including a much wider curriculum to prepare students for the major professional qualifications available in accountancy, banking, insurance, company secretaryship, costing, transport and local Government. In addition, the course includes an intensive study of a modern foreign language or, alternatively, shorthand and typewriting.

*Qualifications for entry:* students must have reached the age of 16 and either (1) hold a General Certificate of Education at Ordinary level in English and three other subjects from mathematics, geography, history, a language other than English, science, commerce, *or* (2) have passed some other examination of equivalent standard.

The diploma is the hallmark of a basic, general education in business and it is accepted as an exempting qualification on a subject for subject basis at their Intermediate examination level by the: Association of Certified and Corporate Accountants, Institute of Bankers, Chartered Institute of Secretaries, Chartered Insurance Institute, Corporation of Secretaries, Institute of Cost and Works Accountants, Institute of Export, Institute of Municipal Treasurers and Accountants, Institute of Transport, Institute of Marketing, and other professional associations.

Candidates for admission to this course should apply for provisional acceptance during their final school term. An application form can be

obtained from the College Registrar. A definite decision about the acceptance of a student cannot be reached until the G.C.E. results are available.

**1st Year.** *Tutor:* B. Mellody. *Curriculum:* accounting 1, structure of commerce, English 1, economic history, elements of statistics, office practice, and either (i) a modern foreign language, *or* (ii) shorthand and typewriting.

*Examinations:* internal, R.S.A., U.L.C.I., G.C.E., Pitman's Shorthand

**2nd Year.** *Tutor:* J. R. Topping. *Curriculum:* accounting 2, economics, English 2, principles of law, economic geography, British Constitution, office practice and either (i) a modern foreign language, or (ii) shorthand and typewriting. Each student will also write a dissertation on a selected business topic under the guidance of the Course Tutor.

*Examinations:* internal, externally assessed

**Day Secretarial** (II)

*Course adviser:* Miss E. M. Rigg

This is a two-year full-time course designed for students who wish to prepare themselves for secretarial and clerical appointments in the offices of industrial and professional firms, posts in local Government offices and similar employment.

*Qualifications for entry:* students must have obtained a good General Certificate of Education or its equivalent in at least three subjects, including English Language, or must pass a College Entrance Examination.

**1st Year.** *Tutor:* Miss I. Parsonage. *Curriculum:* accounting 1, structure of commerce, English 1, German 1, shorthand, typewriting.

*Examinations:* G.C.E., U.L.C.I., R.S.A., Pitman's Shorthand

**2nd Year.** *Tutor:* Miss E. M. Rigg. *Curriculum:* accounting 2, economics, English 2, German 2, secretarial practice, shorthand, typewriting.

*Final examinations:* Students enter for the examinations of the Union of Lancashire and Cheshire Institutes, the Royal Society of Arts and the Pitmans Institute, the majority of them taking the Shorthand-Typists' Certificate at either Intermediate or Advanced level. Students may also add some commercial subjects to their General Certificate of Education.

## Block Release Courses

### JOURNALISTS

*Course adviser:* E. Newell

In conjunction with the National Council for the Training of Journalists, two-year block release courses are arranged in preparation for the Council's Proficiency Test which takes place at the end of a student's three-year apprenticeship in the newspaper industry.

*Qualifications for entry:* students must have reached the age of 16 and must produce evidence of a good general education. At the end of each year of the course students must take an internal examination in each subject.

The regulations require a student to obtain a shorthand certificate at 100 w.p.m. before he can take his Proficiency Test.

Each course will include eight weeks' full-time study from 9 a.m. on Mondays to 5 p.m. on Fridays. The dates of the courses during 1967–68 are as follows:

*First year:* 25th September to 17th November, 1967; 27th November, 1967 to 2nd February, 1968; 12th February to 5th April, 1968; 22nd April to 21st June, 1968.

*Second year:* 2nd October to 24th November, 1967; 4th December 1967 to 9th February, 1968; 12th February to 5th April, 1968; 6th May to 5th July, 1968.

**1st Year** (I). *Tutor:* J. L. Bullas. *Curriculum:* English, newspaper practice, shorthand, goverment, current affairs.

**2nd Year** (II). *Tutor:* E. Newell. *Curriculum:* English, newspaper practice, shorthand, newspaper law.

A copy of the explanatory leaflet summarising the training scheme and giving the regulations for admission can be obtained from the Director, The National Council for the Training of Journalists, 6 Carmelite Street, London E.C.4.

## INSTITUTE OF CHARTERED ACCOUNTANTS INTERMEDIATE EXAMINATION

*Course adviser:* B. Mellody

**Introductory Course for Articled Clerks** (II)

Introductory courses are arranged for articled clerks who are just starting their preparation for the professional qualification. These operate from 9 a.m. to 5 p.m. on Mondays to Fridays for a period of four weeks. The dates of the courses in 1967 will be as follows:

*First course:* 23rd October to 17th November, 1967

*Second course:* 20th November to 15th December, 1967

The aim of the course is to take students rapidly through the early stages of their professional studies to ensure a sound foundation upon which subsequent specialist studies can be based. Each course will also include a talk by a practising Chartered Accountant on the ethics and practice of the profession.

**Pre-examination Course for Articled Clerks** (II)

Special pre-examination courses for students preparing for the Intermediate Examination of the Institute of Chartered Accountants will be held from 9 a.m. to 5 p.m. on Mondays to Fridays for a period of four weeks. The dates of the courses in 1968 will be as follows:
*For the March examination:* 29th January to 23rd February, 1968.
*For the September examination:* 10th June to 5th July, 1968.

*Curriculum:* auditing, general commercial and financial knowledge, principles of law and principles of accounting.

Applicants for admission to the courses should apply in the first instance to Mr P. Hampson, F.C.A., Hon. Secretary to the Education Committee, North West Society of Chartered Accountants, 5 Starkie Street, Preston (telephone 57596). General information and syllabuses of the examinations can be obtained from the Secretary, The Institute of Chartered Accountants, City House, 56/66 Goswell Road, London E.C.1.

## Professional Courses

Full courses will be held for the Intermediate and Final Examinations of the professional bodies in accountancy, banking, cost accountancy, secretaryship, Municipal Treasurers and Local Government, for the Graduate Examination of the Institute of Transport, the Associateship examination of the Chartered Insurance Institute and the Institute of Legal Executives.

In certain cases students may attend day-time classes for part of their course.

Intending students should obtain a copy of the current regulations of the appropriate professional body before embarking upon a course of study. Students are responsible for making sure that they can comply with such regulations as are in force from time to time.

**Association of Certified and Corporate Accountants, Sections 1 and 2** (II) **and Section 3** (III)

*Course adviser:* R. J. Hudson

Part-time day and evening classes are arranged to cover the examinations for Sections 1, 2 and 3.

Candidates holding the Ordinary National Diploma or Certificate in Business Studies with passes at credit level may be granted subject for subject exemption from the Section 1 Examination in book-keeping and accounts 1, mercantile law, and economics and business statistics. The Association is also prepared to consider the exemption of holders of a Higher National award from their subjects of costing and book-keeping and accounts 2 where the syllabus for the latter includes taxation.

Syllabuses and regulations for admission can be obtained from the Secretary, The Association of Certified and Corporate Accountants, 22 Bedford Square, London W.C.1.

**Institute of Bankers: Banking Diploma, Part 1** (II) **and Part 2** (III)

*Course adviser:* P. J. Gaule

Part-time day and evening classes are arranged to cover both parts of the examination for the Banking Diploma. These courses enjoy the active support of the local branch of the Institute of Bankers.

The College is a recognised teaching institution, and students who pass the College Internal Examinations in the subjects of Part I may claim exemption from the same subjects in the Institute of Bankers' Examination, subject to a minimum attendance of 75 per cent. of the possible attendances in each subject and a minimum of 40 per cent. of marks awarded for written work during the session.

Candidates are given the choice of sitting in any subject *either* the April (external) examination of the Institute of Bankers *or* the College internal examination in May: but not both.

Candidates must pass in at least two subjects at one sitting before proceeding to the remainder of the examinations. For this purpose the April examination of the Institute is one sitting and the May internal examination is another. For further details students should refer to the Institute's Syllabus.

Candidates holding the Ordinary National Diploma or Certificate in Business Studies with passes in appropriate subjects at credit level may be granted subject for subject exemption from all five subjects of the Part II examination.

Syllabuses and regulations for admission can be obtained from the Secretary, The Institute of Bankers, 10 Lombard Street, London E.C.3.

**Institute of Cost and Works Accountants, Parts 1 and 2 (II) and 3, 4 and 5 (III)**

*Course adviser:* A. G. Cottom

Part-time day and evening classes are arranged to cover Parts 1 and 2 of the Institute's examinations. Day classes in certain subjects only are arranged for Parts 3, 4 and 5. Classes are held in the evenings to cover the whole of all five parts of the examination.

Candidates holding the Ordinary National Diploma or Certificate in Business Studies with passes at credit level in equivalent subjects may be exempted from the whole of Part 1 of the above examination.

Syllabuses and regulations for admission can be obtained from the Director, Institute of Cost and Works Accountants, 63 Portland Place, London W.1.

**Institute of Municipal Treasurers and Accountants**

*Course adviser:* G. Woods

**Intermediate examination** (II). This is a two-year course. The classes for the first year will be held on Wednesdays. The second-year course will be held on Fridays.

**Final examination** (III). The course for Part A will be held on Thursdays. The course for Part B will be held on Tuesdays. Students take one year in study for each part.

Syllabuses and regulations for admission can be obtained from the Secretary, The Institute of Municipal Treasurers and Accountants, 1 Buckingham Place, Westminster, London S.W.1.

**Diploma in Municipal Administration Local Government Examinations Board Administrative Examination**

*Course adviser:* J. R. Topping

**Intermediate examination** (II). Classes for Part 1 will be held on Wednesdays. Classes for Part 2 will be held on Fridays.

**Final examination** (III). Classes for Part 1 will be held on Mondays. Classes for Part 2 will be held on Tuesdays.

Classes in the optional subjects of Part 2 of the final examination are arranged according to demand. Syllabuses and regulations for admission to the examinations can be obtained from the Secretary, The Local Government Examinations Board, Alembic House, 93, Albert Embankment, London, S.E.1.

**Institute of Hospital Administrators, Intermediate** (II) **and Final** (III)

*Course adviser:* J. E. Varley

The course for the Intermediate examination is held on Thursdays. Courses for the Final examination are to be arranged in 1968–69 session.
Candidates holding the Ordinary National Diploma or Certificate in Business Studies with a minimum of 50 per cent of the marks in an assessed examination may obtain subject for subject exemption from part of the Institute's Intermediate Examination. Holders of the Higher National Diploma or Certificate in Business Studies may be granted exemption from the whole of the Intermediate Examination.

Syllabuses and regulations for admission can be obtained from the Secretary and Director of Education, The Institute of Hospital Administrators 75, Portland Place, London W.1.

**Chartered Institute of Secretaries and Corporation of Secretaries, Intermediate** (II) **and Final** (III)

*Course adviser:* E. Schofield

Part-time day and evening classes are arranged for the whole of the Intermediate Examination and for all three parts of the Final Examination.

The Corporation of Secretaries recognises conditionally the College sessional examinations as exempting a candidate from the corresponding subjects of the Intermediate Examination of the Corporation.

Candidates holding the Ordinary National Certificate or Diploma in Business Studies with passes in appropriate subjects at credit level may be

granted exemption on a subject for subject basis from all four subjects of the Intermediate Examination of the respective professional association. Classes in Local Government subjects are also arranged for the final examination. Details can be obtained at the time of enrolment.

Syllabuses and regulations for admission to the secretarial institutions can be obtained from the Secretary, The Chartered Institute of Secretaries, 16 Park Crescent, London W.1., or from the Secretary, The Corporation of Secretaries, Devonshire House, 13 Devonshire Street, London W.1.

**Institute of Legal Executives**

*Course adviser:* P. J. Gaule

**Associate examination** (II). This is a two-year course. The course for Part 1 of the Associate examination will be held on Mondays and for Part 2 on Tuesdays.

Candidates must hold a General Certificate of Education in English at 'O' level before either part of the examination can be taken. Associateship will be granted to candidates successful in both parts of the examination who have at least three years' approved experience in a legal office. Candidates without the necessary experience may still take the examinations, but they will not be eligible for election as an Associate until they have obtained the three years of approved experience.

**Fellowship examination** (III). Candidates for this examination are required to select three subjects from the official list. The College offers classes in conveyancing, contract, commercial law, partnership law and company law. Classes will be arranged to suit the majority of students after enrolment.

Copies of the syllabuses and regulations for admission to the examinations can be obtained from the Secretary of Education and Training, The Institute of Legal Executives, Maltravers House, Arundel Street, Strand, London W.C.2.

**Institute of Transport**

*Course adviser:* Mrs E. J. G. Bairsto

**Graduateship** (II). Part-time day and evening classes are arranged for both parts of this examination.

**Associate Membership Examination Part 1** (III). This course is arranged on Wednesday and Thursday evenings. There are alternative day classes in statistics and accounting.

Candidates holding the Ordinary National Certificate in Business Studies with passes in appropriate subjects at credit level may be granted exemp-

tion on a subject for subject basis from the subjects of the Institute's Graduateship Examination.

Syllabuses and regulations for admission can be obtained from the Secretary, The Institute of Transport, 80 Portland Place, London W.1.

**Chartered Insurance Institute Associateship**

*Course adviser:* B. Mellody

**Part A** (II). *Curriculum:* commercial practice, general principles of law and elements of insurance. This course is held on Mondays. Subject to an adequate enrolment, a parallel course is held on Wednesdays to cover the same subjects. This is arranged for the convenience of insurance offices so that day release facilities can be spread.

**Parts B and C** (III). The following specialist classes are arranged. fire insurance, life assurance, accident insurance, motor insurance, accident insurance law and claims, employer's liability and public liability insurance. Classes in other insurance subjects may be arranged according to demand.

Students wishing to enrol for any of the above insurance classes should communicate, in the first instance, with the Education Secretary of the Preston Insurance Institute, Mr. R. K. Harwood, F.C.I.I., of the Sun Alliance & London Insurance Group at 12, Winckley Square, Preston (telephone: 51671).

Candidates holding the Ordinary National Certificate or Diploma in Business Studies with passes at credit level may be granted a subject for subject exemption from the subjects of Part A of the Institute's examinations.

Syllabuses and regulations for admission can be obtained from the Secretary, The Chartered Insurance Institute, 20 Aldermanbury, London E.C.2.

**Certificate in Supervisory Studies** (II)

*Course adviser:* Dr W. E. Evison

This is a one-year course of a general character to give men and women supervisors an opportunity to study their jobs in relation to modern works organisation. It provides instruction in the general principles of supervision and the basic supervisory skills. It is not only suitable for those in established posts in supervision, but also for those who wish to train themselves for promotion to supervisory posts. Candidates for admission to the course should normally be not less than 21 years of age, but those below this age holding supervisory posts or considered to be potential supervisors may be admitted at the discretion of the Principal. No academic qualifications are laid down as entry conditions to the course, but students should have an educational background such as will enable them to benefit from the course with a reasonable expectation of success.

The course will be held on one half day and two evenings per week and will be conducted by means of talks, discussions, case studies, projects and exercises. Visiting speakers will contribute from their specialist knowledge, and the course will include at least one week-end of concentrated residential study from 26th to 28th January, 1968.

During the course students will be expected to carry out a project and submit a concise report, supplemented where appropriate by diagrams and other data. At the end of the course this report will form the basis of part of a half-hour oral examination, and students will also sit for two written examinations each of two hours' duration.

*Curriculum:* principles and practice of supervision, technical aspects of supervision, economic and financial aspects of supervision, communication.

The written examinations will be conducted by the City and Guilds of London Institute on behalf of the National Examinations Board in Supervisory Studies, 76 Portland Place, London W1.

**Institution of Works Managers**

*Course adviser:* J. R. Meredith

**Certificate in Works Management** (III). This is an intensive course covering two years of study on two evenings per week. Candidates take the I.W.M.

examinations at the end of each year. Intending students must communicate in the first instance with the I.W.M. Local Education Officer, Mr J. L. Boulton, A.M.I.W.M., 45 Thorn Trees Avenue, Lea, Preston (telephone Preston 26966).

**1st Year.** *Curriculum:* economics of industry, management law, fundamentals of management.

**2nd Year.** *Curriculum:* works management in practice, human relations and communication.

Candidates for the Certificate Examination must register as student members of the Institution of Works Managers at least six months before the date of sitting for the first subject of the examination. Application forms can be obtained from Mr Boulton, and students are responsible for submitting them to the I.W.M. head office before the closing date.

**Diploma in Works Management** (III). Applicants for admission to this course must be recommended by the local branch of the I.W.M. following a personal interview by a Branch/College panel.

The course consists of a minimum of lectures and a great deal of practical work through case studies and projects, business exercises and other methods of group participation. Many exercises will take place in the actual work situation by the kind co-operation of the management of a number of local companies. Members of the course will be required to write a report of at least 2,000 words on some management problem, and to attend, in addition, residential study groups as organised by the College. The course will be held on one half day and two evenings per week.

The arrangements for 1967–68 session at present include one period of residential study at Alston Hall Residential College from 26th to 28th January, 1968.

At the end of the course the whole of the students' work will be appraised. There will be no written examination as normally understood, but candidates will be interviewed personally by a Branch/College panel under an independent chairman.

Syllabuses and regulations for admission to both the Certificate and Diploma courses can be obtained from Mr Boulton at the time of registration or at the address given above.

*Works visits:* Throughout each Management Course a number of visits will be arranged for students to go to selected factories to discuss management problems on the spot with the people actively concerned. Such visits may be arranged either in the day-time or in the evening. They will not normally include tours of works.

*Film and discussion evenings:* These will be arranged independently of the normal course for the purpose of showing students plant and equipment in actual operation, and demonstrating the processes of planning, organisation and control. These special evenings will form an integral part of all management courses.

**Institute of Marketing: Diploma in Marketing**

*Course adviser:* J. R. Topping

This is a three-year course which is arranged mainly in the evenings. The course covers the whole of the Diploma scheme.

**1st Year** (II). *Curriculum:* business history of the United Kingdom, economics, economic geography, marketing 1.

**2nd Year** (II). *Curriculum:* accounting, applied statistics, commercial law marketing 2.

**3rd Year**(III). *Curriculum:* advertising, market research, marketing 3.

Syllabuses and regulations for admission can be obtained from the Director, The Institute of Marketing, Marketing House, Richell Place, Lamb's Conduit Street, London W.C.1.

**United Commercial Travellers' Association Diploma** (II)

*Curriculum:* Part 1 – English. Part 2 – Commercial salesmanship and commercial marketing.

Exemption from the examination in English may be granted to those students who hold a G.C.E. 'O' level certificate in English language, or an appropriate equivalent.

Syllabuses and regulations for admission can be obtained from the General Secretary, United Commercial Travellers' Association, 180–182a Tottenham Court Road, London W.1.

**Industrial Administration** (III)

*Course adviser:* Dr W. E. Evison

The course in this subject covers a wide range of management topics as a background study suitable for staff occupying positions of responsibility in all types of industry.

**Section A** will be held on Wednesday mornings, with alternate evening classes on Mondays. This section deals with the development of industrial organisation and its relationship with economics, law and accounting.

**Section B** will be held on Wednesday afternoons with alternative evening classes on the same day. This section deals with the internal aspects of industrial management.

This part-time course for an endorsement to a Higher National Certificate/Diploma in Mechanical Engineering, may qualify for exemption from Part III of the examination of the Institution of Mechanical Engineers provided (*a*) the course extends over two College sessions, (*b*) no more than one of the two assessed examinations is taken at the end of the first session (both may be taken at the end of the second session), and (*c*) a credit pass of 50 per cent. is achieved in each examination.

Students in the course for the Institute of Cost and Works Accountants may take these classes as part of their Part I course.

## Business Studies Courses

**The Certificate in Office Studies** (I)

*Course adviser:* A. G. Cottom

This is a two-year part-time day course for a national award designed for young office workers who wish to pursue courses of further education but who do not possess the necessary General Certificate or other qualifications required for entry to a course leading to the Ordinary National Certificate in Business Studies. The normal age of entry to the course will be 16 years. While no formal academic standard of entry is prescribed students will normally be expected to have completed (*a*) a five-year course of secondary education *or* (*b*) a four-year course of secondary education and a one-year full-time or part-time day or evening course of further education.

To qualify for the award of the certificate the student must have (*a*) made not less than 60% of the possible attendances in each year of the course and (*b*) obtained not less than 40% of the possible marks in each subject of the examination. Students who obtain 60% or more of the total possible marks in any one subject will be awarded a credit in that subject.

*Curriculum:* English and general studies, clerical duties, book-keeping, social studies.

The first year of this certificate course will meet on Wednesdays. The second year course will meet on Mondays.

*Final qualification:* U.L.C.I. Certificate at the end of the second year of the course.

**Ordinary National Certificate in Business Studies** (II)

*Course adviser:* E. Schofield

This is a two-year course in basic training designed to give a student a general education for business covering law, accounting and economics and related subjects. The National Certificate is awarded by a Joint Committee consisting of representatives of the Department of Education and Science and of the principal Educational and Professional Bodies connected with Commerce. The award is based upon satisfactory attendance and home-work records and the passing of appropriate examinations at the end of each year of the course. The examining body is the Union of Lancashire and Cheshire Institutes.

Students on entry must have reached the age of 16 and (1) hold a General Certificate of Education at 'O' level in English and three other subjects from mathematics, geography, history, a language other than English, science, commerce, *or* (2) have passed some other examination of equivalent standard.

Holders of an Ordinary National Certificate in Business Studies may claim exemption from the Preliminary Examination and certain subjects of the Intermediate Examination of a number of professional bodies provided that candidates achieve an adequate percentage of marks in the O.N.C. examinations. This concession is already granted by the: Association of Certified and Corporate Accountants; Institute of Bankers; Chartered Institute of Secretaries; Chartered Insurance Institute; Corporation of Secretaries; Institute of Cost and Works Accountants; Institute of Export; Institute of Municipal Treasurers and Accountants; Institute of Transport; Institute of Marketing.

**The first year course** will be held on Fridays. *Curriculum:* accounting 1, economic history, elements of statistics, structure of commerce.

*Examinations:* U.L.C.I. externally assessed if desired

**The second year course** will be held on Tuesday evenings and all day Thursdays. *Curriculum:* accounting 2, English, economics, general principles of law, extended essay.

*Examinations:* U.L.C.I., externally assessed

**Teachers' Certificates in Shorthand and Typewriting** (III NP)

*Course adviser:* Mrs B. D. Cave

These two courses are intended for students who have already developed a high degree of skill in these subjects, *viz:* shorthand 80–100 w.p.m. or typewriting 35–40 w.p.m. The courses prepare students for the Certificate Examinations of the Royal Society of Arts.

A student may enrol for the Teachers' Certificate Course in both Shorthand and Typewriting, but the regulations of the R.S.A. prevent any candidate from qualifying for both certificates during the same examination series.

The teachers' group will meet on Mondays: *Curriculum:* principles of teaching shorthand, principles of the shorthand system, general principles of teaching, typewriting technique, principles of teaching typewriting.

A copy of the regulations relating to these examinations may be obtained on application to the Examinations Officer, Royal Society of Arts, Murray Road, St. Paul's Cray, Kent, or from 18 Adam Street, Adelphi, London W.C.2.

**Office Skills** (1)

*Course advisers:* Mrs B. D. Cave and Mrs T. M. Stableford

These courses extend over a period of at least three years and at the end of each session students take the group course examinations of the U.L.C.I.

or the R.S.A. English is an integral part of all first and second year courses in shorthand and typewriting. All students in such courses must include English both in their courses and in their examinations. Students holding a G.C.E. in English at 'O' level are not exempt from this provision.

The instruction in typewriting in each of the following courses will include the use of electric typewriters in addition to manual machines and will also include audio-typewriting using a variety of modern dictating machines.

A range of grouped courses will be held in English, office practice, and shorthand and typewriting at various speeds.

**1st Year**: part-time day courses will be held on Monday and Friday afternoons and Wednesday evenings.

**2nd Year**: part-time day courses will be held on Tuesday and Thursday afternoons and Friday evenings.

**3rd Year**: part-time day classes will be held on Tuesday and Wednesday afternoons and Thursday evenings.

**Shorthand Typists' Proficiency Certificate** (I)

This proficiency certificate is offered by the U.L.C.I. to candidates who pass at one sitting an integrated examination in English, shorthand and typewriting. There will be one examination of 3 hours' duration and the answers to all questions will be typewritten. Candidates will be required to pass in both Section A and Section B. Section A will include questions to test the candidate's ability to use English.

**Secretarial Diploma Course** (II)

This diploma is offered by the U.L.C.I. to candidates who pass the examination at one sitting in (i) private secretarial work and office organisation, and (ii) shorthand (130 w.p.m.) with advanced typewriting.

Students who do not propose to offer themselves for the full diploma may join the course provided that they can already write shorthand at 100 w.p.m. The examination in shorthand with advanced typewriting will be divided into two sections and candidates will be required to pass in both Section A and Section B.

**Section A**: Dictation and typewritten transcription of (*a*) a letter of 65 words at 130 w.p.m., (*b*) a letter of 130 words at 130 w.p.m., (*c*) a letter of 240 words at 120 w.p.m. and (*d*) a report (four minutes duration at 120 w.p.m.).

**Section B**: (*a*) a typewriting speed test at 50 w.p.m. for 10 minutes, (*b*) a letter composed from dictated notes of reply, and (*c*) a manuscript tabulation.

## Special Courses

Courses of an intensive and practical nature are offered from time to time during each session on special topics related to management, office organisation, accounting, work study, cost reduction, budgetary control etc. Enrolment into Special Courses will take place separately from the normal enrolment procedure.

Arrangements are being made to hold the following programme of short courses during the 1967–68 session:

*Production Control:* one half day per week for eight weeks between Monday 2nd October and 20th November, 1967.

*Economics for the Businessman:* one day per week for six weeks between Friday 10th November and 15th December, 1967.

*Legal Aspects of Business:* one day per week for three weeks between Friday 19th January and 2nd February, 1968.

*Work Study:* one day per week for six weeks between Monday 15th January, and 19th February, 1968.

*Sales and Marketing Policy:* one day per week for five weeks between Thursday 8th February and 7th March, 1968.

*Personnel Management:* one day per week for six weeks between Tuesday 6th February and 12th March, 1968.

*Financial Control:* one day per week for six weeks between Friday 1st March and 5th April, 1968

*Job Analysis:* one day per week for three weeks between Wednesday 20th March and 3rd April, 1968.

*Planned Maintenance:* one day per week for four weeks between Friday 26th April and 17th May, 1968.

*Systems Analysis:* one day per week for six weeks between Monday 22nd April and 27th May, 1968.

*Modern Management Techniques:* one day per week for six weeks between Tuesday 23rd April and 28th May, 1968.

Special leaflets giving more details of each of the above courses and providing a detailed programme will be available within the two or three weeks preceding the start of each course. Such leaflets and application forms can be obtained from the Head of Department.

The number of people admitted to these courses is limited in order to provide useful working groups.

## Administrative Staff

| | |
|---|---|
| *Registrar* | J. Barnacle, D.M.A., F.C.C.S. |
| *Senior Clerks* | E. D. Hardman (Finance and Accounts) |
| | B. Stott (Examinations and Records) |
| *Secretary to the Principal* | Miss F. M. Jones |
| *Section Clerks* | Mrs K. M. Glynn (Accommodation) |
| | Miss E. Stobbart (Services) |
| *Clerks* | Mrs P. K. Hall |
| | Mrs K. Howarth |
| | Mrs D. Hurst |
| | Miss K. Lucas |
| | Mrs B. Metcalf (Secretary to the Industrial Liaison Officer) |
| | Mrs M. A. Simpson |
| | Miss J. H. Slee |
| | Mrs D. M. Sturzaker |
| | Mrs P. Tinsley |
| | Miss C. Tyrer |
| | Miss J. K. Watt |
| *Telephonists* | Mrs B. J. Baker |
| | Mrs P. B. Bamford |
| *Cashiers* | Mrs R. Doherty |
| | Mrs M. Marland |
| *Equipment Maintenance* | E. Goodson (Chief Engineer) |
| | E. Davis |
| | R. Holmes |
| *Refectory* | Mrs M. Hamlyn White (Catering Manageress) |
| | Miss E. Grunshaw (Assistant) |
| *Custodian of Premises* | W. H. Hatton |
| *Caretaker* | L. Whalley (Avenham premises) |
| *Assistant Caretakers* | V. Baron |
| | W. J. Butler |
| | G. Holden |
| | H. Mee |
| | H. Nicholls |
| | W. Pullan |

| | |
|---|---|
| *Assistant Caretakers* | W. Saunders |
| *(contd.)* | J. Walton |
| | T. K. Wharton |
| *Groundsman* | G. Cowell |
| *Watchmen* | S. Dixon |
| | F. Miller |
| | D. Postlethwaite |

## Calendar

| | | |
|---|---|---|
| 1967 | Thursday, 14th September | General Staff Meeting |
| | ENROLMENT PERIOD | |
| | Monday, 18th September | Enrolment, first day |
| | Tuesday, 19th September | Enrolment, second day |
| | Wednesday, 20th September | Enrolment, last day |
| | AUTUMN TERM | |
| | Monday, 25th September | All day and evening classes commence for the Autumn term |
| | Wednesday, 20th December | All departments close for Christmas after evening classes |
| | SPRING TERM | |
| 1968 | Thursday, 4th January | All classes re-open for the Spring term |
| | Tuesday, 13th February | Foundation Address and Distribution of Awards: all evening classes closed |
| | Friday, 5th April | All departments close for Easter after evening classes |
| | SUMMER TERM | |
| | Monday, 22nd April | All classes re-open for the Summer term |
| | Friday, 31st May | All departments close for Whitsuntide after evening classes |
| | Monday, 10th June | All classes re-open |
| | Friday, 5th July | All classes close: end of session |
| | Friday, 12th July | End of term: submission of reports |

*Note:* There are other important dates with which students must be familiar, for example closing dates for receipt of examination entries, commencement and termination of sandwich and block release courses. These will be found in the appropriate sections of the prospectus.

## Admission to Courses and Examinations

Courses will be provided subject to adequate enrolment; they may be discontinued at the discretion of the Principal at any time during the session should the numbers attending fall below a reasonable level.

The acceptance of a student into a course must have the approval of a Head of Department, and the student must produce satisfactory evidence that he has the necessary qualifications to enter the course.

Full-time and sandwich course students should make application well before the commencement of the session on the form obtainable from the Registrar.

At enrolment each student will receive an admission form bearing an admission number. This form must be shown to the class lecturer when the student attends each class for the first time in the session. Students will not be permitted to attend classes until they have completed the enrolment procedure (see page 42).

To qualify for certificates and to pass on to higher years of a course it is necessary that students should have:

(*a*) reached a prescribed standard of attainment, tested by examinations held at the end of the session, and

(*b*) made satisfactory attendance and progress during the session.

EXAMINATIONS

All Students are required to take prescribed internal or external examinations at the end of each year of the course.

Examination fees must be paid by students at the time of entry to examinations: accounts cannot be sent to employers or grant-aiding Authorities. There are no fees for purely internal examinations of the College.

Students who take the examinations of external examining bodies (*e.g.* the Union of Lancashire and Cheshire Institutes, the Royal Society of Arts, the City and Guilds of London Institute) or General Certificate of Education examinations, must pay the examination fees of these bodies.

Each student entering the final examination for Ordinary or Higher National Diplomas and Certificates must pay an entry fee of 7s. 6d. per

subject, in addition to the examination fee charged by the external examining body whose examinations are adopted. In the event of a Joint Committee agreeing to the re-examination of a student in a subject, the student will be required to pay the full cost of the re-examination, or to share the cost proportionately should more than one student be involved in the same re-examination.

Each student is responsible for his own entry to external examinations and must complete the appropriate entry form and present it with the fee to the College office. Students will not be informed individually of the last dates of entry or of timetables of examinations, but these will be published on notice boards. The last dates of entry for the undermentioned examinations are:

Assessed papers for National Diplomas and Certificates, including endorsements: 15th December, 1967

City and Guilds of London Institute: 19th January, 1968

Union of Lancashire and Cheshire Institutes, series B and C: 2nd February, 1968

General Certificate of Education papers (N.U.J.M.B.): 9th February, 1968

Institute of Linguists: 1st March, 1968

Pitmans: 15th March, 1968

Training Council for Teachers of the Mentally Handicapped: 5th April, 1968

Royal Society of Arts, Summer Series: 26th April, 1968

Students who do not enter by these dates may well be excluded from taking the examinations, and even if accepted late fees are payable ranging from 10s. to £10. 0s. 0d.

### EXAMINATION RESULTS

Sessional Reports will include examination results, but they cannot be completed until after the results are received from external examining bodies. Reports are then sent to each student as soon as possible. It is regretted that in the meantime enquiries cannot be answered. Copies of external examination pass lists will be made available for scrutiny on the College notice board as soon as possible after they are received.

## Tuition Fees

Sessional tuition fees must be paid at the time of enrolment and are returnable only in exceptional cases. Cheques should be made payable to the Corporation of Preston and crossed.

A student whose employer undertakes to pay the fee on his behalf must produce at enrolment a letter from his employer to that effect.

Part-time students from the administrative counties of Lancashire and Westmorland and all students from Wigan County Borough under age 18 on the 1st September will be enrolled without payment of the tuition fee.

| **Full-time and Sandwich Courses** | Students under age 18 on 1st September | | | Students age 18 and over on 1st September | | |
|---|---|---|---|---|---|---|
| | £ | s. | d. | £ | s. | d. |
| Bachelor of Science (Economics) | 55 | 2 | 6 | 56 | 10 | 0 |
| Higher National Diploma in Business Studies | 36 | 17 | 6 | 38 | 5 | 0 |
| Ordinary National Diploma in Business Studies | 30 | 2 | 6 | 31 | 10 | 0 |
| Day Secretarial | 30 | 2 | 6 | 31 | 10 | 0 |

| **Block Release Courses** | | All age groups | | |
|---|---|---|---|---|
| | | £ | s. | d. |
| Journalists: | 1st year | 4 | 2 | 6 |
| | 2nd year | 6 | 17 | 6 |
| Chartered Accountants | | 3 | 10 | 0 |

| **Part-time Courses** | Students under age 21 on 1st September | | | Students age 21 and over on 1st September | | |
|---|---|---|---|---|---|---|
| | £ | s. | d. | £ | s. | d. |
| Group I (introductory level) | 1 | 7 | 6 | 2 | 12 | 6 |
| Group II (intermediate level) | 1 | 17 | 6 | 2 | 17 | 6 |
| Group III (advanced level) | 2 | 12 | 6 | 3 | 2 | 6 |

OVERSEAS STUDENTS

Students from outside the United Kingdom attending full-time and sandwich courses are required to pay special fees. Details of these can be obtained from the Registrar.

RESIDENTIAL LIBERAL STUDIES COURSES

As an integral part of their studies, students in certain advanced full-time and sandwich courses will normally attend each year a three-day residential course. The fee is approximately £3. 10s. 0d. which must be paid by the student. Students in receipt of Local Authority grants will in most cases be reimbursed all or part of the cost by their supporting authorities.

GRANTS

Full-time or College-based Sandwich Course students may apply to the Local Education Authority for the area in which they permanently reside for a grant of fees and maintenance. Works-based Sandwich Course students may also be eligible for financial assistance where the employer does not pay fees or wages during the College periods of a course, or where only partial financial support is offered by the employer.

NOTE TO LOCAL AUTHORITIES

The course grade designation (III NP) indicates an advanced course which is not poolable under D.E.S. regulations. In respect of these courses the normal recoupment procedure will apply.

# Enrolment

Students will be enrolled between the times: 10.0 a.m. to 12.30 p.m., 1.30 to 4.30 p.m. and 5.30 to 8.30 p.m. on the following days:

Monday, 18th September, 1967
Tuesday, 19th September, 1967
Wednesday, 20th September, 1967

Students must enrol during the times and on the dates stated; those who fail to enrol on these dates will be charged a late fee of 10s. 0d. The busiest enrolment periods are in the evenings; students who can enrol during the morning or afternoon periods will help the College and save themselves an appreciable amount of time.

Postal enrolments cannot be accepted.

Enrolment into special courses takes place separately from the procedure detailed on this page. (see page 33).

A student who wishes to enrol into a course demanding entry qualifications must produce documentary evidence at or before enrolment. Documentary evidence is not required in respect of students who have gained their qualifications at the Harris College.

PERMISSION VOUCHERS: all students resident in the County Borough of Preston or in the administrative area of Lancashire County, and part-time students resident in the County Borough of Wigan, will be admitted without the production of an inter-authority voucher. *All other students* must obtain permission vouchers each year from their Local Education Authorities and present them at enrolment.

**Enrolment procedure**

Students should first report to the department in which they wish to enrol. The plan of the College on the opposite page shows the blocks in which departments are situated. The rooms in which enrolment takes place in each department are shown in brackets below, *viz:*

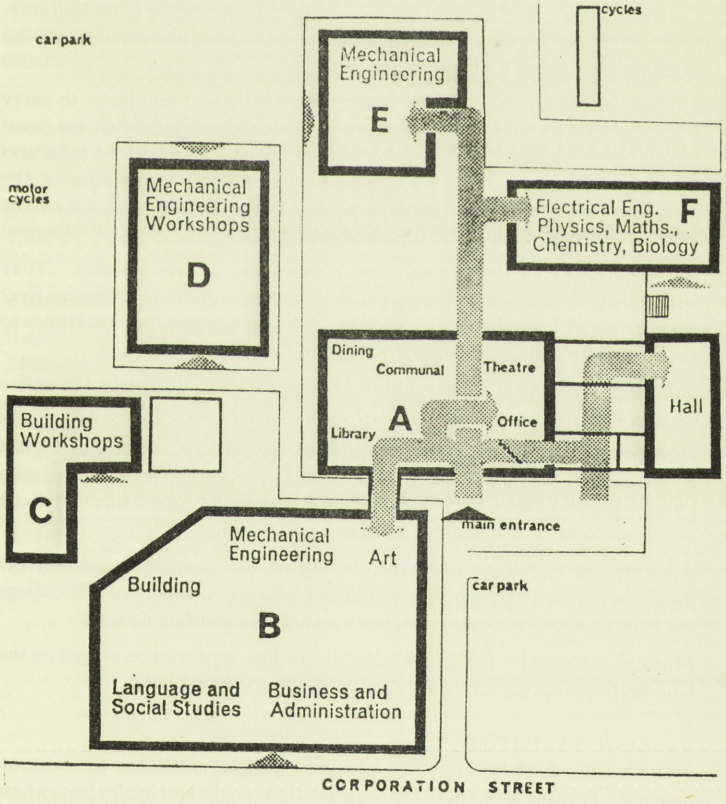
B BLOCK
School of Art (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52 and B55)

E BLOCK
Mechanical, Civil and Production Engineering Department (new students E1, former students E9)

F BLOCK
Chemistry and Biology Department (F37)
Electrical Engineering Department (F8, F9 and F10)
Physics and Mathematics Department (courses which include chemistry F35 and F37: other courses F26)

A BLOCK
College Office and enquiries

*When details of his future course have been determined in the department the student must present his enrolment forms at the Hall (A Block) for enrolment and payment of fees.*



DISCIPLINE

Students are accepted into College courses on the understanding that they abide by the regulations herein and from time to time in force.

The Principal has the authority to suspend students from attendance for any cause which he considers adequate. The Council will exclude from the College premises any student whose continued attendance is undesirable. Suspended or excluded students automatically lose membership of the students' union and College societies.

Students are required to attend classes punctually and regularly, to carry out satisfactorily such work as is set by their tutors, and to sit the prescribed examinations. Employers who grant release to students to attend College courses will, after the fourth week of session, be notified of the absence of their employees, and as soon as possible after the end of the course will receive copies of sessional reports.

Students must conduct themselves in a quiet and orderly manner. They will be held responsible for and required to make good any damage they may cause due to negligence or wilfulness. They are expected at all times to keep the College tidy and free from litter.

Smoking within the College buildings is prohibited, except in the coffee lounge, staff rooms, common rooms, and assembly areas at permitted times.

Hot cooked foods must not be brought into the College, and food must not be consumed on the premises other than in the dining room and coffee lounge. Students who wish to bring packed meals may do so but they must take their meals at the fixed tables in the coffee lounge.

All forms of gambling and card playing on the premises or within the precincts are strictly prohibited. Students who are members of the college card club may, by arrangement, use the students' meeting room.

Musical instruments, including transistor radios, must not be played on the College premises except by arrangement with the Principal.

PARKING FACILITIES

The College does not possess adequate parking facilities to meet all demands. Parking is restricted to the official car parks and cycle sheds where vehicles may be left at the owners' risk.

Students must travel very slowly in the College precincts, and should use the entrance nearest to the point of parking. They must not drive around or within the College premises in break periods. Roadways must be kept clear in case of emergencies.

### PERSONAL PROPERTY

The Council cannot accept responsibility for the safety of students' property. Property found on the premises will be handed to the Custodian of Premises, and students wishing to reclaim lost property should address enquiries to the Custodian.

Cloak lockers are available in all departments for students' use. Full-time, sandwich and block release course students may be allocated lockers for the duration of the course. Part-time students may use a locker during the day and/or evening spent in the College but must remove locker contents and padlocks when leaving the College for the day. Lockers should be secured by the students' own padlocks.

Lockers must be left empty and unlocked at the end of a course or session, otherwise the locks and contents will be removed.

### HEALTH AND SAFETY

Students are required in the interests of cleanliness, health and safety to provide themselves with the recommended kind of protective clothing which must be worn in workshop and laboratory classes. Workshop and laboratory clothes must not be worn whilst attending lectures or whilst in the communal block.

Students must use all protective devices provided.

Students should not attend the College from a house in which there is infectious illness. Cases should be promptly reported to the Registrar.

### FLOOR PROTECTION

It is regretted that ladies wearing stiletto heels will have to be refused admission to parts of the premises where damage to the floor would result. Ordinary footwear will be permitted in the Hall only when the floor drugget is laid.

COMMUNAL FACILITIES

The Communal Block provides facilities for the educational, social and recreational enjoyment of the students and staff. Besides administrative accommodation and a fully equipped theatre for both lectures and drama, there is a dining room and coffee foyer, a students' common room, students' union office and meeting rooms. The library is situated in this building.

An unusual feature is the Recreation Hall. The hall will be reserved at certain times for examinations, and occasionally for ceremonies or exhibitions, but at other times it is available to student groups, societies, and individuals for games and a very wide variety of physical activities. The bridge over the North courtyard leading to the hall contains changing rooms and showers.

REFECTORY

The dining room is open from 12.15 to 1.30 p.m. for lunch. A selection of courses at various prices is available. Tea or coffee after lunch may be taken in the adjacent coffee foyer.

Light teas or cooked meals are normally available from 4.30 to 7.00 p.m.

In addition to meals, tea or coffee or soft drinks will be available in the coffee foyer during set periods to cover mid-morning and mid-afternoon breaks between classes. Service from trolleys is available elsewhere at the same times.

Staff and students are requested to observe any restrictions on smoking in the refectory premises.

Requests for any special catering should be made in the first instance to the Registrar, well in advance of the occasion.

STATIONERY

The College stationery shop is open on three occasions during the day, namely 8.50 to 9.15 a.m., 1.00 to 2.00 p.m., and 6.45 to 7.15 p.m. Students may purchase the usual items of stationery, and also special laboratory and note books necessary for many courses.

## SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of societies and professional bodies are frequently held in the College.

Notice of the lectures will be displayed in the main entrance foyer during the session. Individual students and members of staff are welcome to attend. Application for groups to attend should be made through the Principal to the local secretary of the organisation.

## NATIONAL DIPLOMA AND CERTIFICATE COURSE REQUIREMENTS

An Ordinary National Diploma is awarded at the end of a two-year senior course of full-time study. A Higher National Diploma is awarded at the end of a further three year advanced course of full-time study.

Ordinary National Certificates and Higher National Certificates are corresponding awards following courses of part-time study.

Awards in each case are made by the Department of Education and Science in conjunction with one or more Professional Institutions. To receive an award a candidate must normally:

(*a*) make not less than 80% of the possible attendances in each subject in each year of the course for the award of a diploma, or 60% for the award of a certificate,

(*b*) obtain not less than 40% of the possible marks in each subject in the examinations held at the end of each year,

(*c*) obtain not less than 40% 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, and

(*d*) obtain not less than 50% of the grand total of marks obtainable in the final year. Of this total the possible marks in the examinations constitute 70% and the remaining 30% will be the possible marks for home work, class work, laboratory work, etc.

A 'Distinction' may be awarded to any candidate qualified to receive a diploma or certificate who, in the opinion of the examiners, has shown special merit in the final examination. His certificate will be specially endorsed with the name(s) of the subject(s) in which he has thus distinguished himself.

## CHANGE IN STUDENT PARTICULARS

Changes during the session should be notified immediately to the Registrar on the form available from the College office, for example: change of address, change of employer, change of name on marriage.

## ABSENCES

In the event of absences from classes because of illness or other unavoidable causes a note of explanation should be sent to the Head of Depart-

ment. A student who absents himself for a continuous period of four weeks without the approval of the Head of Department will be deemed to have left the course and his name will be removed from the register.

### OUTSIDE ACCOMMODATION

Shortage of accommodation makes it necessary for some classes to be held in the following premises: Avenham (School of Art Annexe); Blackburn and East Lancashire Royal Infirmary; Blood Transfusion Unit, Lancaster; Cheviot Street Workshop (off Strand Road); Deepdale County Secondary School; Lancashire County Institute of Agriculture, Hutton; N.W.G.B. Training Centre, Moor Lane, Preston; Preston Royal Infirmary; G.P.O. Telephone House, Moor Lane, Preston; and Trinity County Secondary School.

## The Library

Telephone: Preston 51831, ext. 15

| | |
|---|---|
| *Librarian* | A. Lawrence, A.L.A. |
| *Assistant Librarians* | Mrs M. Pye, A.L.A. |
| | Mrs S. M. Hunt |
| *Library Assistants* | Miss J. E Bamford |
| | Mrs I. M. Fuller |

The College library is available to all students for reference purposes. 360 technical journals are received annually in addition to the development of the book stock. An up-to-date set of British Standard Specifications is maintained.

The library is open from Monday to Friday at the following times:

*During term time:* 9.00 a.m. to 9.00 p.m.
*During vacations:* 9.00 a.m. to 5.30 p.m.

The library has facilities for photocopying, and students may obtain copies of pages of books and periodicals subject to the law of copyright. A charge is made for this service.

The library is a local agent for the National Lending Library of Science and Technology, a member of ASLIB and the North Western Regional Library System, and may be able to obtain through these organisations items not in its own stock.

## Physical Education and Recreation

Telephone: Preston 51831, ext. 27

| | |
|---|---|
| *Lecturer* | C. M. Robinson, D.L.C. |
| *Assistant Lecturers* | J. Gridley, A.G.A. |
| | Mrs B. J. Harrison, DIP.P.E., DARTFORD COLLEGE |
| *Visiting Lecturers* | A. Lewis |
| | R. Poole |
| | A. Spavin |
| | D. Stokes |
| | B. Strettle, B.J.A. |
| | G. Wilson, N.A.B.B.A. |
| | S. Wright, B.J.A. |

The Recreation Hall is equipped with fixed apparatus which, together with portable apparatus and equipment the College possesses, allows the pursuit of the following activities: athletics, badminton, basket ball, canoeing and sailing, cricket, dance, fencing, five-a-side football, golf, judo, mountaineering, netball, olympic gymnastics, padder tennis, soccer and rugby training, table tennis, trampolining, volley ball, weight training and lifting.

The recreational facilities of the College are available to all students enrolled into an academic course without payment of a further fee. Anyone interested in any of the activities detailed should contact the Lecturer in Physical Education at enrolment or as soon as possible afterwards. College sports clubs, affiliated to the students' union, are given priority in the evenings.

Lectures and films on a variety of activities, and inter-departmental and inter-College tournaments and competitions, are arranged throughout the session.

The mountaineering club arranges visits to the Lake District and North Wales for rock climbing, rambling and canoeing. For full-time students one week courses in mountain activities are arranged. From time to time arrangements are made for parties to engage in outdoor activities in vacation periods, for example ski-ing, rock climbing, canoeing, pony trekking, etc.

### REGIONAL AND NATIONAL SPORTS ACTIVITIES

The College is a centre for regional and national sports tournaments in badminton, table tennis and trampolining. It is also an Olympic Gym-

nastics Centre; the College gymnastic team competes in the National Team Championships of Great Britain and has also competed abroad.

### RESEARCH

The Physical Education Section in conjunction with the Department of Chemistry and Biology is undertaking research into the effects of different types of exercise on the heart and lungs, and a number of volunteer groups of students are co-operating.

### SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's eight academic departments. Persons not registered as students for academic courses may be admitted to certain scheduled classes in physical education, so far as places are available.The tuition fee payable is £1. 7s. 6d. if under age 21 on the 1st September or £2. 12s. 6d. if age 21 or over.

In order to give academic course students priority, persons who wish to enrol for physical education classes alone are not accepted until the fourth week in the session. No person may be admitted to these classes who is less than 16 years of age on the 1st September.

## Harris Students' Union

Telephone: Preston 53852

B. Hayes, *President*
A. England, *Vice-President*
Miss S. Standing, *Vice-President* (*female students*)
A. Kimm, *Secretary*
I. Horne, *Student Treasurer*
D. Swift, *Honorary Treasurer*

The Harris Students' Union is organised and governed by students, and is affiliated to the National Union of Students. It arranges general social activities, provides a means of helping the formation of student societies, and maintains contact with the students of other colleges. The union is financed by a grant from the Harris Council.

All students other than those enrolled in special courses are automatically admitted to membership of the students' union. A membership card will be issued at enrolment entitling students to participate in all social activities, to join any student society or club, and to vote in the election of members to the Executive Committee.

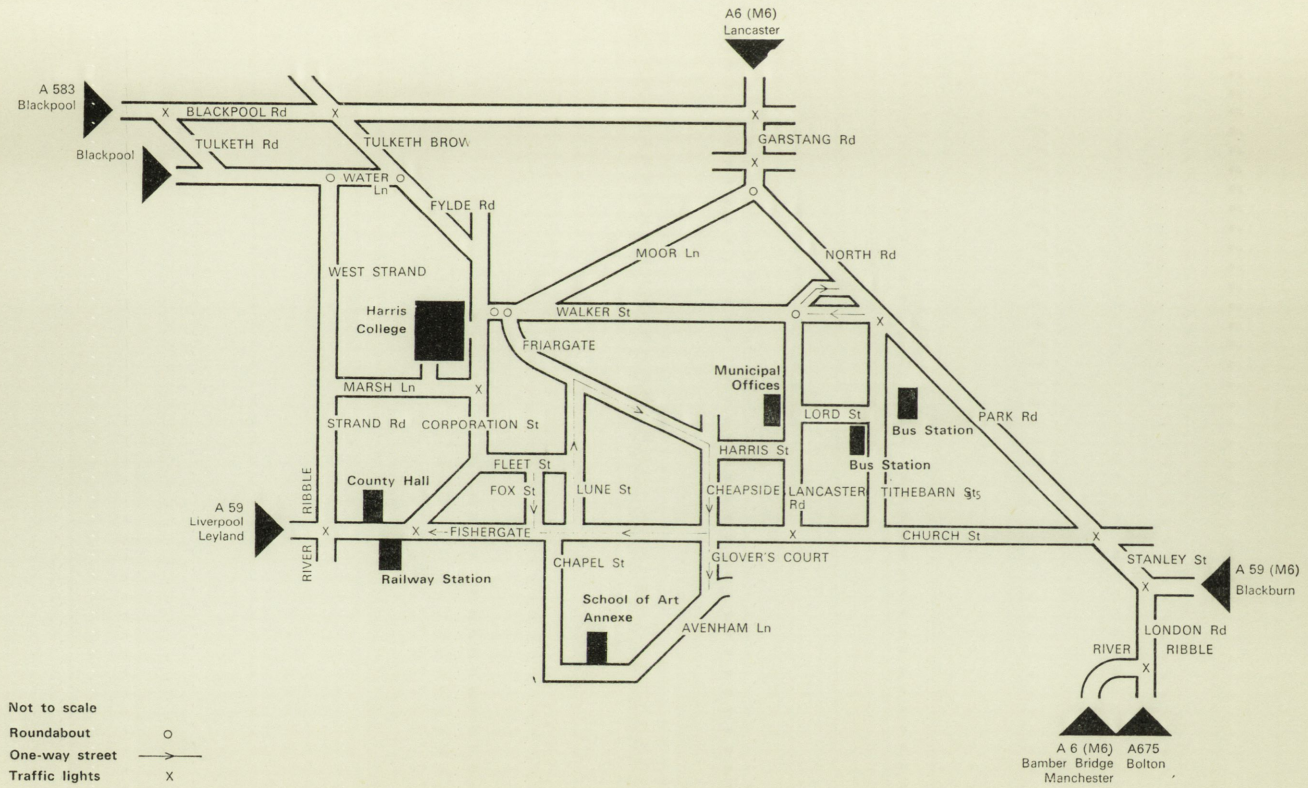
All clubs and societies in the College are affiliated to the Students' Union, and special subscriptions may be required for membership of particular clubs and societies. A Students' Union Handbook, issued free to members, describes the activities of the union.

Dances and other social events are regularly arranged in the College and in the town. A common room and an office are allocated exclusively for the use of students and recreational facilities are available elsewhere by arrangement with the Lecturer in Physical Education.

Enquiries concerning student activities should be addressed to the Secretary, Harris Students' Union, Corporation Street, Preston.

**College Colours**

A Harris College blazer badge, scarf and tie, designed by the School of Art and Design and approved by the College Governors, are on sale at Messrs. Hellewells, Lune Street, Preston. Prices: 8s. 11d., 28s. 6d. and 8s. 6d. each respectively.


A6 (M6)
Lancaster
A 583
Blackpool
BLACKPOOL Rd
TULKETH Rd
TULKETH BROW
Blackpool
GARSTANG Rd
WATER Ln
FYLDE Rd
MOOR Ln
NORTH Rd
WEST STRAND
Harris College
WALKER St
FRIARGATE
Municipal Offices
MARSH Ln
LORD St
Bus Station
PARK Rd
STRAND Rd
CORPORATION St
HARRIS St
FLEET St
Bus Station
County Hall
FOX St
LUNE St
CHEAPSIDE
LANCASTER Rd
TITHEBARN St
A 59
Liverpool
Leyland
RIBBLE
FISHERGATE
CHURCH St
STANLEY St
A 59 (M6)
Blackburn
RIVER
Railway Station
CHAPEL St
GLOVER'S COURT
School of Art Annexe
AVENHAM Ln
LONDON Rd
RIVER
RIBBLE
A 6 (M6)
Bamber Bridge
Manchester
A675
Bolton
Not to scale
Roundabout
One-way street
Traffic lights

Harris College **Department of Building 1967–68**

**Harris College, Corporation Street, Preston, Lancashire**
**Telephone: Preston 51831–5**

*Foundation.* On the 4th April, 1956, the Minister of Education made a scheme for the establishment of the Harris College of Further Education, formerly the Harris Institute (comprising the Harris Technical College and the School of Art). In the terms of this scheme, and a later amendment to it, the College is housed in premises provided and maintained by the County Borough of Preston and is governed by the Harris Council of twenty-eight members; namely nine members of Preston Education Committee, nine members appointed by Lancashire Education Authority, nine members representative of industry and commerce, and one member representative of the Universities.

**The Harris Council**

*President:* Alderman W. Beckett, O.B.E., J.P.

*Vice-President:* Councillor J. Hargreaves

*Members:*

Alderman J. Atkinson
Alderman Mrs D. M. Dewhurst, J.P.
Alderman J. F. Gray
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker, J.P. (The Right Worshipful the Mayor of Preston)
Councillor Mrs K. E. Crozier
Councillor T. Dewhurst
Councillor Mrs R. Lytton
Alderman Sir Fred Longworth (Vice Chairman of Lancashire County Council)
Alderman J. Bradley, M.B.E., J.P.
Councillor T. V. Brown
Councillor C. W. Eastwood
F. Ley
Councillor A. J. Whittall
Councillor Mrs W. Winn
Councillor G. Woods

F. D. Crowe, B.SC.(ENG)., A.F.R.AE.S.
Professor E. Roland Dobbs
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., A.M.I.MECH.E.
P. D. Oakley, B.SC., F.R.I.C.
H. Rogan, O.B.E., B.SC., PH.D., F.R.I.C.
Alderman J. W. Taylor, J.P., F.C.I.S.
J. W. Walker

*Clerk to the Council:* W. R. Tuson, B.SC., Chief Education Officer, Preston

**Research Council**

The research council is a sub-committee of the Harris Council charged with the promotion of research and the administration of research funds.

*Chairman:*
Alderman W. Beckett, O.B.E., J.P., *President of the Harris Council*

*Members:*
Councillor J. Hargreaves, *Vice-President of the Harris Council*
Professor E. Roland Dobbs, *University of Lancaster*
J. Jones, A.M.I.MECH.E.
Dr P. R. Lancaster, *University of Bradford*
W. J. R. Merren, M.A., B.SC., *Director of Research, Pilkington Research Laboratories*
Dr K. Morgan, *University of Lancaster*
P. D. Oakley, B.SC., F.R.I.C., *Member of the Harris Council*
Dr H. Wilkinson, *Principal of the Harris College*
Dr S. Skidmore, *Vice-Principal of the Harris College*

**Principal**: H. Wilkinson, M.SC.TECH., PH.D., A.INST.P.

**Vice-Principal**: S. Skidmore, B.SC., PH.D.(LONDON), F.R.I.C.

*Registrar:* J. Barnacle, D.M.A., F.C.C.S.

*The Harris College* is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are eight teaching departments in the College: the School of Art, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical Engineering, Language and Social Studies, Mechanical Civil and Production Engineering, Physics and Mathematics. All are newly housed, and the facilities include a combined Lecture Hall and Theatre, a Recreation Hall, Student Common Rooms, Library and Refectory.

Strong links exist between the College, Industry and Commerce and these have helped the development of sandwich courses leading to professional qualifications. Extension of these courses into other professional fields of activity is planned. Short courses on specialist or advanced topics are arranged regularly in all departments of the College. Research and consultancy are important features of the work of the College, and the recent appointment of an Industrial Liaison Officer is expected to increase and widen the range of these activities.

*The Department of Building* provides courses leading to the Higher National Certificate in Building, the Full Technological Certificate in Building Crafts, Associateship of the Institute of Works and Highways Superintendents and the Construction Technicians' Certificate. An Ordinary National Diploma in Building course is provided and approval is being sought to offer a Higher National Diploma course.

Types of courses offered are full-time, sandwich, block release, part-time day release and evening. In sandwich courses, arrangements are made with industry to place students for the industrial training periods of the course. Local Education Authorities are prepared to consider applications from full-time and sandwich course students for financial assistance.

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## Department of Building

Telephone: Preston 51831, ext. 33

| | |
|---|---|
| *Head of Department* | J. G. V. Proudman, A.M.C.T., A.I.O.B. |
| *Senior Lecturer* | K. Redhouse, A.I.O.B., M.R.S.H. |
| *Lecturers* | S. R. Cardwell, A.I.A.S., A.I.O.B. |
| | W. S. Hunter, A.I.O.B. |
| *Assistant Lecturers* | R. Abrahams, A.M.INST.W.H.S. |
| | W. Bell, L.I.O.B. |
| | T. H. Bower, A.B.I.C.C., A.R.S.H. |
| | B. Coyne |
| | T. H. Crisp, M.I.B.S.M., A.M.INST.W.H.S. |
| | J. Cross, A.B.I.C.C. |
| | J. Lindley |
| | L. J. Pulford, M.R.S.H., M.R.P.A. |
| *Technicians* | W. A. Crossley |
| | B. L. Lush |
| *Steward* | J. W. Swarbrick |

## List of Courses


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**Ordinary National Diploma in Building** (II)

*Course adviser:* K. Redhouse

A two-year sandwich course providing initial education and training for careers in the construction industry and for those students wishing to proceed to advanced courses in general or specialist fields. The curriculum is broadly designed to suit the needs of students who, with subsequent advanced study, will occupy such positions as Builders' Manager, Agent, Surveyor, Estimator, Building Inspector, Architectural Technician, etc., and who may aspire to professional status.

In the first session students will spend two terms in full-time study at the College, followed by up to six months in gaining practical experience of site and/or office work. The second session will consist of full-time study at the College.

*Qualifications for entry:* the General Certificate of Education at 'O' level in four subjects including mathematics, an appropriate science, and two other subjects one of which must require a facility in written English, *or* the Certificate of Secondary Education, Grade I, in appropriate subjects, *or* satisfactory completion of the General Course in Construction with credit in mathematics and in either science, construction processes, materials or construction drawing, and a pass in any other of these subjects provided that science is included at either pass or credit level. The normal minimum age at entry is 16 years.

**1st Year** *Tutor:* K. Redhouse. *Curriculum:* technology of construction, related studies, drawing office practice, elements of surveying, science and properties of materials, mechanics, mathematics, liberal studies, physical education.

*College course:* September to April (26 weeks)

*Examinations:* internal

**2nd Year** *Tutor:* K. Redhouse. *Curriculum:* technology of construction, materials, structures, measurement of building work, economics, accounting, law, science, mathematics, liberal studies, physical education.

*College course:* September to June (36 weeks)

*Examinations:* internal, externally assessed

*Final qualification:* Ordinary National Diploma in Building

**Pre-Diploma in Building** (1)

*Tutor:* S. R. Cardwell

A one-year full-time course to prepare students for examinations which qualify for entry to the Ordinary National Diploma Course.

*Qualifications for entry:* satisfactory completion of a five-year secondary education up to the age of 16 years, including the study of mathematics and science.

*Curriculum:* technology of construction, processes and materials, construction and geometrical drawing, science, mathematics, physics, English, physical recreation.

*Examinations:* G.C.E. 'O' level and/or U.L.C.I. G.2. Course (170) in Construction

*Final qualification:* subjects as appropriate to bring the student's qualifications up to the minimum standard required for entry to the Ordinary National Diploma course in Building

## Block Release Courses

### GAS SERVICE COURSES

*Course adviser:* T. Thornley

These courses provide for progressive study in preparation for the City and Guilds of London Institute's examinations in Gas Fitting and Gas Utilisation. In Gas Fitting the Intermediate examination is taken in the 2nd year and the Final examination in the 3rd year. In Gas Utilisation, the Domestic Utilisation and Commercial and Industrial Utilisation examinations are each taken in separate years. See page 22 for part-time day courses.

**Gas Fitting** (C.G.L.I. 13)

**1st Year** (I). *Tutor:* N. B. Tindale. *Curriculum:* theory and practice, related subjects, calculations, science, geometry, physical education, liberal studies.

*College course:* Group A: Oct—Nov. Jan. Feb—March (8 weeks)
Group B: Aug—Oct. Nov—Dec. Jan. Feb—March (18 weeks)

**2nd Year** (I). *Tutor:* N. B. Tindale. *Curriculum:* theory and practice, related subjects, calculations, science, geometry, liberal studies.

*College course:* Group A: Aug. Oct. Dec. Jan. Mar. Apl. (12 weeks)
Group B: July. Sept. Nov—Dec. Jan. Feb. Mar—Apl. (12 weeks)

*Examinations:* C.G.L.I. Intermediate in Gas Fitting

**3rd Year** (II). *Tutor:* N. B. Tindale. *Curriculum:* theory and practice, related subjects, calculations, science, geometry, liberal studies.

*College course:* Group A: July. Sept. Oct—Nov. Jan. Feb. Mar—Apl. (12 weeks)
Group B: Aug. Oct. Nov. Feb. Mar. Apl. (12 weeks)

*Examinations:* C.G.L.I. Final in Gas Fitting

**Gas Utilisation** (C.G.L.I. 12)

**1st Year** (II). *Tutor:* N. B. Tindale. *Curriculum:* theory of gas utilisation for domestic purposes, with related calculations, science and drawing.

*College course:* July. Sept. Nov. Feb. Mar. May. June (7 weeks)

*Examination:* C.G.L.I. Intermediate in (Domestic) Gas Utilisation

## Part-time Day Courses

**Higher National Certificate in Building** (III)

*Course adviser:* K. Redhouse

A two-year course leading to the award of the Higher National Certificate and to Institute of Builders' qualifications.

*Qualifications for entry:* students admitted to the course must possess either (1) the Ordinary National Certificate/Diploma in Construction or Building, *or* (2) any one of the following awards of the City and Guilds of London Institute provided that, in addition, students have passed the assessed examinations of the O.N.C. scheme in building technology O2, building science O2, and a final college examination in mathematics O1: (*a*) the Full Technological Certificate for building crafts obtained under the C.G.L.I., regulations introduced in 1962 or later, *or* (*b*) the Certificate in General Foremanship Studies, *or* (*c*) the Construction Technicians' Certificate, Part II.

**1st Year.** *Tutor:* K. Redhouse. *Curriculum:* technology of construction, services and equipment, measurement and economics.

*Attendance:* one day and two evenings per week

*Examinations:* internal

**2nd Year.** *Tutor:* K. Redhouse. *Curriculum:* technology of construction, services and equipment, measurement and economics.

*Attendance:* one day and two evenings per week

*Examinations:* internal, externally assessed

*Final qualification:* the Higher National Certificate in Building

**Ordinary National Certificate in Construction** (II)

*Course adviser:* K. Redhouse

A two-year course leading to the award of the Ordinary National Certificate in Construction for students engaged in the Construction Industry or as Architectural Technicians.

*Qualifications for entry:* the General Certificate of Education at 'O' level in four subjects including mathematics, an appropriate science and two other subjects one of which must require a facility in written English, *or* the

Certificate of Secondary Education, Grade 1, in appropriate subjects, *or* the satisfactory completion of the General Course in Construction and the possession of a certificate with credit in mathematics and in either science, construction processes, materials or construction drawing, and a pass in any other of these subjects provided that science is included at either pass or credit level. The normal minimum age at entry is 16 years.

**1st Year** *Tutor:* K. Redhouse. *Curriculum:* technology of construction science, surveying, construction drawing, mathematics, general studies.

*Attendance:* one day and two evenings per week

*Examinations:* internal

**2nd Year** *Tutor:* K. Redhouse. *Curriculum:* technology of construction materials, structures, science, mathematics, accounting.

*Attendance:* one day and two evenings per week

*Examinations:* internal, externally assessed

*Final qualification:* the Ordinary National Certificate in Construction

**Construction Technicians' Certificate** (C.G.L.I. 314)

*Course adviser:* S. R. Cardwell

A four-year course to meet the need of the construction industry for technical staff on the site and in the office who require a sound understanding of the principles of construction, a knowledge of techniques and an appreciation of skills. After successful completion of the course and with appropriate experience the route is open to non-corporate membership of the Institute of Building, Technician class.

*Qualifications for entry:* entrants to the first year of the course must have satisfactorily completed their secondary education, in which mathematics and an appropriate science subject were included in the last year (minimum age 16 years), *or* the first year of the General Construction Course, *or* the first stage of an appropriate craft course to the satisfaction of the Head of Department. Entrants to the second year must have obtained a pass in the first year, *or* possess appropriate G.C.E. 'O' level passes (or equivalents), *or* possess a General Construction Course certificate with passes in construction processes, materials and construction drawing. Entrance to the third year is normally from the second year, but satisfactory completion of the first year of an Ordinary National Certificate course in construction is an acceptable alternative, or a Full Technological Certificate in a building craft.

**1st Year** (I). The first year of the course will be offered only if there is an adequate demand.

**2nd Year** (II). *Tutor:* S. R. Cardwell. *Curriculum:* technology of construction, related subjects, construction drawing, general studies.

*Attendance:* one day and two evenings per week

*Examinations:* C.G.L.I. Construction Technicians' Certificate Part I.

**3rd Year** (II). *Tutor:* S. R. Cardwell. *Curriculum:* construction practice in various types of new building work; maintenance, repair and alteration of existing structures; finishes, services, roads and external pavings. A subsidiary subject such as site surveying, measurement of building work, structural drawing, office work, elements of administration, is also included.

*Attendance:* one day and one evening per week

*Examinations:* internal

**4th Year** (III NP). *Tutor:* S. R. Cardwell. *Curriculum:* construction practice in various types of new building work; maintenance, repair and alteration of existing structures; finishes, services, roads and external pavings. A subsidiary subject such as site surveying, measurement of building work, structural drawing, office work, elements of administration, is also included.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. Construction Technicians' Certificate

*Final qualification:* City and Guilds of London Institute's Construction Technicians' Certificate

**General Course in Construction** (I)

*Tutor:* S. R. Cardwell

A one-year special course for students who will utlimately proceed either to a Construction Technicians' course or a National Certificate course.

*Qualifications for entry:* satisfactory completion of a five-year secondary education up to the age of 16 years, including the study of mathematics and science.

*Curriculum:* technology of construction processes and materials, geometrical and construction drawing, science, mathematics, general studies.

*Attendance:* one and a half day and one evening per week

*Examinations:* U.L.C.I. G2 Construction

*Final qualification:* the U.L.C.I. General Course in Construction Certificate. Note: to be eligible for entry to the National Certificate course it is necessary to hold a General Course in Construction Certificate with credits in mathematics and in either science, construction processes, materials, or construction drawing, and a pass in anyother of these subjects provided that science is included at either pass or credit level.

**Roadworks** (C.G.L.I. 99: I.W.H.S.)

*Course adviser:* W. S. Hunter

The course provides for progressive study in preparation for the City and Guilds of London Institute's examinations (1st, 2nd and 3rd years of the course) and for the intermediate and final examinations of the Institute of Works and Highways Superintendents (3rd and 4th years of the course).

**1st Year** (I). *Tutor:* R. Abrahams. *Curriculum:* technology of roadway and footway construction with related science, calculations, geometry and construction drawing.

*Attendance:* one day per week

**2nd Year** (I). *Tutor:* R. Abrahams. *Curriculum:* technology of roadway and footway construction with related science, calculations, geometry and construction drawing.

*Attendance:* one day per week

**3rd Year** (II). *Tutor:* R. Abrahams. *Curriculum:* technology of roadway and footway construction, maintenance, safety and administration, related science, calculations, geometry and drawing.

*Attendance:* one day per week

*Examinations:* C.G.L.I. and I.W.H.S. Intermediate in Highways Construction and Maintenance

**4th Year** (III NP). *Tutor:* R. Abrahams. *Curriculum:* technology of roadway and footway construction, maintenance, safety and administration, law, supervision, estimating, office routine.

*Attendance:* one day per week

*Examinations:* I.W.H.S. (Highways Construction and Maintenance)

*Final qualification:* Associate of the Institute of Works and Highways Superintendents

## BUILDING CRAFTS COURSES

*Course advisers:* T. H. Crisp (Brickwork); J. Lindley (Carpentry and Joinery); L. J. Pulford (Plumbing).

These courses provide progressive study in preparation for the examinations of the City and Guilds of London Institute. The Ordinary Craft Certificate courses are of three years' duration; the Advanced Craft Certificate courses are of two years' duration.

**Brickwork: Craft Certificate** (C.G.L.I. 82)

**1st Year** (I). *Tutor:* T. H. Crisp. *Curriculum:* technology and practice of brickwork with related science, calculations, geometry and construction drawing, general studies.

*Attendance:* one day and one evening per week

**2nd Year** (I). *Tutor:* T. H. Crisp. *Curriculum:* technology and practice of brickwork with related science, calculations, geometry and construction drawing: general studies.

*Attendance:* one day and one evening per week

**3rd Year** (I). *Tutor:* T. H. Crisp. *Curriculum:* technology and practice of brickwork with related science, calculations, geometry and construction drawing: general studies.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. Ordinary Craft Certificate in Brickwork

**Brickwork: Advanced Craft Certificate** (C.G.L.I. 82)

**1st Year** (II). *Tutor:* T. H. Crisp. *Curriculum:* technology and practice of brickwork with related science, calculations, geometry and construction drawing, general studies.

*Attendance:* one day and one evening per week

**2nd Year** (II). *Tutor:* T. H. Crisp. *Curriculum:* technology and practice of brickwork with related science, calculations, geometry and construction drawing, general studies.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. Advanced Craft Certificate in Brickwork

**Carpentry and Joinery: Craft Certificate** (C.G.L.I. 80)

**1st Year** (I). *Tutor:* T. H. Bower. *Curriculum:* technology and practice of carpentry and joinery work with related science, calculations, geometry and construction drawing, general studies.

*Attendance:* one day and one evening per week

**2nd Year** (I). *Tutor:* J. Lindley. *Curriculum:* technology and practice of carpentry and joinery work with related science, calculations, geometry and construction drawing, general studies.

*Attendance:* one day and one evening per week

**3rd Year** (I). *Tutor:* J. Cross. *Curriculum:* technology and practice of carpentry and joinery work with related science, calculations, geometry and construction drawing, general studies.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. Ordinary Craft Certificate in Carpentry and Joinery

**Carpentry and Joinery: Advanced Craft Certificate** (C.G.L.I. 80)

**1st Year** (II). *Tutor:* J. Cross. *Curriculum:* technology and practice of carpentry and joinery work with related science, calculations, geometry and construction drawing, general studies.

*Attendance:* one day and one evening per week

**2nd Year** (II). *Tutor:* J. Cross. *Curriculum:* technology and practice of carpentry and joinery work with related science, calculations, geometry and construction drawing, general studies.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. Advanced Craft Certificate in Carpentry and Joinery

**Plumbing: Craft Certificate** (C.G.L.I. 86)

**1st Year** (I). *Tutor:* B. Coyne. *Curriculum:* technology and practice of plumbers' work with related science, calculations, geometry and construction drawings, general studies.

*Attendance:* one day and one evening per week

**2nd Year** (I). *Tutor:* B. Coyne. *Curriculum:* technology and practice of plumbers' work with related science, calculations, geometry and construction drawing, general studies.

*Attendance:* one day and one evening per week

**3rd Year** (I). *Tutor:* L. J. Pulford. *Curriculum:* technology and practice of plumbers' work with related science, calculations, geometry and construction drawing, general studies.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. Ordinary Craft Certificate in Plumbers' Work

**Gas Utilisation** (C.G.L.I. 12)

*Course adviser:* T. Thornley

**1st Year** (II). *Tutor:* N. B. Tindale. *Curriculum:* theory of gas utilisation for domestic purposes, with related calculations, science and drawing.

*Attendance:* one day per week

*Examinations:* C.G.L.I. Intermediate in Domestic Gas Utilisation

**2nd year** (II). *Tutor:* N. B. Tindale. *Curriculum:* theory of gas utilisation for industrial and commercial purposes, with related calculations, science and drawing.

*Attendance:* one day per week

*Examinations:* C.G.L.I. Final in Commercial and Industrial Gas Utilisation

**Full Technological Certificate in Building Crafts** (III NP) (C.G.L.I. 291)

*Tutor:* W. S. Hunter

A course for building crafts students to qualify for the award of the Full Technological Certificate of the City and Guilds of London Institute. To be eligible for the award a candidate shall (*a*) be at least 21 years of age at the time of making application to the Institute, (*b*) have appropriate industrial experience, (*c*) possess a C.G.L.I. Advanced Craft Certificate and (*d*) have passed C.G.L.I. examinations in principles of construction and building calculations and *either* building science *or* craft foremanship.

*Qualifications for entry:* the minimum requirement is a C.G.L.I. Craft Certificate

*Curriculum:* study of the fundamental principles of constructional techniques used in building, related science and calculations: the elements of supervision of building work are dealt with in the subject Craft Foremanship.

*Attendance:* three evenings per week

*Examinations:* The City and Guilds of London Institute's Full Technological Certificate in Building Crafts

**Full Technological Certificate Extension** (II)

*Course adviser:* K. Redhouse

Holders of a Full Technological Certificate wishing to extend their qualifications should consult the course adviser.

*Curriculum:* technology of construction, science, mathematics.

*Attendance:* three evenings per week

*Examinations:* internal, externally assessed

**Carpentry and Joinery: Craft Certificate** (I) (C.G.L.I. 80)

*Tutor:* J. Cross

**3rd Year:** A course for students who, having reached the age of 18 years and who are unable to obtain day-release, require to complete their studies for the Craft Certificate of the City and Guilds of London Institute.

*Qualifications for entry:* satisfactory completion of the second year Craft Course

*Curriculum:* technology and practice of carpentry and joinery work with related science, calculations, geometry and construction drawing.

*Attendance:* three evenings per week

*Examinations:* C.G.L.I. Ordinary Craft Certificate in Carpentry and Joinery

**Carpentry and Joinery: Advanced Craft Certificate** (II) (C.G.L.I. 80)

*Course adviser:* J. Lindley

A two-year course leading to the Advanced Craft Certificate of the City and Guilds of London Institute.

*Qualifications for entry:* the Ordinary Craft Certificate in Carpentry and Joinery.

**1st Year.** *Tutor:* J. Cross. *Curriculum:* technology and practice of carpentry and joinery work with related science, calculations, geometry and construction drawing.

*Attendance:* three evenings per week

**2nd Year.** *Tutor:* J. Cross. *Curriculum:* technology and practice of carpentry and joinery work with related science, calculations, geometry and construction drawing.

*Attendance:* three evenings per week

*Examinations:* C.G.L.I. Advanced Craft Certificate in Carpentry and Joinery

**Plumbing: Final Craft Certificate** (II) (C.G.L.I. 86)

*Tutor:* B. Coyne

A one-year course for the study of technology and practice of which the standard is that expected of a first-class craftsman.

*Qualifications for entry:* the Craft Certificate in Plumbers' Work

*Curriculum:* technology and practice of plumbers' work with related science, calculations, geometry and drawing.

*Attendance:* three evenings per week

*Examinations:* C.G.L.I. Final Craft Certificate in Plumbers' Work

**Plumbing: Advanced Craft Certificate** (II) (C.G.L.I. 86)

*Tutor:* L. J. Pulford

A one-year course providing a more comprehensive study of technology together with the elements of measurement and design.

*Qualifications for entry:* the Final Craft Certificate in Plumbers' Work, or a standard of knowledge and experience acceptable to the Head of Department.

*Curriculum:* technology of plumbers' work in water supply and hydraulics, hot-water supply and heating, ventilation, sanitation, drainage, materials, specifications and measurement.

*Attendance:* two evenings per week

*Examinations:* C.G.L.I. Advanced Plumbing Technology

*Final qualification:* City and Guilds of London Institute's Advanced Craft Certificate in Plumbing

## Special Courses

*Enrolment into Special Courses* will take place separately from the normal enrolment procedure. Leaflets will be supplied on request by the Head of Department, and these will give full details of the courses and will include an application form.

**The Use of Plastics in Domestic and Chemical Plumbing**

*Course organiser:* L. J. Pulford

A course for practising plumbers covering the techniques of working with plastic materials in both pipe and sheet form. The course is of one half-day per week for eight weeks.

**Domestic Central Heating**

*Course organiser:* W. Bell

A course of 10 evening lectures for those interested and engaged in the design and installation of heating systems.

**Concrete Technology**

*Course organiser:* W. S. Hunter

A course of 10 evening lectures for those who occupy positions of responsibility in relation to the supervision of concreting work, *e.g.* Site Supervisors and Foremen. Topics covered will include specifications, quality control, testing, and formwork.

## Administrative Staff

| | |
|---|---|
| *Registrar* | J. Barnacle, D.M.A., F.C.C.S. |
| *Senior Clerks* | E. D. Hardman (Finance and Accounts) |
| | B. Stott (Examinations and Records) |
| *Secretary to the Principal* | Miss F. M. Jones |
| *Section Clerks* | Mrs K. M. Glynn (Accommodation) |
| | Miss E. Stobbart (Services) |
| *Clerks* | Mrs P. K. Hall |
| | Mrs K. Howarth |
| | Mrs D. Hurst |
| | Miss K. Lucas |
| | Mrs B. Metcalf (Secretary to the Industrial Liaison Officer) |
| | Mrs M. A. Simpson |
| | Miss J. H. Slee |
| | Mrs D. M. Sturzaker |
| | Mrs P. Tinsley |
| | Miss C. Tyrer |
| | Miss J. K. Watt |
| *Telephonists* | Mrs B. J. Baker |
| | Mrs P. B. Bamford |
| *Cashiers* | Mrs R. Doherty |
| | Mrs M. Marland |
| *Equipment Maintenance* | E. Goodson (Chief Engineer) |
| | E. Davis |
| | R. Holmes |
| *Refectory* | Mrs M. Hamlyn White (Catering Manageress) |
| | Miss E. Grunshaw (Assistant) |
| *Custodian of Premises* | W. H. Hatton |
| *Caretaker* | L. Whalley (Avenham premises) |
| *Assistant Caretakers* | V. Baron |
| | W. J. Butler |
| | G. Holden |
| | H. Mee |
| | H. Nicholls |
| | W. Pullan |

| | |
|---|---|
| *Assistant Caretakers (contd.)* | W. Saunders |
| | J. Walton |
| | T. K. Wharton |
| *Groundsman* | G. Cowell |
| *Watchmen* | S. Dixon |
| | F. Miller |
| | D. Postlethwaite |

## Calendar

| | | |
|---|---|---|
| 1967 | Thursday, 14th September | General Staff Meeting |
| | ENROLMENT PERIOD | |
| | Monday, 18th September | Enrolment, first day |
| | Tuesday, 19th September | Enrolment, second day |
| | Wednesday, 20th September | Enrolment, last day |
| | AUTUMN TERM | |
| | Monday, 25th September | All day and evening classes commence for the Autumn term |
| | Wednesday, 20th December | All departments close for Christmas after evening classes |
| | SPRING TERM | |
| 1968 | Thursday, 4th January | All classes re-open for the Spring term |
| | Tuesday, 13th February | Foundation Address and Distribution of Awards: all evening classes closed |
| | Friday, 5th April | All departments close for Easter after evening classes |
| | SUMMER TERM | |
| | Monday, 22nd April | All classes re-open for the Summer term |
| | Friday, 31st May | All departments close for Whitsuntide after evening classes |
| | Monday, 10th June | All classes re-open |
| | Friday, 5th July | All classes close: end of session |
| | Friday, 12th July | End of term: submission of reports |

*Note:* There are other important dates with which students must be familiar, for example closing dates for receipt of examination entries, commencement and termination of sandwich and block release courses. These will be found in the appropriate sections of the prospectus.

## Admission to Courses and Examinations

Courses will be provided subject to adequate enrolment; they may be discontinued at the discretion of the Principal at any time during the session should the numbers attending fall below a reasonable level.

The acceptance of a student into a course must have the approval of a Head of Department, and the student must produce satisfactory evidence that he has the necessary qualifications to enter the course.

Full-time and sandwich course students should make application well before the commencement of the session on the form obtainable from the Registrar.

At enrolment each student will receive an admission form bearing an admission number. This form must be shown to the class lecturer when the student attends each class for the first time in the session. Students will not be permitted to attend classes until they have completed the enrolment procedure (see page 34).

To qualify for certificates and to pass on to higher years of a course it is necessary that students should have:

(*a*) reached a prescribed standard of attainment, tested by examinations held at the end of the session, and

(*b*) made satisfactory attendance and progress during the session.

EXAMINATIONS

All Students are required to take prescribed internal or external examinations at the end of each year of the course.

Examination fees must be paid by students at the time of entry to examinations: accounts cannot be sent to employers or grant-aiding Authorities. There are no fees for purely internal examinations of the College.

Students who take the examinations of external examining bodies (*e.g.* the Union of Lancashire and Cheshire Institutes, the Royal Society of Arts, the City and Guilds of London Institute) or General Certificate of Education examinations, must pay the examination fees of these bodies.

Each student entering the final examination for Ordinary or Higher National Diplomas and Certificates must pay an entry fee of 7s. 6d. per

subject, in addition to the examination fee charged by the external examining body whose examinations are adopted. In the event of a Joint Committee agreeing to the re-examination of a student in a subject, the student will be required to pay the full cost of the re-examination, or to share the cost proportionately should more than one student be involved in the same re-examination.

Each student is responsible for his own entry to external examinations and must complete the appropriate entry form and present it with the fee to the College office. Students will not be informed individually of the last dates of entry or of timetables of examinations, but these will be published on notice boards. The last dates of entry for the undermentioned examinations are:

Assessed papers for National Diplomas and Certificates, including endorsements: 15th December, 1967

City and Guilds of London Institute: 19th January, 1968

Union of Lancashire and Cheshire Institutes, series B and C: 2nd February, 1968

General Certificate of Education papers (N.U.J.M.B.): 9th February, 1968

Institute of Linguists: 1st March, 1968

Pitmans: 15th March, 1968

Training Council for Teachers of the Mentally Handicapped: 5th April, 1968

Royal Society of Arts, Summer Series: 26th April, 1968

Students who do not enter by these dates may well be excluded from taking the examinations, and even if accepted late fees are payable ranging from 10s. to £10. 0s. 0d.

### EXAMINATION RESULTS

Sessional Reports will include examination results, but they cannot be completed until after the results are received from external examining bodies. Reports are then sent to each student as soon as possible. It is regretted that in the meantime enquiries cannot be answered. Copies of external examination pass lists will be made available for scrutiny on the College notice board as soon as possible after they are received.

## Tuition Fees

Sessional tuition fees must be paid at the time of enrolment and are returnable only in exceptional cases. Cheques should be made payable to the Corporation of Preston and crossed.

A student whose employer undertakes to pay the fee on his behalf must produce at enrolment a letter from his employer to that effect.

Part-time students from the administrative counties of Lancashire and Westmorland and from Wigan County Borough under age 18 on the 1st September will be enrolled without payment of the tuition fee.

| **Full-time and Sandwich Courses** | | Students under age 18 on 1st September £ s. d. | Students age 18 and over on 1st September £ s. d. |
|---|---|---|---|
| Ordinary National Diploma in Building: | 1st year | 20 2 6 | 21 10 0 |
| | 2nd year | 30 2 6 | 31 10 0 |
| Pre-Diploma in Building | | 18 2 6 | 19 10 0 |

| **Block Release Courses** | | All age groups £ s. d. |
|---|---|---|
| Gas Fitting: | 1st year | 9 2 6 |
| | 2nd year | 6 2 6 |
| | 3rd year | 10 2 6 |
| Gas Utilisation | | 6 0 0 |

| **Part-time Courses** | Students under age 21 on 1st September £ s. d. | Students age 21 and over on 1st September £ s. d. |
|---|---|---|
| Group I (introductory level) | 1 7 6 | 2 12 6 |
| Group II (intermediate level) | 1 17 6 | 2 17 6 |
| Group III (advanced level) | 2 12 6 | 3 2 6 |

OVERSEAS STUDENTS

Students from outside the United Kingdom attending full-time and sandwich courses are required to pay special fees. Details of these can be obtained from the Registrar.

RESIDENTIAL LIBERAL STUDIES COURSES

As an integral part of their studies, students in certain advanced full-time and sandwich courses will normally attend each year a three-day residential course. The fee is approximately £3. 10s. 0d. which must be paid by the student. Students in receipt of Local Authority grants will in most cases be reimbursed all or part of the cost by their supporting authorities.

GRANTS

Full-time or College-based Sandwich Course students may apply to the Local Education Authority for the area in which they permanently reside for a grant of fees and maintenance. Works-based Sandwich Course students may also be eligible for financial assistance where the employer does not pay fees or wages during the College periods of a course, or where only partial financial support is offered by the employer.

NOTE TO LOCAL AUTHORITIES

The course grade designation (III NP) indicates an advanced course which is not poolable under D.E.S. regulations. In respect of these courses the normal recoupment procedure will apply.

# Enrolment

Students will be enrolled between the times: 10.0 a.m. to 12.30 p.m., 1.30 to 4.30 p.m. and 5.30 to 8.30 p.m. on the following days:

Monday, 18th September, 1967
Tuesday, 19th September, 1967
Wednesday, 20th September, 1967

Students must enrol during the times and on the dates stated; those who fail to enrol on these dates will be charged a late fee of 10s. 0d. The busiest enrolment periods are in the evenings; students who can enrol during the morning or afternoon periods will help the College and save themselves an appreciable amount of time.

Postal enrolments cannot be accepted.

Enrolment into special courses takes place separately from the procedure detailed on this page. (see page 26).

A student who wishes to enrol into a course demanding entry qualifications must produce documentary evidence at or before enrolment. Documentary evidence is not required in respect of students who have gained their qualifications at the Harris College.

PERMISSION VOUCHERS: all students resident in the County Borough of Preston or in the administrative area of Lancashire County, and part-time students resident in the County Borough of Wigan, will be admitted without the production of an inter-authority voucher. *All other students* must obtain permission vouchers each year from their Local Education Authorities and present them at enrolment.

**Enrolment procedure**
Students should first report to the department in which they wish to enrol. The plan of the College on the opposite page shows the blocks in which departments are situated. The rooms in which enrolment takes place in each department are shown in brackets below, *viz:*

B BLOCK
School of Art (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52 and B55)

E BLOCK

Mechanical, Civil and Production Engineering Department (new students E1, former students E9)

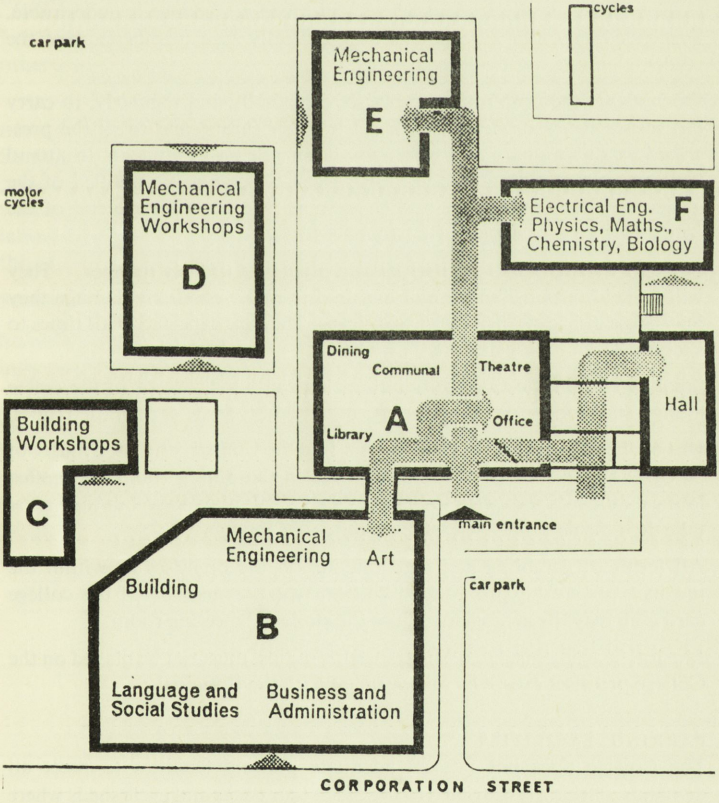
F BLOCK

Chemistry and Biology Department (F37)
Electrical Engineering Department (F8, F9 and F10)
Physics and Mathematics Department (courses which include chemistry F35 and F37: other courses F26)

A BLOCK

College Office and enquiries

*When details of his future course have been determined in the department the student must present his enrolment forms at the Hall (A Block) for enrolment and payment of fees.*



# Regulations

## DISCIPLINE

Students are accepted into College courses on the understanding that they abide by the regulations herein and from time to time in force.

The Principal has the authority to suspend students from attendance for any cause which he considers adequate. The Council will exclude from the College premises any student whose continued attendance is undesirable. Suspended or excluded students automatically lose membership of the students' union and College societies.

Students are required to attend classes punctually and regularly, to carry out satisfactorily such work as is set by their tutors, and to sit the prescribed examinations. Employers who grant release to students to attend College courses will, after the fourth week of session, be notified of the absence of their employees, and as soon as possible after the end of the course will receive copies of sessional reports.

Students must conduct themselves in a quiet and orderly manner. They will be held responsible for and required to make good any damage they may cause due to negligence or wilfulness. They are expected at all times to keep the College tidy and free from litter.

Smoking within the College buildings is prohibited, except in the coffee lounge, staff rooms, common rooms, and assembly areas at permitted times.

Hot cooked foods must not be brought into the College, and food must not be consumed on the premises other than in the dining room and coffee lounge. Students who wish to bring packed meals may do so but they must take their meals at the fixed tables in the coffee lounge.

All forms of gambling and card playing on the premises or within the precincts are strictly prohibited. Students who are members of the college card club may, by arrangement, use the students' meeting room.

Musical instruments, including transistor radios, must not be played on the College premises except by arrangement with the Principal.

## PARKING FACILITIES

The College does not possess adequate parking facilities to meet all demands. Parking is restricted to the official car parks and cycle sheds where vehicles may be left at the owners' risk.

Students must travel very slowly in the College precincts, and should use the entrance nearest to the point of parking. They must not drive around or within the College premises in break periods. Roadways must be kept clear in case of emergencies.

### PERSONAL PROPERTY

The Council cannot accept responsibility for the safety of students' property. Property found on the premises will be handed to the Custodian of Premises, and students wishing to reclaim lost property should address enquiries to the Custodian.

Cloak lockers are available in all departments for students' use. Full-time, sandwich and block release course students may be allocated lockers for the duration of the course. Part-time students may use a locker during the day and/or evening spent in the College but must remove locker contents and padlocks when leaving the College for the day. Lockers should be secured by the students' own padlocks.

Lockers must be left empty and unlocked at the end of a course or session, otherwise the locks and contents will be removed.

### HEALTH AND SAFETY

Students are required in the interests of cleanliness, health and safety to provide themselves with the recommended kind of protective clothing which must be worn in workshop and laboratory classes. Workshop and laboratory clothes must not be worn whilst attending lectures or whilst in the communal block.

Students must use all protective devices provided.

Students should not attend the College from a house in which there is infectious illness. Cases should be promptly reported to the Registrar.

### FLOOR PROTECTION

It is regretted that ladies wearing stiletto heels will have to be refused admission to parts of the premises where damage to the floor would result. Ordinary footwear will be permitted in the Hall only when the floor drugget is laid.

COMMUNAL FACILITIES

The Communal Block provides facilities for the educational, social and recreational enjoyment of the students and staff. Besides administrative accommodation and a fully equipped theatre for both lectures and drama, there is a dining room and coffee foyer, a students' common room, students' union office and meeting rooms. The library is situated in this building.

An unusual feature is the Recreation Hall. The hall will be reserved at certain times for examinations, and occasionally for ceremonies or exhibitions, but at other times it is available to student groups, societies, and individuals for games and a very wide variety of physical activities. The bridge over the North courtyard leading to the hall contains changing rooms and showers.

REFECTORY

The dining room is open from 12.15 to 1.30 p.m. for lunch. A selection of courses at various prices is available. Tea or coffee after lunch may be taken in the adjacent coffee foyer.

Light teas or cooked meals are normally available from 4.30 to 7.00 p.m.

In addition to meals, tea or coffee or soft drinks will be available in the coffee foyer during set periods to cover mid-morning and mid-afternoon breaks between classes. Service from trolleys is available elsewhere at the same times.

Staff and students are requested to observe any restrictions on smoking in the refectory premises.

Requests for any special catering should be made in the first instance to the Registrar, well in advance of the occasion.

STATIONERY

The College stationery shop is open on three occasions during the day, namely 8.50 to 9.15 a.m., 1.00 to 2.00 p.m., and 6.45 to 7.15 p.m. Students may purchase the usual items of stationery, and also special laboratory and note books necessary for many courses.

## SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of societies and professional bodies are frequently held in the College.

Notice of the lectures will be displayed in the main entrance foyer during the session. Individual students and members of staff are welcome to attend. Application for groups to attend should be made through the Principal to the local secretary of the organisation.

## NATIONAL DIPLOMA AND CERTIFICATE COURSE REQUIREMENTS

An Ordinary National Diploma is awarded at the end of a two-year senior course of full-time study. A Higher National Diploma is awarded at the end of a further three year advanced course of full-time study.

Ordinary National Certificates and Higher National Certificates are corresponding awards following courses of part-time study.

Awards in each case are made by the Department of Education and Science in conjunction with one or more Professional Institutions. To receive an award a candidate must normally:

(*a*) make not less than 80% of the possible attendances in each subject in each year of the course for the award of a diploma, or 60% for the award of a certificate,

(*b*) obtain not less than 40% of the possible marks in each subject in the examinations held at the end of each year,

(*c*) obtain not less than 40% 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, and

(*d*) obtain not less than 50% of the grand total of marks obtainable in the final year. Of this total the possible marks in the examinations constitute 70% and the remaining 30% will be the possible marks for home work, class work, laboratory work, etc.

A 'Distinction' may be awarded to any candidate qualified to receive a diploma or certificate who, in the opinion of the examiners, has shown special merit in the final examination. His certificate will be specially endorsed with the name(s) of the subject(s) in which he has thus distinguished himself.

## CHANGE IN STUDENT PARTICULARS

Changes during the session should be notified immediately to the Registrar on the form available from the College office, for example: change of address, change of employer, change of name on marriage.

## ABSENCES

In the event of absences from classes because of illness or other unavoidable causes a note of explanation should be sent to the Head of Depart-

ment. A student who absents himself for a continuous period of four weeks without the approval of the Head of Department will be deemed to have left the course and his name will be removed from the register.

### OUTSIDE ACCOMMODATION

Shortage of accommodation makes it necessary for some classes to be held in the following premises: Avenham (School of Art Annexe); Blackburn and East Lancashire Royal Infirmary; Blood Transfusion Unit, Lancaster; Cheviot Street Workshop (off Strand Road); Deepdale County Secondary School; Lancashire County Institute of Agriculture, Hutton; N.W.G.B. Training Centre, Moor Lane, Preston; Preston Royal Infirmary; G.P.O. Telephone House, Moor Lane, Preston; and Trinity County Secondary School.

## The Library

Telephone: Preston 51831, ext. 15

| | |
|---|---|
| *Librarian* | A. Lawrence, A.L.A. |
| *Assistant Librarians* | Mrs M. Pye, A.L.A. |
| | Mrs S. M. Hunt |
| *Library Assistants* | Miss J. E Bamford |
| | Mrs I. M. Fuller |

The College library is available to all students for reference purposes. 360 technical journals are received annually in addition to the development of the book stock. An up-to-date set of British Standard Specifications is maintained.

The library is open from Monday to Friday at the following times:

*During term time:* 9.00 a.m. to 9.00 p.m.
*During vacations:* 9.00 a.m. to 5.30 p.m.

The library has facilities for photocopying, and students may obtain copies of pages of books and periodicals subject to the law of copyright. A charge is made for this service.

The library is a local agent for the National Lending Library of Science and Technology, a member of ASLIB and the North Western Regional Library System, and may be able to obtain through these organisations items not in its own stock.

## Physical Education and Recreation

Telephone: Preston 51831, ext. 27

| | |
|---|---|
| *Lecturer* | C. M. Robinson, D.L.C. |
| *Assistant Lecturers* | J. Gridley, A.G.A. |
| | Mrs B. J. Harrison, DIP.P.E., DARTFORD COLLEGE |
| *Visiting Lecturers* | A. Lewis |
| | R. Poole |
| | A. Spavin |
| | D. Stokes |
| | B. Strettle, B.J.A. |
| | G. Wilson, N.A.B.B.A. |
| | S. Wright, B.J.A. |

The Recreation Hall is equipped with fixed apparatus which, together with portable apparatus and equipment the College possesses, allows the pursuit of the following activities: athletics, badminton, basket ball, canoeing and sailing, cricket, dance, fencing, five-a-side football, golf, judo, mountaineering, netball, olympic gymnastics, padder tennis, soccer and rugby training, table tennis, trampolining, volley ball, weight training and lifting.

The recreational facilities of the College are available to all students enrolled into an academic course without payment of a further fee. Anyone interested in any of the activities detailed should contact the Lecturer in Physical Education at enrolment or as soon as possible afterwards. College sports clubs, affiliated to the students' union, are given priority in the evenings.

Lectures and films on a variety of activities, and inter-departmental and inter-College tournaments and competitions, are arranged throughout the session.

The mountaineering club arranges visits to the Lake District and North Wales for rock climbing, rambling and canoeing. For full-time students one week courses in mountain activities are arranged. From time to time arrangements are made for parties to engage in outdoor activities in vacation periods, for example ski-ing, rock climbing, canoeing, pony trekking, etc.

### REGIONAL AND NATIONAL SPORTS ACTIVITIES

The College is a centre for regional and national sports tournaments in badminton, table tennis and trampolining. It is also an Olympic Gym-

nastics Centre; the College gymnastic team competes in the National Team Championships of Great Britain and has also competed abroad.

### RESEARCH

The Physical Education Section in conjunction with the Department of Chemistry and Biology is undertaking research into the effects of different types of exercise on the heart and lungs, and a number of volunteer groups of students are co-operating.

### SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's eight academic departments. Persons not registered as students for academic courses may be admitted to certain scheduled classes in physical education, so far as places are available.The tuition fee payable is £1. 7s. 6d. if under age 21 on the 1st September or £2. 12s. 6d. if age 21 or over.

In order to give academic course students priority, persons who wish to enrol for physical education classes alone are not accepted until the fourth week in the session. No person may be admitted to these classes who is less than 16 years of age on the 1st September.

## Harris Students' Union

Telephone: Preston 53852

B. Hayes, *President*
A. England, *Vice-President*
Miss S. Standing, *Vice-President* (*female students*)
A. Kimm, *Secretary*
I. Horne, *Student Treasurer*
D. Swift, *Honorary Treasurer*

The Harris Students' Union is organised and governed by students, and is affiliated to the National Union of Students. It arranges general social activities, provides a means of helping the formation of student societies, and maintains contact with the students of other colleges. The union is financed by a grant from the Harris Council.

All students other than those enrolled in special courses are automatically admitted to membership of the students' union. A membership card will be issued at enrolment entitling students to participate in all social activities, to join any student society or club, and to vote in the election of members to the Executive Committee.

All clubs and societies in the College are affiliated to the Students' Union, and special subscriptions may be required for membership of particular clubs and societies. A Students' Union Handbook, issued free to members, describes the activities of the union.

Dances and other social events are regularly arranged in the College and in the town. A common room and an office are allocated exclusively for the use of students and recreational facilities are available elsewhere by arrangement with the Lecturer in Physical Education.

Enquiries concerning student activities should be addressed to the Secretary, Harris Students' Union, Corporation Street, Preston.

**College Colours**

A Harris College blazer badge, scarf and tie, designed by the School of Art and Design and approved by the College Governors, are on sale at Messrs. Hellewells, Lune Street, Preston. Prices: 8s. 11d., 28s. 6d. and 8s. 6d. each respectively.

Harris College **Department of Chemistry and Biology 1967–68**

**Harris College, Corporation Street, Preston, Lancashire**
**Telephone: Preston 51831–5**

*Foundation.* On the 4th April, 1956, the Minister of Education made a scheme for the establishment of the Harris College of Further Education, formerly the Harris Institute (comprising the Harris Technical College and the School of Art). In the terms of this scheme, and a later amendment to it, the College is housed in premises provided and maintained by the County Borough of Preston and is governed by the Harris Council of twenty-eight members; namely nine members of Preston Education Committee, nine members appointed by Lancashire Education Authority, nine members representative of industry and commerce, and one member representative of the Universities.

**The Harris Council**

*President:* Alderman W. Beckett, O.B.E., J.P.

*Vice-President:* Councillor J. Hargreaves

*Members:*

Alderman J. Atkinson
Alderman Mrs D. M. Dewhurst, J.P.
Alderman J. F. Gray
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker, J.P. (The Right Worshipful the Mayor of Preston)
Councillor Mrs K. E. Crozier
Councillor T. Dewhurst
Councillor Mrs R. Lytton

Alderman Sir Fred Longworth (Vice-Chairman of Lancashire County Council)
Alderman J. Bradley, M.B.E., J.P.
Councillor T. V. Brown
Councillor C. W. Eastwood
F. Ley
Councillor A. J. Whittall
Councillor Mrs W. Winn
Councillor G. Woods

F. D. Crowe, B.SC.(ENG)., A.F.R.AE.S.
Professor E. Roland Dobbs
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., A.M.I.MECH.E.
P. D. Oakley, B.SC., F.R.I.C.
H. Rogan, O.B.E., B.SC., PH.D., F.R.I.C.
Alderman J. W. Taylor, J.P., F.C.I.S.
J. W. Walker

*Clerk to the Council:* W. R. Tuson, B.SC., Chief Education Officer, Preston

**Research Council**

The research council is a sub-committee of the Harris Council charged with the promotion of research and the administration of research funds.

*Chairman:*
Alderman W. Beckett, O.B.E., J.P., *President of the Harris Council*

*Members:*
Councillor J. Hargreaves, *Vice-President of the Harris Council*
Professor E. Roland Dobbs, *University of Lancaster*
J. Jones, A.M.I.MECH.E.
Dr P. R. Lancaster, *University of Bradford*
W. J. R. Merren, M.A., B.SC., *Director of Research, Pilkington Research Laboratories*
Dr K. Morgan, *University of Lancaster*
P. D. Oakley, B.SC., F.R.I.C., *Member of the Harris Council*
Dr H. Wilkinson, *Principal of the Harris College*
Dr S. Skidmore, *Vice-Principal of the Harris College*

**Principal**: H. Wilkinson, M.SC.TECH., PH.D., A.INST.P.

**Vice-Principal**: S. Skidmore, B.SC., PH.D.(LONDON), F.R.I.C.

*Registrar:* J. Barnacle, D.M.A., F.C.C.S.

*The Harris College* is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are eight teaching departments in the College: the School of Art, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical Engineering, Language and Social Studies, Mechanical Civil and Production Engineering, Physics and Mathematics. All are newly housed, and the facilities include a combined Lecture Hall and Theatre, a Recreation Hall, Student Common Rooms, Library and Refectory.

Strong links exist between the College, Industry and Commerce and these have helped the development of sandwich courses leading to professional qualifications. Extension of these courses into other professional fields of activity is planned. Short courses on specialist or advanced topics are arranged regularly in all departments of the College. Research and consultancy are important features of the work of the College, and the recent appointment of an Industrial Liaison Officer is expected to increase and widen the range of these activities.

*The Department of Chemistry and Biology*. The principal courses offered are those leading to membership of the Royal Institute of Chemistry and the Institute of Medical Laboratory Technology. The College has a 'Special Relationship' with the Royal Institute of Chemistry which enables the department to set its own Grad. R.I.C. examinations. The Grad. R.I.C. Sandwich Course receives the support of a number of national industries which offer industrial training places to course members. Local Education Authorities are prepared to consider applications from full-time and sandwich course students for financial assistance.

The department maintains close links with industry and regular meetings of professional bodies are held in the College, including meetings of the Royal Institute of Chemistry and the Institute of Medical Laboratory Technology.

*Service facilities to industry*. The department houses a number of items of advanced teaching and research equipment which on request and subject to availability may be used by qualified technologists in industry. The items include i.r. and u.v. spectrophotometers, various items of electrochemical measuring equipment, and Geiger and Scintillation counters. Special training courses on the techniques associated with the equipment will be

given as required. Collaboration with industry on technical problems is welcomed.

*Post-Graduate Research.* Full-time research facilities for Graduates are available in the fields of reaction kinetics, surface properties of cells, radiation chemistry, heterocyclic syntheses. The accommodation of the department includes six well equipped research laboratories. The Governing Body of the College offers each year a number of Research Assistantships and the number is further supplemented by Science Research Council Scholarships.

Suitable candidates may work for higher degrees of their own University or in approved cases for higher degrees of the University of Lancaster.

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**Advisory Board for Chemistry, Biology and Metallurgy**

The function of the Advisory Board is to advise the Harris Council, through the College Principal, on professional and technical matters pertaining to the work of the Department in such a way as to further the educational aims of the Department both regionally and nationally. The College Principal, Vice-Principal and the Head of Department are *ex-officio* members, as also is the Clerk to the Harris Council and the Chief Education Officer of the Lancashire County Authority.

*Chairman:*
Professor J. C. Bevington, *Department of Chemistry, University of Lancaster*

*Members:*
G. Browne, F.R.I.C., *Chief Chemist, H.M. Chemical Inspectorate, Chorley*
Dr V. G. Cove, *Works Manager, Mond Division, I.C.I. Ltd., Thornton*
A. N. Edmondson, F.R.I.C., F.T.I., *Chief Chemist, Birtwistle and Leigh Ltd., Preston*
Professor K. M. Entwistle, *Department of Metallurgy, Manchester College of Science and Technology*
Professor W. E. Kershaw, *Department of Biology, University of Salford*
Dr. A. A. Miller, *Group Pathologist, Preston and Chorley Hospital Management Committee*
P. D. Oakley, B.SC., F.R.I.C.

## Department of Chemistry and Biology

Telephone: Preston 51831, ext. 9

| | |
|---|---|
| *Head of Department* | J. J. Betts, B.SC.(LOND.), PH.D.(CANTAB.), PH.D.(BIRM), F.R.I.C. |
| *Senior Lecturers* | J. Donnelly, B.SC. |
| | H. E. G. Emmett, B.SC., A.R.C.S., M.I.BIOL. |
| | J. L. Latham, B.SC., PH.D., F.R.I.C. |
| | D. J. Marks, B.SC., PH.D. |
| | F. Ramsden, F.I.M.L.T., F.R.S.H. |
| | C. A. Russell, M.SC., PH.D., F.R.I.C. |
| *Lecturers* | S. Blake, B.A., PH.D., A.R.I.C. |
| | K. Edgar, M.SC., A.R.I.C. |
| | D. Mason, B.SC., PH.D., A.R.I.C. |
| | G. Newton, B.SC., PH.D. |
| | A. Ottewell, B.SC., A.I.M. |
| | W. H. Rothwell, B.SC. |
| | J. Taylor, B.SC., PH.D. |
| *Assistant Lecturers* | N. G. Allen, B.SC. |
| | S. Britland, B.SC. |
| | L. G. Morton, B.SC., L.I.BIOL. |
| | A. Sherrington, A.R.I.C. |
| *Research Assistants* | A. Jones, GRAD.R.I.C. |
| | J. T. Nicholson, B.SC. |
| | D. Steel, M.A. |
| *Technicians* | T Nicol (*Senior*) |
| | G. R. Cunliffe (*Research*) |
| | A. B. Fazackerley |
| | H. Smith, F.R.S.H. |
| | J. L. Stoker |
| | B. A. Thomas |
| | C. Tracey |
| *College Glassblower* | D. R. Evans |
| *Visiting Lecturers* | J. P. Betts, B.SC. |
| | J. Brown, A.INST P.R.A. |
| | H. Dawkins, F.I.M.L.T. |
| | A. N. Edmondson, F.R.I.C. |
| | D. R. Evans |
| | R. Field, F.P.S., PH.C., D.B.A. |
| | J. A. Gatt, B.SC. |

*Visiting Lecturers (contd)*

H. H. Gunson, M.D., M.C.PATH.
D. H. Locke, B.SC., PH.D.
J. Lord, F.I.M.L.T.
G. Mullard, F.I.M.L.T.
G. Padmore, F.R.I.C.
R. Rawlinson, F.I.M.L.T.
L. Robertson, M.A., B.M., DIP.BACT., M.C.PATH.
D. M. Such, B.SC.
D. W. White, B.SC., F.R.I.C.

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28 Topics in Advanced Organic Chemistry
28 Modern Aspects of Paper Technology

*Corporate Membership of the Royal Institute of Chemistry:* The Royal Institute of Chemistry is the acknowledged professional organisation for chemists, its members being engaged in the advancement, teaching and practice of chemistry and its application in industry and the public service. The standard required of applicants for associateship is not less than that required for a good Honours degree of a British university, and success in Part II of the Institute's Graduate Membership examinations is recognised by most universities as a qualification for entry to their research schools and the subsequent award of a higher degree. There are three grades of corporate membership: Licentiateship (L.R.I.C.), Associateship (A.R.I.C.), Fellowship (F.R.I.C.). Candidates for either of the first two grades must have (*a*) an acceptable level of general education, (*b*) suitable academic qualifications in chemistry, and (*c*) one or two years experience in the practice of chemistry.

Students taking Grad.R.I.C. courses are advised to register as Student Members of the Institute and should write for details to: The Registrar, The Royal Institute of Chemistry, 30, Russell Square, London, W.C.1. Students receive literature from the Institute and may attend meetings of its members.

The general education requirements are: G.C.E. 'O' level passes in English language, mathematics, and either two sciences and one arts subject or two arts subjects and one science; or an approved equivalent.

Academic requirements for admission to Licentiateship are: either Higher National Certificate in Chemistry, ancillary mathematics and physics, and satisfactory completion of an approved post H.N.C. course in some aspect of pure or applied chemistry, or a pass in Part I of the Institute's Graduate Membership examinations together with evidence of having pursued an appropriate course of practical work and of having passed an approved practical examination; or a degree in Science, with chemistry as the main subject, awarded by a British university.

Academic requirements for admission to Associateship are: either a G.C.E. 'A' level pass in Chemistry or a Higher National Certificate in Chemistry with ancillary mathematics and physics (in either case), success in Part I of the Institute's Graduate Membership examinations, a third ancillary subject, and success in Part II of the Graduate Membership examinations; or

a First or Upper Second Class degree awarded by a British university. Graduate members of the Institute, graduates of British universities, and others holding equivalent qualifications, may apply for Associateship after suitable research, teaching or industrial experience.

**Graduate Membership of the Royal Institute of Chemistry** (III)

*Course adviser:* Dr D. J. Marks

A four-year College-based sandwich course (see page 15). The Higher National Diploma in Chemistry is taken at the end of the third year; good marks in this examination will give exemption from Part I of the Institute's Graduate membership examinations, though students may take Part I in addition to the Higher National Diploma. The endorsement subject, advanced analytical chemistry, is studied concurrently with the H.N.D. subjects throughout the second and third years. Success in the H.N.D. and endorsement examinations or success in the Part I examination qualifies a student for admission to the Licentiateship of the Royal Institute of Chemistry. Part II of these examinations, success in which gives the academic qualification for admission to Associateship, is taken at the end of the fourth year.

*Qualifications for entry* to the first year of the course: G.C.E. 'O' level passes in mathematics, English language, an arts subject, and a science other than chemistry; and either a G.C.E. 'A' level pass in chemistry with evidence that mathematics and physics have been studied to a standard one year beyond the 'O' level syllabus, or an Ordinary National Certificate in Chemistry and one pass at 'O' level in addition to the four mentioned above. Successes in departmental examinations taken during the course provides the additional qualifications for entry to Part I and Part II of the Graduate Membership examinations.

**1st Year.** *Tutor:* K. Edgar. *Curriculum:* inorganic chemistry; chemical bonding, atomic structure, valency, typical elements, radiochemistry: organic chemistry; electronic theory of organic chemistry and its applications, aliphatic chemistry, stereo-chemistry I: physical chemistry; first law of thermodynamics, quantum theory and spectrophotometry, kinetic-molecular theory of gases, electrochemistry: general physics: mathematics: liberal studies.

*College course:* October to April (24 weeks)

*Examinations:* internal: general physics and mathematics externally assessed if not in possession of G.C.E. at 'A' level or equivalent

**2nd Year.** *Tutor:* Dr J. Taylor. *Curriculum:* inorganic chemistry; transition elements, co-ordination compounds, carbonyls, interhalogens: organic chemistry; aromatic chemistry, stereo-chemistry II; physical chemistry; second and third laws of thermodynamics, electrochemistry (galvanic cells) phase equilibria, reaction kinetics: metallurgy or microbiology: statistics: advanced analytical chemistry: liberal studies.

*College course:* October to April (24 weeks)

*Examinations:* internal

**3rd Year.** *Tutor:* J. Donnelly. *Curriculum:* inorganic chemistry; comparative chemistry of the groups, review and extension of theoretical chemistry, ion exchange, non aqueous media: organic chemistry; alicyclic chemistry, aliphatic and heteroaromatic chemistry, stereo-chemistry III: physical chemistry: review and extension of thermodynamics, thermodynamics of solutions, structural chemistry, surface and colloid chemistry: metallurgy or microbiology: industrial administration: advanced analytical chemistry: liberal studies.

*College course:* September to June (36 weeks)

*Examinations:* H.N.D. in Chemistry, endorsement in advanced analytical chemistry; Grad. R.I.C. Part I

**4th Year.** *Tutor:* Dr D. J. Marks. *Curriculum:* review and extension of chemical subjects studied: recent advances in inorganic, organic and physical chemistry.

*College course:* September to June (36 weeks)

*Examinations:* Grad. R.I.C. Part II

*Final qualification:* Graduate Membership of the Royal Institute of Chemistry

**Graduate Membership of the Royal Institute of Chemistry** (III)

*Course adviser:* Dr D. J. Marks

A two-year full-time course leading to the Graduate Membership examinations of the Royal Institute of Chemistry.

Students with a Higher National Certificate in Chemistry may enter directly into the third year of the four-year Grad. R.I.C. Course (see page 16). The chemical subject matter of the course is identical with that of the third and fourth years of the four-year course, but timetabling will allow ancillary subjects to be studied during both years of this course. Success in the Grad. R.I.C. Part I Examination, which is taken at the end of the third year, qualifies a student for admission to the Licentiateship. The Grad. R.I.C. Part II Examination is taken at the end of the fourth year.

*Qualifications for entry* to the third year of the course: G.C.E. 'O' level passes in mathematics, English language, one science subject other than chemistry and one arts subject; and a Higher National Certificate in Chemistry. The additional requirements for admission to both parts of the Institute's examinations will be met by students who are successful in departmental examinations taken during the third year of the course. Candidates for admission to the fourth year of the course should consult the Head of Department after assuring themselves that they have the appropriate qualifications.

**3rd Year.** *Tutor:* J. Donnelly. *Curriculum:* inorganic chemistry, organic chemistry, physical chemistry, mathematics, physics, metallurgy or microbiology, advanced analytical chemistry.

*College course:* September to June (36 weeks)

*Examinations:* ancillary subjects; Grad.R.I.C. Part I

**4th Year.** *Tutor:* Dr D. J. Marks. *Curriculum:* review and extension of chemical subjects studies: recent advances in inorganic, organic and physical chemistry.

*College course:* September to June (36 weeks)

*Examinations:* Grad.R.I.C. Part II

*Final qualification:* Graduate Membership of the Royal Institute of Chemistry

**General Certificate of Education; Advanced level (II)**

*Course Tutors:* Dr S. Blake and R. Egerton

A one-year full-time revision course in preparation for Advanced level examinations of the Northern Universities Joint Matriculation Board. The course will also be appropriate for mature students seeking qualifications for entry to Graduate courses.

*Qualifications for entry:* it will be assumed that all course students have previously attended G.C.E. Advanced level courses in their chosen subjects.

*Curriculum:* suitable combinations of subjects chosen from: biology, physics, chemistry, mathematics, computations.

*Examinations:* G.C.E. 'A' level

*Final qualification:* General Certificate of Education, Advanced level

**Graduate Membership of the Royal Institute of Chemistry** (III)

*Course adviser:* Dr C. A. Russell

A three-year course leading to the Graduate Membership examinations of the Royal Institute of Chemistry (see page 15). Ancillary subjects may be studied during the course. The Grad.R.I.C. Part I examination is taken at the end of the first year and the Grad.R.I.C. Part II examination at the end of the third year.

*Qualifications for entry:* a Higher National Certificate in Chemistry and G.C.E. 'O' level passes acceptable to the R.I.C. as evidence of a satisfactory general education.

**1st Year.** *Tutor:* Dr C. A. Russell. *Curriculum:* inorganic chemistry; comparative chemistry of the groups, review and extension of theoretical chemistry, special topics: organic chemistry; alicyclic chemistry, aliphatic and heteroaromatic chemistry, stereo-chemistry: physical chemistry; review and extension of thermodynamics, thermodynamics of solutions, structural chemistry, surface and colloid chemistry.

*Attendance:* one day and one evening per week

*Examinations:* Grad.R.I.C. Part I

**2nd and 3rd Years.** *Tutor:* Dr C. A. Russell. *Curriculum:* review and extension of chemical subjects studied: recent advances in inorganic, organic and physical chemistry.

*Attendance:* one day and two evenings per week

*Examinations:* Grad.R.I.C. Part II

*Final qualification:* Graduate Membership of the Royal Institute of Chemistry

**Licentiateship of the Royal Institute of Chemistry and Higher National Certificate in Chemistry** (III)

*Course adviser:* Dr J. L. Latham

A three-year course to prepare students for examinations necessary to fulfil the academic requirements for the Licentiateship grade. The Higher

National Certificate in Chemistry is taken at the end of the second year of the course and the H.N.C. endorsement subject, advanced analytical chemistry, at the end of the third year.

*Qualifications for entry:* Ordinary National Certificate with Elective Chemistry, or passes in G.C.E. 'A' level chemistry and either mathematics or physics.

**1st Year.** *Tutor:* Dr G. Newton. *Curriculum:* inorganic chemistry; chemical bonding, atomic structure, valency, typical elements, radio-chemistry; organic chemistry; electronic theory of organic chemistry, aliphatic chemistry, stereo-chemistry: physical chemistry; thermodynamics, electro chemistry, kinetics: liberal studies.

*Attendance:* one day and one evening per week

*Examinations:* internal

**2nd Year.** *Tutor:* Dr J. L. Latham. *Curriculum:* inorganic chemistry; transition elements, co-ordination compounds, carbonyls, interhalogens: organic chemistry; aromatic chemistry, stereo-chemistry: physical chemistry; thermodynamics, electrochemistry, phase equilibria, surface and colloid chemistry.

*Attendance:* one day and one evening per week

*Examinations:* H.N.C. in Chemistry.

**3rd Year.** *Tutor:* Dr D. Mason. *Curriculum:* radiochemistry, complexmetry, non-aqueous titrimetry, ion exchange resins, potentiometry, pH, electro-analysis, coulometry, polarography, amperometry, spectrometry, chromatography.

*Attendance:* one day and one evening per week

*Examinations:* H.N.C. Endorsement subject, advanced analytical chemistry

*Final qualification:* Higher National Certificate in Chemistry with Advanced Analytical Chemistry endorsement

**Ancillary Subjects for Licentiate and Associate Membership of the Royal Institute of Chemistry** (III)

*Tutors:* Dr D. Mason and F. R. Dean

A collection of classes either part-time day or evening to prepare students for assessed examinations in subjects appropriate for the Royal Institute of Chemistry Ancillary Subject requirements. Mathematics and Physics are compulsory subjects for R.I.C. qualifications and students wishing to proceed to Grad.R.I.C. must pass in a third ancillary subject.

*Qualifications for entry:* mathematics and physics should have been studied beyond G.C.E. 'O' level

*Curriculum:* mathematics (70 hours), physics (90 hours), metallurgy (180 hours), applied mathematics (180 hours).

*Attendance:* mathematics and physics: one day per week for one year; metallurgy, applied mathematics: one evening per week for two years

*Final qualification:* Royal Institute of Chemistry Assessed Ancillary Subject passes

**Ordinary National Certificate in Sciences** (II)

*Course advisers:* J. Donnelly and J. Unsworth

A two-year course of six terms, the first four terms of which will be devoted to a basic study of mathematics, physics and chemistry together with English and general subjects. At the end of the fourth term candidates will sit assessed theory papers in basic chemistry, basic physics and basic mathematics. In the fifth and sixth terms of the course candidates will study their elective subject which may be chemistry or applied physics and sit a theory and practical paper in their subject. Students may be awarded an Ordinary National Certificate with Elective Chemistry provided they pass elective chemistry, basic chemistry and either basic physics or basic mathematics and will be eligible to proceed to the Higher National Certificate in Chemistry course.

*Qualifications for entry:* either four G.C.E. 'O' level subjects *e.g.* mathematics, English and two complementary science subjects, or a certificate of the General Course in Science at credit level.

**1st Year.** *Tutor:* S. Britland. *Curriculum:* basic chemistry, basic physics, mathematics, liberal studies.

*Attendance:* one day and one evening per week

**Examinations**: internal

**2nd Year.** *Tutor:* A. Sherrington. *Curriculum:* basic chemistry (1 term), basic physics (1 term), mathematics (1 term), elective chemistry or physics (2 terms), liberal studies; supplementary mathematics and physics for R.I.C. qualifications.

*Attendance:* one day and one evening per week

*Examinations:* internal, externally assessed, in basic chemistry, basic physics, mathematics at the end of first term: elective chemistry theory (internal, externally assessed) and practical (internal) at the end of the third term.

*Final qualifications:* Ordinary National Certificate in Sciences

*Corporate Membership of the Institute of Medical Laboratory Technology.* The Institute of Medical Laboratory Technology is the acknowledged professional organisation for hospital laboratory technologists, and its members are engaged on the advancement, teaching and practice of the

application of science to hospital laboratory procedures. There are two corporate grades of membership, the Associateship (A.I.M.L.T.) and the Fellowship (F.I.M.L.T.)

After 3 years' hospital experience candidates may sit the Intermediate examination of the Institute and after 5 years' hospital experience they may sit the final examination which is taken in a specific medical laboratory subject *e.g.* Haematology and Blood Transfusion. To become an Associate of the Institute it is necessary to pass the Final examination, but to become a Fellow a candidate must either pass a further Final examination subject or pass a higher grade paper in the original final subject or submit a dissertation or thesis.

Recently the Institute of Medical Laboratory Technology has arranged with the Department of Education and Science a National Certificate scheme of qualification administered through a Joint committee for Medical Laboratory Sciences on which the Institute is well represented. The Ordinary National Certificate in Medical Laboratory Sciences is a two year day release course in which students study not only general medical technology but also relevant aspects of the related sciences of physics, chemistry and biology together with a study of mathematics and statistics. Holders of the Ordinary National Certificate will be granted exemption from the I.M.L.T. Intermediate examination. The Higher National Certificate requires a further two-year day release course and it is proposed that candidates should take examinations in a specific Medical technology subject *e.g.* Haematology and Blood Transfusion together with related subjects *e.g.* physiology and biochemistry. Exemption from the I.M.L.T. Final examination will be granted to holders of the Higher National Certificate.

All students on either I.M.L.T. or O.N.C. courses are advised to become Student Members of the Institute of Medical Laboratory Technology, and should obtain an application form from their chief technologist or write directly to: The General Secretary, The Institute of Medical Laboratory Technology, 12, Queen Anne Street, London, W.1.

**Institute of Medical Laboratory Technology: Intermediate Course** (II)

*Tutor:* F. Ramsden

A course of three years' duration was designed for Medical Laboratory Technologists who wished to prepare for the Intermediate examination of the Institute. Since the Intermediate course is being replaced by the O.N.C. in Medical Laboratory Sciences only the third year of the course will be offered this year.

*Qualifications for entry:* Successful completion of the second year of the course

**3rd Year.** *Curriculum:* chemical pathology, physiology, bacteriology histopathology, haematology, blood transfusion.

*Attendance:* one day and one evening per week

*Examinations:* I.M.L.T. Intermediate

*Final qualification:* Institute of Medical Laboratory Technology Intermediate Certificate

**Ordinary National Certificate in Medical Laboratory Sciences** (II)

*Course adviser:* F. Ramsden

A two-year course leading to the O.N.C. in Medical Laboratory Sciences thereby giving exemption from the I.M.L.T. Intermediate examinations. The examination scheme is based on four subjects, Chemistry, Biology, and Medical Laboratory Science each counting as one subject, and Mathematics and Physics each counting as half a subject. To qualify for the Ordinary National Certificate a student must pass in Medical Laboratory Science and at least two more subjects. An integrated hospital training is an essential part of the course and all students should hold full-time posts in hospital laboratories or in the laboratories or ancillary hospital units.

*Qualifications for entry:* four G.C.E. 'O' level passes which include mathematics, evidence of a good standard in English and two acceptable science subjects.

**1st Year**. *Tutor:* L. G. Morton. *Curriculum:* chemistry, physics, mathematics, biology, liberal studies.

*Attendance:* one day and one evening per week

*Examinations:* chemistry, biology: internal. mathematics and physics: internal, externally assessed.

**2nd Year**. *Tutor:* W. Rothwell. *Curriculum:* chemistry, biology, medical laboratory science, liberal studies.

*Attendance:* one day and one evening per week

*Examinations:* chemistry, biology, medical laboratory science: internal, externally assessed

*Final qualification:* Ordinary National Certificate in Medical Laboratory Science

**Pharmaceutical Technicians** (II)

*Tutor:* Mrs J. Betts

A one-year course for pharmaceutical technicians under training in preparation for the Society of Apothecaries Certificate. The qualification is recognised by Ministry of Health Hospital Boards for promotion to a higher grade. Before entering the examination candidates must have reached the age of 18 and have had two years practical training in dispensing under the direct supervision of a qualified pharmacist. It is important that upon commencing training, students should register with the society. Detailed syllabuses and regulations may be obtained directly from: The Registrar, The Society of Apothecaries of London, Blackfriars Lane, Queen Victoria Street, London E.C.4.

*Qualifications for entry:* good standard of general education

*Curriculum:* pharmacology, materia medica, pharmacy theory and practice.

*Attendance:* one day per week

*Examinations:* external

*Final qualification:* Certificate of the Society of Apothecaries

**General Certificate of Education; Ordinary level** (I)

*Tutor:* D. Steel

A one-year course primarily designed to enable students to complete the qualifications necessary for entry to the Ordinary National Certificate in Sciences Course (see page 21).

*Qualifications for entry:* previous studies in the chosen subjects

*Curriculum:* students may chose with their tutor's advice a suitable combination of the subjects: chemistry, biology, mathematics, physics, English.

*Attendance*: one day and one evening per week

*Examinations:* N.U.J.M.B.

*Final qualification:* General Certificate of Education, Ordinary level

**The Certificated Gardeners' Course** (I) (U.L.C.I. 375)

The Harris College and the Hutton Agricultural College co-operate to provide a three-year day-release course designed to cover the examination requirements for the Certificated Gardeners' qualification. Before the final examination candidates should also have completed an apprenticeship in horticulture or have had 5 years' experience in practical horticulture under an approved public/industrial authority.

Further details and course enrolment forms may be obtained from Hutton Agricultural College.

**Scientific Glassblowing** (II)

*Tutor:* D. Evans

Three ten-week courses covering the basic principles of glassblowing and the application of these principles to the fabrication of scientific equipment.

*Curriculum:* cutting, joining, T and Y joints, bending, blowing, reaming, internal seals.

*Attendance:* Saturday mornings

## Evening Courses

**Institute of Medical Laboratory Technology: Final** (III)

*Course adviser:* F. Ramsden

The subjects offered for advanced study in this two-year course are Bacteriological Techniques (Public Health Laboratory, Preston Royal Infirmary) and Haematology and Blood Transfusion (Blood Transfusion Unit, Lancaster, and Harris College).

*Qualifications for entry:* I.M.L.T. Intermediate or O.N.C. in Medical Laboratory Sciences

**1st Year.** *Tutors:* H. Dawkins and J. Lord. *Curriculum:* choice of either bacteriological techniques or raematology.

*Attendance:* one evening per week for each subject

*Examinations:* internal

**2nd Year.** *Tutors:* H. Dawkins and Dr H. H. Gunson. *Curriculum:* choice of either bacteriological techniques or blood transfusion

*Attendance:* one evening per week for each subject

*Examinations:* Institute of Medical Laboratory Technology (Final) in either Bacteriological Techniques or Haematology and Blood Transfusion

*Final qualification:* Associateship or Fellowship of the Institute of Medical Laboratory Technology (see page 21)

**Ancillary Subjects for Royal Institute of Chemistry Qualifications** (II)

*Tutor:* Dr D. Mason and F. R. Dean

A collection of classes to prepare students for assessed examinations in subjects appropriate for Royal Institute of Chemistry Ancillary Subject requirements. Mathematics and physics are compulsory subjects for R.I.C. qualifications and students wishing to proceed to Grad. R.I.C. must pass in a third ancillary subject.

*Qualifications for entry:* mathematics and physics should have been studied beyond G.C.E. 'O' level

*Curriculum:* mathematics (70 hours), physics (90 hours), metallurgy (180 hours).

*Attendance:* mathematics and physics; one evening per subject per week for one year: metallurgy; one evening per week for two years

*Final qualification:* Royal Institute of Chemistry Assessed Ancillary Subject passes

**Higher National Certificate (Engineering): Endorsement in Physical Metallurgy** (III)

*Course adviser:* N. C. Allen

A two-year course for engineers wishing to obtain an endorsement to complete exemption from Part II of the Institution of Mechanical Engineers.

*Qualifications for entry:* H.N.C. in Engineering

*Curriculum:* physical metallurgy

*Attendance:* one evening per week for 2 years

*Examinations:* H.N.C. Endorsement

*Final qualification:* Higher National Certificate (Engineering) Endorsement Certificate

**General Certificate of Education, Advanced level** (II)

*Course adviser:* H. E. G. Emmett

A two-year course for students seeking entrance to Graduate Courses

*Qualifications for entry:* candidates should be of G.C.E. Ordinary level standard in the subjects of their choice.

*Curriculum:* choice of subjects from: chemistry, physics, biology, mathematics, theoretical mechanics.

*Attendance:* one evening per week for each subject for 2 years

*Examinations:* G.C.E. 'A' level

*Final qualification:* General Certificate of Education, Advanced level subjects

**General Certificate of Education, Ordinary level** (I)

*Course Tutor:* L. G. Morton

A one-year revision course designed to enable students to gain further G.C.E. Ordinary Level passes in order to complete their qualifications for entering O.N.C. courses. The course will also be useful for students requiring further qualifications for industrial or commercial posts.

*Qualifications for entry:* previous studies in the subject chosen

*Curriculum:* choice of subjects from: mathematics, physics, chemistry, biology.

*Attendance:* one evening per subject per week for one year

*Examinations:* G.C.E. 'O' level

*Final qualifications:* General Certificate of Education, Ordinary level subjects

## Special Courses

*Enrolment into Special Courses* will take place separately from the normal enrolment procedure. Leaflets will be supplied on request by the Head of Department, and these will give full details of the courses and will include an application form.

**Selected experiments from the Nuffield Chemistry Scheme**

*Course organiser:* Dr. J. L. Latham

A series of 10 weekly demonstration tutorial periods arranged for Thursday evenings commencing 28th September, 1967, at 6-0 p.m. A variety of practical exercises from the Nuffield Chemistry Scheme, stages I and II, will be offered. The course will be particularly helpful to those teachers who are contemplating introducing the Nuffield chemistry course into their schools.

**Selected experiments from the Nuffield Biology Scheme**

*Course organiser:* L. G. Morton

A series of 10 weekly demonstration tutorial periods arranged for Thursday evenings commencing 28th September, 1967, at 6-0 p.m. A variety of practical exercises from the Nuffield Biology Scheme, years I and III, will be offered. The course will be particularly helpful to those teachers who are contemplating introducing the Nuffield biology course into their schools.

**New Engineering Materials**

*Course organisers:* A. Ottewell and N. G. Allen

A series of six lectures to be given on Monday evenings from the 30th October 1967, at 7-30 p.m. The lectures will deal with the problems involved in the development of new materials, how they arise and have been overcome, and how current difficulties relating to materials may be resolved in the future. The course is designed for metallurgists and workers in the fields of mechanical, production, civil and electrical engineering who are concerned with the problem of materials selection.

**Microscopy for Biologists**

*Course organisers:* H. E. G. Emmett and L. H. G. Morton

A series of lectures to be given on Friday evening and Saturday, the 1st and 2nd December, 1967, for biology teachers in Secondary Schools and Technical Colleges, dealing with microscopes and their use, modern techniques, the teaching of microscopy.

**Industrial Water Supply: Treatment and Disposal**

*Course organisers:* Dr J. Taylor and K. Edgar

A series of lectures to be given on Friday evening and Saturday morning, the 19th and 20th January 1968, designed for chemists and engineers concerned with aspects of industrial water utilization.

**The White Cells**

*Course organisers:* F. Ramsden and W. Rothwell

A series of lectures to be given on Friday evening and Saturday morning the 23rd and 24th February, 1968. The course is designed to facilitate discussion of current thought and recent developments in the study of the white cell series in human blood and tissues.

**Topics in Advanced Organic Chemistry**

*Course organisers:* Dr C. A. Russell and Dr G. Newton

A series of lectures to be given on Friday and Saturday, the 5th and 6th April 1968. Of special interest to teachers and others who wish to become acquainted with modern developments in a rapidly changing subject.

**Modern Aspects of Paper Technology**

*Course organisers:* Dr S. Blake and Dr D. J. Marks

A series of lectures to be given on Friday evening and Saturday morning, the 14th and 15th June 1968, designed to interest technical, managerial and supervisory staff in the paper-making industry.

## Administrative Staff

| | |
|---|---|
| *Registrar* | J. Barnacle, D.M.A., F.C.C.S. |
| *Senior Clerks* | E. D. Hardman (Finance and Accounts) |
| | B. Stott (Examinations and Records) |
| *Secretary to the Principal* | Miss F. M. Jones |
| *Section Clerks* | Mrs K. M. Glynn (Accommodation) |
| | Miss E. Stobbart (Services) |
| *Clerks* | Mrs P. K. Hall |
| | Mrs K. Howarth |
| | Mrs D. Hurst |
| | Miss K. Lucas |
| | Mrs B. Metcalf (Secretary to the Industrial Liaison Officer) |
| | Mrs M. A. Simpson |
| | Miss J. H. Slee |
| | Mrs D. M. Sturzaker |
| | Mrs P. Tinsley |
| | Miss C. Tyrer |
| | Miss J. K. Watt |
| *Telephonists* | Mrs B. J. Baker |
| | Mrs P. B. Bamford |
| *Cashiers* | Mrs R. Doherty |
| | Mrs M. Marland |
| *Equipment Maintenance* | E. Goodson (Chief Engineer) |
| | E. Davis |
| | R. Holmes |
| *Refectory* | Mrs M. Hamlyn White (Catering Manageress) |
| | Miss E. Grunshaw (Assistant) |
| *Custodian of Premises* | W. H. Hatton |
| *Caretaker* | L. Whalley (Avenham premises) |
| *Assistant Caretakers* | V. Baron |
| | W. J. Butler |
| | G. Holden |
| | H. Mee |
| | H. Nicholls |
| | W. Pullan |

| | |
|---|---|
| *Assistant Caretakers* | W. Saunders |
| *(contd.)* | J. Walton |
| | T. K. Wharton |
| *Groundsman* | G. Cowell |
| *Watchmen* | S. Dixon |
| | F. Miller |
| | D. Postlethwaite |

## Calendar

| | | |
|---|---|---|
| 1967 | Thursday, 14th September | General Staff Meeting |
| | ENROLMENT PERIOD | |
| | Monday, 18th September | Enrolment, first day |
| | Tuesday, 19th September | Enrolment, second day |
| | Wednesday, 20th September | Enrolment, last day |
| | AUTUMN TERM | |
| | Monday, 25th September | All day and evening classes commence for the Autumn term |
| | Wednesday, 20th December | All departments close for Christmas after evening classes |
| | SPRING TERM | |
| 1968 | Thursday, 4th January | All classes re-open for the Spring term |
| | Tuesday, 13th February | Foundation Address and Distribution of Awards: all evening classes closed |
| | Friday, 5th April | All departments close for Easter after evening classes |
| | SUMMER TERM | |
| | Monday, 22nd April | All classes re-open for the Summer term |
| | Friday, 31st May | All departments close for Whitsuntide after evening classes |
| | Monday, 10th June | All classes re-open |
| | Friday, 5th July | All classes close: end of session |
| | Friday, 12th July | End of term: submission of reports |

*Note:* There are other important dates with which students must be familiar, for example closing dates for receipt of examination entries, commencement and termination of sandwich and block release courses. These will be found in the appropriate sections of the prospectus.

## Admission to Courses and Examinations

Courses will be provided subject to adequate enrolment; they may be discontinued at the discretion of the Principal at any time during the session should the numbers attending fall below a reasonable level.

The acceptance of a student into a course must have the approval of a Head of Department, and the student must produce satisfactory evidence that he has the necessary qualifications to enter the course.

Full-time and sandwich course students should make application well before the commencement of the session on the form obtainable from the Registrar.

At enrolment each student will receive an admission form bearing an admission number. This form must be shown to the class lecturer when the student attends each class for the first time in the session. Students will not be permitted to attend classes until they have completed the enrolment procedure (see page 36).

To qualify for certificates and to pass on to higher years of a course it is necessary that students should have:

(*a*) reached a prescribed standard of attainment, tested by examinations held at the end of the session, and

(*b*) made satisfactory attendance and progress during the session.

### EXAMINATIONS

All Students are required to take prescribed internal or external examinations at the end of each year of the course.

Examination fees must be paid by students at the time of entry to examinations: accounts cannot be sent to employers or grant-aiding Authorities. There are no fees for purely internal examinations of the College.

Students who take the examinations of external examining bodies (*e.g.* the Union of Lancashire and Cheshire Institutes, the Royal Society of Arts, the City and Guilds of London Institute) or General Certificate of Education examinations, must pay the examination fees of these bodies.

Each student entering the final examination for Ordinary or Higher National Diplomas and Certificates must pay an entry fee of 7s. 6d. per

subject, in addition to the examination fee charged by the external examining body whose examinations are adopted. In the event of a Joint Committee agreeing to the re-examination of a student in a subject, the student will be required to pay the full cost of the re-examination, or to share the cost proportionately should more than one student be involved in the same re-examination.

Each student is responsible for his own entry to external examinations and must complete the appropriate entry form and present it with the fee to the College office. Students will not be informed individually of the last dates of entry or of timetables of examinations, but these will be published on notice boards. The last dates of entry for the undermentioned examinations are:

Assessed papers for National Diplomas and Certificates, including endorsements: 15th December, 1967

City and Guilds of London Institute: 19th January, 1968

Union of Lancashire and Cheshire Institutes, series B and C: 2nd February, 1968

General Certificate of Education papers (N.U.J.M.B.): 9th February, 1968

Institute of Linguists: 1st March, 1968

Pitmans: 15th March, 1968

Training Council for Teachers of the Mentally Handicapped: 5th April, 1968

Royal Society of Arts, Summer Series: 26th April, 1968

Students who do not enter by these dates may well be excluded from taking the examinations, and even if accepted late fees are payable ranging from 10s. to £10. 0s. 0d.

### EXAMINATION RESULTS

Sessional Reports will include examination results, but they cannot be completed until after the results are received from external examining bodies. Reports are then sent to each student as soon as possible. It is regretted that in the meantime enquiries cannot be answered. Copies of external examination pass lists will be made available for scrutiny on the College notice board as soon as possible after they are received.

## Tuition Fees

Sessional tuition fees must be paid at the time of enrolment and are returnable only in exceptional cases. Cheques should be made payable to the Corporation of Preston and crossed.

A student whose employer undertakes to pay the fee on his behalf must produce at enrolment a letter from his employer to that effect.

Part-time students from the administrative counties of Lancashire and Westmorland and from Wigan County Borough under age 18 on the 1st September will be enrolled without payment of the tuition fee.

| **Full-time and Sandwich Courses** | | Students under age 18 on 1st September £ s. d. | Students age 18 and over on 1st September £ s. d. |
|---|---|---|---|
| Graduate Membership of the Royal Institute of Chemistry: | 1st year | 36 17 6 | 38 5 0 |
| | 2nd year | | 38 5 0 |
| | 3rd year | | 56 10 0 |
| | 4th year | | 56 10 0 |
| General Certificate of Education 'A' level | | 30 2 6 | 31 10 0 |

| **Part-time Courses** | Students under age 21 on 1st September £ s. d. | Students age 21 and over on 1st September £ s. d. |
|---|---|---|
| Group I (introductory level) | 1 7 6 | 2 12 6 |
| Group II (intermediate level) | 1 17 6 | 2 17 6 |
| Group III (advanced level) | 2 12 6 | 3 2 6 |

OVERSEAS STUDENTS

Students from outside the United Kingdom attending full-time and sandwich courses are required to pay special fees. Details of these can be obtained from the Registrar.

RESIDENTIAL LIBERAL STUDIES COURSES

As an integral part of their studies, students in certain advanced full-time and sandwich courses will normally attend each year a three-day residential

course. The fee is approximately £3. 10s. od. which must be paid by the student. Students in receipt of Local Authority grants will in most cases be reimbursed all or part of the cost by their supporting authorities.

GRANTS

Full-time or College-based Sandwich Course students may apply to the Local Education Authority for the area in which they permanently reside for a grant of fees and maintenance. Works-based Sandwich Course students may also be eligible for financial assistance where the employer does not pay fees or wages during the College periods of a course, or where only partial financial support is offered by the employer.

NOTE TO LOCAL AUTHORITIES

The course grade designation (III NP) indicates an advanced course which is not poolable under D.E.S. regulations. In respect of these courses the normal recoupment procedure will apply.

## Enrolment

Students will be enrolled between the times: 10.0 a.m. to 12.30 p.m., 1.30 to 4.30 p.m. and 5.30 to 8.30 p.m. on the following days:

Monday, 18th September, 1967
Tuesday, 19th September, 1967
Wednesday, 20th September, 1967

Students must enrol during the times and on the dates stated; those who fail to enrol on these dates will be charged a late fee of 10s. 0d. The busiest enrolment periods are in the evenings; students who can enrol during the morning or afternoon periods will help the College and save themselves an appreciable amount of time.

Postal enrolments cannot be accepted.

Enrolment into special courses takes place separately from the procedure detailed on this page. (see page 27).

A student who wishes to enrol into a course demanding entry qualifications must produce documentary evidence at or before enrolment. Documentary evidence is not required in respect of students who have gained their qualifications at the Harris College.

PERMISSION VOUCHERS: all students resident in the County Borough of Preston or in the administrative area of Lancashire County, and part-time students resident in the County Borough of Wigan, will be admitted without the production of an inter-authority voucher. *All other students* must obtain permission vouchers each year from their Local Education Authorities and present them at enrolment.

**Enrolment procedure**
Students should first report to the department in which they wish to enrol. The plan of the College on the opposite page shows the blocks in which departments are situated. The rooms in which enrolment takes place in each department are shown in brackets below, *viz:*

B BLOCK
School of Art (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52 and B55)

E BLOCK

Mechanical, Civil and Production Engineering Department (new students E1, former students E9)

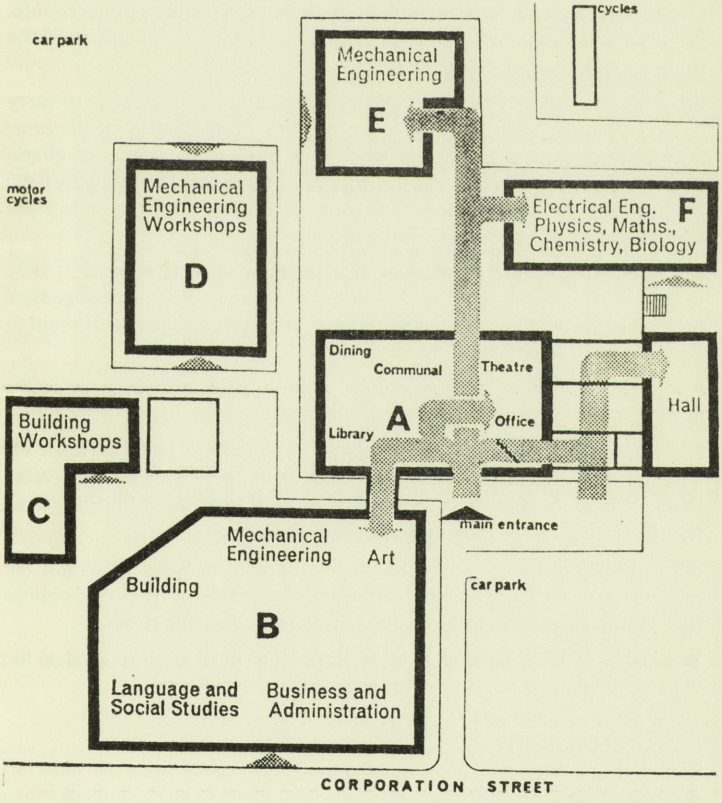
F BLOCK

Chemistry and Biology Department (F37)
Electrical Engineering Department (F8, F9 and F10)
Physics and Mathematics Department (courses which include chemistry F35 and F37: other courses F26)

A BLOCK

College Office and enquiries

*When details of his future course have been determined in the department the student must present his enrolment forms at the Hall (A Block) for enrolment and payment of fees.*



# Regulations

DISCIPLINE

Students are accepted into College courses on the understanding that they abide by the regulations herein and from time to time in force.

The Principal has the authority to suspend students from attendance for any cause which he considers adequate. The Council will exclude from the College premises any student whose continued attendance is undesirable. Suspended or excluded students automatically lose membership of the students' union and College societies.

Students are required to attend classes punctually and regularly, to carry out satisfactorily such work as is set by their tutors, and to sit the prescribed examinations. Employers who grant release to students to attend College courses will, after the fourth week of session, be notified of the absence of their employees, and as soon as possible after the end of the course will receive copies of sessional reports.

Students must conduct themselves in a quiet and orderly manner. They will be held responsible for and required to make good any damage they may cause due to negligence or wilfulness. They are expected at all times to keep the College tidy and free from litter.

Smoking within the College buildings is prohibited, except in the coffee lounge, staff rooms, common rooms, and assembly areas at permitted times.

Hot cooked foods must not be brought into the College, and food must not be consumed on the premises other than in the dining room and coffee lounge. Students who wish to bring packed meals may do so but they must take their meals at the fixed tables in the coffee lounge.

All forms of gambling and card playing on the premises or within the precincts are strictly prohibited. Students who are members of the college card club may, by arrangement, use the students' meeting room.

Musical instruments, including transistor radios, must not be played on the College premises except by arrangement with the Principal.

PARKING FACILITIES

The College does not possess adequate parking facilities to meet all demands. Parking is restricted to the official car parks and cycle sheds where vehicles may be left at the owners' risk.

Students must travel very slowly in the College precincts, and should use the entrance nearest to the point of parking. They must not drive around or within the College premises in break periods. Roadways must be kept clear in case of emergencies.

### PERSONAL PROPERTY

The Council cannot accept responsibility for the safety of students' property. Property found on the premises will be handed to the Custodian of Premises, and students wishing to reclaim lost property should address enquiries to the Custodian.

Cloak lockers are available in all departments for students' use. Full-time, sandwich and block release course students may be allocated lockers for the duration of the course. Part-time students may use a locker during the day and/or evening spent in the College but must remove locker contents and padlocks when leaving the College for the day. Lockers should be secured by the students' own padlocks.

Lockers must be left empty and unlocked at the end of a course or session, otherwise the locks and contents will be removed.

### HEALTH AND SAFETY

Students are required in the interests of cleanliness, health and safety to provide themselves with the recommended kind of protective clothing which must be worn in workshop and laboratory classes. Workshop and laboratory clothes must not be worn whilst attending lectures or whilst in the communal block.

Students must use all protective devices provided.

Students should not attend the College from a house in which there is infectious illness. Cases should be promptly reported to the Registrar.

### FLOOR PROTECTION

It is regretted that ladies wearing stiletto heels will have to be refused admission to parts of the premises where damage to the floor would result. Ordinary footwear will be permitted in the Hall only when the floor drugget is laid.

COMMUNAL FACILITIES

The Communal Block provides facilities for the educational, social and recreational enjoyment of the students and staff. Besides administrative accommodation and a fully equipped theatre for both lectures and drama, there is a dining room and coffee foyer, a students' common room, students' union office and meeting rooms. The library is situated in this building.

An unusual feature is the Recreation Hall. The hall will be reserved at certain times for examinations, and occasionally for ceremonies or exhibitions, but at other times it is available to student groups, societies, and individuals for games and a very wide variety of physical activities. The bridge over the North courtyard leading to the hall contains changing rooms and showers.

REFECTORY

The dining room is open from 12.15 to 1.30 p.m. for lunch. A selection of courses at various prices is available. Tea or coffee after lunch may be taken in the adjacent coffee foyer.

Light teas or cooked meals are normally available from 4.30 to 7.00 p.m.

In addition to meals, tea or coffee or soft drinks will be available in the coffee foyer during set periods to cover mid-morning and mid-afternoon breaks between classes. Service from trolleys is available elsewhere at the same times.

Staff and students are requested to observe any restrictions on smoking in the refectory premises.

Requests for any special catering should be made in the first instance to the Registrar, well in advance of the occasion.

STATIONERY

The College stationery shop is open on three occasions during the day, namely 8.50 to 9.15 a.m., 1.00 to 2.00 p.m., and 6.45 to 7.15 p.m. Students may purchase the usual items of stationery, and also special laboratory and note books necessary for many courses.

SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of societies and professional bodies are frequently held in the College.

Notice of the lectures will be displayed in the main entrance foyer during the session. Individual students and members of staff are welcome to attend. Application for groups to attend should be made through the Principal to the local secretary of the organisation.

NATIONAL DIPLOMA AND CERTIFICATE COURSE REQUIREMENTS

An Ordinary National Diploma is awarded at the end of a two-year senior course of full-time study. A Higher National Diploma is awarded at the end of a further three year advanced course of full-time study.

Ordinary National Certificates and Higher National Certificates are corresponding awards following courses of part-time study.

Awards in each case are made by the Department of Education and Science in conjunction with one or more Professional Institutions. To receive an award a candidate must normally:

(*a*) make not less than 80% of the possible attendances in each subject in each year of the course for the award of a diploma, or 60% for the award of a certificate,

(*b*) obtain not less than 40% of the possible marks in each subject in the examinations held at the end of each year,

(*c*) obtain not less than 40% 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, and

(*d*) obtain not less than 50% of the grand total of marks obtainable in the final year. Of this total the possible marks in the examinations constitute 70% and the remaining 30% will be the possible marks for home work, class work, laboratory work, etc.

A 'Distinction' may be awarded to any candidate qualified to receive a diploma or certificate who, in the opinion of the examiners, has shown special merit in the final examination. His certificate will be specially endorsed with the name(s) of the subject(s) in which he has thus distinguished himself.

CHANGE IN STUDENT PARTICULARS

Changes during the session should be notified immediately to the Registrar on the form available from the College office, for example: change of address, change of employer, change of name on marriage.

ABSENCES

In the event of absences from classes because of illness or other unavoidable causes a note of explanation should be sent to the Head of Depart-

ment. A student who absents himself for a continuous period of four weeks without the approval of the Head of Department will be deemed to have left the course and his name will be removed from the register.

### OUTSIDE ACCOMMODATION

Shortage of accommodation makes it necessary for some classes to be held in the following premises: Avenham (School of Art Annexe); Blackburn and East Lancashire Royal Infirmary; Blood Transfusion Unit, Lancaster; Cheviot Street Workshop (off Strand Road); Deepdale County Secondary School; Lancashire County Institute of Agriculture, Hutton; N.W.G.B. Training Centre, Moor Lane, Preston; Preston Royal Infirmary; G.P.O. Telephone House, Moor Lane, Preston; and Trinity County Secondary School.

## The Library

Telephone: Preston 51831, ext. 15

| | |
|---|---|
| *Librarian* | A. Lawrence, A.L.A. |
| *Assistant Librarians* | Mrs M. Pye, A.L.A. |
| | Mrs S. M. Hunt |
| *Library Assistants* | Miss J. E Bamford |
| | Mrs I. M. Fuller |

The College library is available to all students for reference purposes. 360 technical journals are received annually in addition to the development of the book stock. An up-to-date set of British Standard Specifications is maintained.

The library is open from Monday to Friday at the following times:

*During term time:* 9.00 a.m. to 9.00 p.m.
*During vacations:* 9.00 a.m. to 5-30 p.m.

The library has facilities for photocopying, and students may obtain copies of pages of books and periodicals subject to the law of copyright. A charge is made for this service.

The library is a local agent for the National Lending Library of Science and Technology, a member of ASLIB and the North Western Regional Library System, and may be able to obtain through these organisations items not in its own stock.

## Physical Education and Recreation

Telephone: Preston 51831, ext. 27

| | |
|---|---|
| *Lecturer* | C. M. Robinson, D.L.C. |
| *Assistant Lecturers* | J. Gridley, A.G.A. |
| | Mrs B. J. Harrison, DIP.P.E., DARTFORD COLLEGE |
| *Visiting Lecturers* | A. Lewis |
| | R. Poole |
| | A. Spavin |
| | D. Stokes |
| | B. Strettle, B.J.A. |
| | G. Wilson, N.A.B.B.A. |
| | S. Wright, B.J.A. |

The Recreation Hall is equipped with fixed apparatus which, together with portable apparatus and equipment the College possesses, allows the pursuit of the following activities: athletics, badminton, basket ball, canoeing and sailing, cricket, dance, fencing, five-a-side football, golf, judo, mountaineering, netball, olympic gymnastics, padder tennis, soccer and rugby training, table tennis, trampolining, volley ball, weight training and lifting.

The recreational facilities of the College are available to all students enrolled into an academic course without payment of a further fee. Anyone interested in any of the activities detailed should contact the Lecturer in Physical Education at enrolment or as soon as possible afterwards. College sports clubs, affiliated to the students' union, are given priority in the evenings.

Lectures and films on a variety of activities, and inter-departmental and inter-College tournaments and competitions, are arranged throughout the session.

The mountaineering club arranges visits to the Lake District and North Wales for rock climbing, rambling and canoeing. For full-time students one week courses in mountain activities are arranged. From time to time arrangements are made for parties to engage in outdoor activities in vacation periods, for example ski-ing, rock climbing, canoeing, pony trekking, etc.

### REGIONAL AND NATIONAL SPORTS ACTIVITIES

The College is a centre for regional and national sports tournaments in badminton, table tennis and trampolining. It is also an Olympic Gym-

nastics Centre; the College gymnastic team competes in the National Team Championships of Great Britain and has also competed abroad.

### RESEARCH

The Physical Education Section in conjunction with the Department of Chemistry and Biology is undertaking research into the effects of different types of exercise on the heart and lungs, and a number of volunteer groups of students are co-operating.

### SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's eight academic departments. Persons not registered as students for academic courses may be admitted to certain scheduled classes in physical education, so far as places are available.The tuition fee payable is £1. 7s. 6d. if under age 21 on the 1st September or £2. 12s. 6d. if age 21 or over.

In order to give academic course students priority, persons who wish to enrol for physical education classes alone are not accepted until the fourth week in the session. No person may be admitted to these classes who is less than 16 years of age on the 1st September.

## Harris Students' Union

Telephone: Preston 53852

B. Hayes, *President*
A. England, *Vice-President*
Miss S. Standing, *Vice-President (female students)*
A. Kimm, *Secretary*
I. Horne, *Student Treasurer*
D. Swift, *Honorary Treasurer*

The Harris Students' Union is organised and governed by students, and is affiliated to the National Union of Students. It arranges general social activities, provides a means of helping the formation of student societies, and maintains contact with the students of other colleges. The union is financed by a grant from the Harris Council.

All students other than those enrolled in special courses are automatically admitted to membership of the students' union. A membership card will be issued at enrolment entitling students to participate in all social activities, to join any student society or club, and to vote in the election of members to the Executive Committee.

All clubs and societies in the College are affiliated to the Students' Union, and special subscriptions may be required for membership of particular clubs and societies. A Students' Union Handbook, issued free to members, describes the activities of the union.

Dances and other social events are regularly arranged in the College and in the town. A common room and an office are allocated exclusively for the use of students and recreational facilities are available elsewhere by arrangement with the Lecturer in Physical Education.

Enquiries concerning student activities should be addressed to the Secretary, Harris Students' Union, Corporation Street, Preston.

**College Colours**

A Harris College blazer badge, scarf and tie, designed by the School of Art and Design and approved by the College Governors, are on sale at Messrs. Hellewells, Lune Street, Preston. Prices: 8s. 11d., 28s. 6d. and 8s. 6d. each respectively.

Harris College **Department of Electrical Engineering 1967–68**

**Harris College, Corporation Street, Preston, Lancashire**
**Telephone: Preston 51831–5**

*Foundation.* On the 4th April, 1956, the Minister of Education made a scheme for the establishment of the Harris College of Further Education, formerly the Harris Institute (comprising the Harris Technical College and the School of Art). In the terms of this scheme, and a later amendment to it, the College is housed in premises provided and maintained by the County Borough of Preston and is governed by the Harris Council of twenty-eight members; namely nine members of Preston Education Committee, nine members appointed by Lancashire Education Authority, nine members representative of industry and commerce, and one member representative of the Universities.

**The Harris Council**

*President:* Alderman W. Beckett, O.B.E., J.P.

*Vice-President:* Councillor J. Hargreaves

*Members:*

Alderman J. Atkinson
Alderman Mrs D. M. Dewhurst, J.P.
Alderman J. F. Gray
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker, J.P. (The Right Worshipful the Mayor of Preston)
Councillor Mrs K. E. Crozier
Councillor T. Dewhurst
Councillor Mrs R. Lytton

Alderman Sir Fred Longworth (Vice-Chairman of Lancashire County Council)
Alderman J. Bradley, M.B.E., J.P.
Councillor T. V. Brown
Councillor C. W. Eastwood
F. Ley
Councillor A. J. Whittall
Councillor Mrs W. Winn
Councillor G. Woods

F. D. Crowe, B.SC.(ENG)., A.F.R.AE.S.
Professor E. Roland Dobbs
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., A.M.I.MECH.E.
P. D. Oakley, B.SC., F.R.I.C.
H. Rogan, O.B.E., B.SC., PH.D., F.R.I.C.
Alderman J. W. Taylor, J.P., F.C.I.S.
J. W. Walker

*Clerk to the Council:* W. R. Tuson, B.SC., Chief Education Officer, Preston

**Research Council**

The research council is a sub-committee of the Harris Council charged with the promotion of research and the administration of research funds.

*Chairman:*
Alderman W. Beckett, O.B.E., J.P., *President of the Harris Council*

*Members:*
Councillor J. Hargreaves, *Vice-President of the Harris Council*
Professor E. Roland Dobbs, *University of Lancaster*
J. Jones, A.M.I.MECH.E.
Dr P. R. Lancaster, *University of Bradford*
W. J. R. Merren, M.A., B.SC., *Director of Research, Pilkington Research Laboratories*
Dr K. Morgan, *University of Lancaster*
P. D. Oakley, B.SC., F.R.I.C., *Member of the Harris Council*
Dr H. Wilkinson, *Principal of the Harris College*
Dr S. Skidmore, *Vice-Principal of the Harris College*

**Principal**: H. Wilkinson, M.SC.TECH., PH.D., A.INST.P.

**Vice-Principal**: S. Skidmore, B.SC., PH.D.(LONDON), F.R.I.C.

*Registrar:* J. Barnacle, D.M.A., F.C.C.S.

*The Harris College* is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are eight teaching departments in the College: the School of Art, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical Engineering, Language and Social Studies, Mechanical Civil and Production Engineering, Physics and Mathematics. All are newly housed, and the facilities include a combined Lecture Hall and Theatre, a Recreational Hall, Student Common Rooms, Library and Refectory.

Strong links exist between the College, Industry and Commerce and these have helped the development of sandwich courses leading to professional qualifications. Extension of these courses into other professional fields of activity is planned. Short courses on specialist or advanced topics are arranged regularly in all departments of the College. Research and consultancy are important features of the work of the College, and the recent appointment of an Industrial Liaison Officer is expected to increase and widen the range of these activities.

*The Department of Electrical Engineering* provides full-time, sandwich and part-time courses leading to corporate membership of the Institution of Electrical Engineers and the Institution of Electronic and Radio Engineers. Courses are also provided for the Ordinary National Certificate in Engineering, the Higher National Certificate in Electrical and Electronic Engineering, and final qualifications in the technician and craft fields. Students in sandwich and full-time courses may apply for Local Authority grants.

Short courses on specialist topics are organised in conjunction with local industry. The College maintains close ties with the local centres of the Institution of Electrical Engineers and the Institution of Post Office Engineers who hold regular technical meetings within the College.

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## Department of Electrical Engineering

Telephone: Preston 51831, ext. 8

| | |
|---|---|
| *Head of Department* | A. Palmer, B.SC.TECH., C.ENG., M.I.E.E. |
| *Principal Lecturer* | M. F. McKenna, B.SC., PH.D., C.ENG., M.I.E.E., M.I.E.E.E. |
| *Senior Lecturers* | R. O. Hall, B.SC.TECH., A.M.C.T., C.ENG., M.I.E.E. |
| | H. C. Parker, B.SC.(ENG), C.ENG., M.I.E.E., A.M.I.MECH.E. |
| | N. T. Slater, B.SC., C.ENG., M.I.E.E. |
| *Lecturers* | R. N. Abbott, B.SC., C.ENG., M.I.E.E. |
| | J. A. Askew, DIP.TECH.(ENG.)., M.SC. |
| | D. Baxter, A.I.E.R.E., M.I.S.M., A.M.INST.E. |
| | H. Duckworth, C.ENG., M.I.E.E. |
| | W. S. Kirkpatrick, C.ENG., M.I.E.E. |
| | J. K. Moss, B.SC., M.I.E.E. |
| | R. J. Simpson, B.SC. |
| *Assistant Lecturers* | J. M. Berry |
| | K. Blencowe, B.SC. |
| | K. Bowker |
| | T. H. Cowperthwaite |
| | F. H. Downham |
| | R. Duddle |
| | S. E. Egerton |
| | F. Walmsley, A.M.A.S.E.E., A.M.I.T.E. |
| | J. Wilson, M.A. |
| | C. Yates, A.I.E.E., A.M.I.T.E. |
| *Technicians* | G. Gibson, A.M.A.S.E.E., A.M.I.T.E. (*Chief*) |
| | J. Bannerman |
| | J. R. D. Davies |
| | N. Faulkner |
| *Visiting Lecturers* | R. Benn, B.SC.(ENG.), M.I.E.E. |
| | J. Blackie, F.I.E.E. |
| | E. Byron |
| | T. J. Conway |
| | W. B. Crook |
| | W. N. F. Evans |
| | W. Fowler |
| | F. Hackett, A.M.A.S.E.E., A.M.I.T.E. |
| | G. Gibson, A.M.A.S.E.E., A.M.I.T.E. |
| | E. Hatton |

| | |
|---|---|
| *Visiting Lecturers* (*contd.*) | W. A. Hesketh |
| | E. Howarth |
| | D. Hutchinson |
| | A. Jackson, A.M.I.C.E. |
| | A. Kent |
| | R. E. Kenwright, M.I.E.E |
| | E. Leeming |
| | B. Lewis |
| | B. Marshall, M.I.E.E. |
| | A. Shorrock |
| | C. W. Sturley |
| | Mrs B. Standing |
| | N. J. Sumner |
| | F. J. Sweetman |
| | D. Taylor |

## List of Courses


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*Corporate Membership of the Professional Institutions:* the Council of Engineering Institutions representing nine Institutions, including the Institution of Electrical Engineers and the Institution of Electronic and Radio Engineers, was established in 1966 and holds the sole authority to confer the title 'Chartered Engineer' to members of the Profession.

In order to attain the status 'Chartered Engineer' it will be necessary for the candidate to either pass or obtain exemption from the Parts 1 and 2 Examinations set by the Council. Success in these examinations will qualify the candidate for Associate Membership of the Institution of Electrical Engineers and/or Graduate Membership of the Institution of Electronic and Radio Engineers. If this is followed by a period of approved experience in the field of electrical or electronic engineering, a candidate is entitled to apply for admission to Corporate Membership and also gain the status 'Chartered Engineer' (C.Eng.).

The standard of the final examination is equivalent to that of a first degree in electrical engineering. It is therefore recognised by many Universities as a suitable qualification for entry to a higher degree course.

**Associate Membership of the Institution of Electrical Engineers and Graduate Membership of the Institution of Electronic and Radio Engineers** (III)

This is a four-year sandwich course for students wishing to satisfy the academic requirements for election as an Associate Member of the Institution of Electrical Engineers and/or Graduate Member of the Institution of Electronic and Radio Engineers.

In each of the first three years of the course the students will spend approximately alternate six monthly periods in full-time study at the College and in industry. The final year will be spent in full-time study at the College. Students selected for the course may be already in employment or may join the course directly from school. The industrial training periods for these latter students is arranged by the College.

Successful completion of the first three years of the course leads to the award of a Higher National Diploma in Electrical and Electronic Engineering giving exemption from the Council of Engineering Institutions Part 1 Examinations.

Specialist endorsement subjects are available in the final year of the course which provides a suitable introduction to those students wishing to undertake the Council of Engineering Institutions' Part **2** Examinations.

*Qualifications for entry* to the first year of the course: Ordinary National Certificate or Diploma in Electrical Engineering with credit standard in all assessed subjects, *or* Ordinary National Certificate or Diploma in Engineering with credit standard in Mathematics and the Electrical Engineering subject(s), *or* completion of the Advanced level courses for the General Certificate of Education in mathematics and physics with a pass in at least one of these subjects, together with a pass in each of three additional subjects at Ordinary level, one of which should preferably be English Language.

**1st Year.** *Tutor:* T. H. Cowperthwaite. *Curriculum:* mathematics, engineering drawing, physics, applied mechanics, electrical technology, general studies.

*College course:* September to April (26 weeks)

*Examinations:* internal

**2nd Year.** *Tutor:* R. N. Abbott. *Curriculum:* mathematics, engineering physics, materials and machines, electrotechnology, applied electricity, general studies.

*College course:* September to April (26 weeks)

*Examinations:* internal

**3rd Year.** *Tutor:* H. C. Parker. *Curriculum:* mathematics, circuits, fields and measurements; electronics, electricity supply, unified theory of electrical machines, control and computation, management studies.

*College course:* September to June (36 weeks)

*Examinations:* Higher National Diploma in Electrical Engineering

**4th Year.** *Tutor:* R. O. Hall. *Curriculum:* advanced studies in the fields of electronics, communication engineering, computer engineering, electrical power engineering, electrical machines, mathematics.

*College course:* September to June (36 weeks)

*Examinations:* I.E.E. Part III

*Final qualification:* Associate Membership of the Institution of Electrical Engineers and/or Graduate Membership of the Institution of Electronic and Radio Engineers

**Institution of Electrical Engineers, Part III Examination** (III)

*Course adviser:* R. O. Hall

A one-year full-time course. The existing route to Associate Membership of the Institution of Electrical Engineers via the Institution's Part III Examinations will continue for the 1967/68 session as in previous years.

*Qualifications for entry:* a Higher National Diploma in Electrical and Electronic Engineering, *or* Ordinary and Higher National Certificates in Electrical Engineering with approved endorsement subjects.

*Curriculum:* options from advanced electrical engineering, applied electronics, instrumentation and control, radio communication, utilisation of electrical plant, electricity supply. The Higher National Certificate endorsement subject of engineering physics will be available as required.

*Examinations:* I.E.E. Part III

*Final qualification:* Associate Membership of the Institution of Electrical Engineers

## Block Release Course

**Ordinary National Certificate in Engineering** (II)

A two-year course, the successful completion of which satisfies the academic requirements for entry to the four-year full-time/sandwich course leading to the Higher National Diploma in Electrical and Electronic Engineering and to professional qualifications. Alternatively, the Ordinary National Certificate provides an entry to the Higher National Certificate Course in Electrical and Electronic Engineering.

Attendance is required for periods of approximately six weeks, alternating with similar lengths of time in industry.

*Qualifications for entry* to the first year of the course: successful completion of the General Engineering Course with credits in mathematics and engineering science and a pass in engineering drawing, *or* G.C.E. 'O' level passes in at least four subjects including mathematics and an approved science subject.

**1st Year.** *Tutor:* S. E. Egerton. *Curriculum:* mechanical engineering science, electrical science, mathematics, telecommunications, electrical power equipment, English and liberal studies.

*College course:* 16 weeks in all

*Examinations:* internal

**2nd Year.** *Tutor:* S. E. Egerton. *Curriculum:* applied mechanics, physics, electrical engineering principles, mathematics, telecommunications, electrical power equipment, English and liberal studies.

*College course:* 16 weeks in all

*Examinations:* O.N.C. in Engineering

*Final qualification:* Ordinary National Certificate in Engineering

## Part-time Day Courses

**Associate Membership of the Institution of Electrical Engineers** (I.E.E. PART III EXAMINATIONS) (III)

A two-year course in preparation for the Part III Examinations of the Institution of Electrical Engineers. On completion of the first year of the course students normally take an examination in advanced electrical engineering, together with engineering physics if a qualification in this latter subject has not already been obtained. Examinations in two subjects, selected from a number of specialist subjects offered, are normally taken on completion of the second year.

Students should note that the regulations governing Associate Membership of the Institution will shortly be changed. The last Part III Examinations will be held in June, 1969, and thereafter it will not be possible to obtain Associate Membership via a Higher National Certificate qualification. Students wishing to obtain Graduate Membership of the Institution of Electronic and Radio Engineers are referred to page 13 of this prospectus.

*Qualifications for entry* to the first year of the course: a Higher National Diploma in Electrical and Electronic Engineering, *or* an Ordinary National Certificate and Higher National Certificate with credits in the electrical subjects, together with appropriate endorsements, *or* Part I and Part II Examinations of the Institution of Electrical Engineers. A recognised English language qualification is required in all cases.

Candidates for the Part III Examinations must be Student Members of the Institution of Electrical Engineers in accordance with the requirements of the Institution Examination Regulations.

**1st Year.** *Tutor:* J. A. Askew. *Curriculum:* advanced electrical engineering, engineering physics.

*Attendance:* one day and one evening per week

*Examinations:* I.E.E., H.N.C. Endorsement

**2nd Year.** *Tutor:* J. A. Askew. *Curriculum:* studies in two specialist subjects selected from electricity supply, utilisation of electrical plant, applied electronics.

*Attendance:* one day per week

*Examinations:* I.E.E. Part III

*Final qualification:* Associate Membership of the Institution of Electrical Engineers

**Higher National Certificate in Electrical and Electronic Engineering** (III)

A two-year course leading to the award of the Higher National Certificate in Electrical and Electronic Engineering. Students are offered either a power or an electronics specialisation.

*Qualifications for entry:* an Ordinary National Certificate in Engineering or an approved equivalent qualification

**1st Year.** *Tutor:* W. S. Kirkpatrick. *Curriculum:* electrical technology, electrical power, electronics, mathematics.

*Attendance:* one day per week

*Examinations:* internal

**2nd Year.** *Tutor:* N. T. Slater. *Curriculum:* electrical measurements, electrical power, electronics, mathematics.

*Attendance:* one day and one evening per week

*Examinations:* H.N.C.

*Final qualification:* Higher National Certificate in Electrical and Electronic Engineering

**Endorsements to the Higher National Certificate in Electrical and Electronic Engineering** (III)

Students who hold the Ordinary National Certificate together with the necessary endorsements, and who also hold the Higher National Certificate, can take endorsement courses to enable them to claim exemption from certain of the examinations of the Institution of Electrical Engineers. Since the regulation governing Associate Membership of the Institution of Electrical Engineers will shortly be changed, and the last Part III Examination is to be held in June 1969, students who require endorsements to their Higher National Certificates are advised to consult the Head of Department.

**1st Year.** *Tutor:* N. T. Slater. *Curriculum:* engineering physics. Other endorsement subjects are available in the evenings (see page 28).

*Attendance:* one day and/or one evening per week

*Examinations:* H.N.C. endorsement subjects, externally assessed

*Final qualification:* Endorsement to the Higher National Certificate in Electrical and Electronic Engineering

**Ordinary National Certificate in Engineering** (II)

A two-year course, the successful completion of which satisfies the academic requirements for entry to the four-year full-time/sandwich course leading to the Higher National Diploma in Electrical and Electronic Engineering and to professional qualifications. Alternatively the Ordinary National Certificate provides an entry to the Higher National Certificate Course in Electrical and Electronic Engineering.

*Qualifications for entry* to the first year of the course: successful completion of the General Engineering Course with credits in mathematics and engineering science and a pass in engineering drawing, *or* G.C.E. 'O'level passes in at least four subjects including mathematics and an approved science subject.

**1st Year.** *Tutor:* R. Duddle. *Curriculum:* mechanical engineering science, physics, electrical science, mathematics, English and liberal studies.

*Attendance:* one day and one evening per week

*Examinations:* internal

**2nd Year.** *Tutor:* R. Duddle. *Curriculum:* applied mechanics, physics, electrical engineering, mathematics, English and liberal studies.

*Attendance:* one day and one evening per week

*Examinations:* O.N.C.

*Final qualification:* Ordinary National Certificate in Engineering

**General Course in Engineering** (I)

A two-year course for students who show promise of being able to proceed to either a National Certificate Course in Engineering or a Technicians' Course. On completion of the second year, students will be directed into appropriate further study depending on their success in the final examinations. These courses will normally be the Ordinary National Certificate, the Ordinary National Diploma, or a Technicians' Course in either Electrical or Mechanical Engineering.

Identical courses are available in both the Electrical and the Mechanical Engineering Departments, and success in any allows further study in either department.

*Qualifications for entry:* school leavers of 15 years of age are normally admitted to the first year of the course. School leavers of 16 years of age who have followed a suitable full-time course at a secondary school and who have attained a satisfactory standard may enter the second year.

**1st Year.** *Tutor:* K. Bowker. *Curriculum:* electrical and mechanical science, engineering drawing, mathematics, workshop processes and materials.

*Attendance:* one day and one evening per week

*Examinations:* internal

**2nd Year.** *Tutor:* K. Blencowe. *Curriculum:* electrical and mechanical science, engineering drawing, mathematics, workshop processes and materials.

*Attendance:* one day and one evening per week

*Examinations:* U.L.C.I. 105–2

**Electrical Technicians**

A four-year course which provides qualifications for technicians engaged in the design, manufacture, testing, erection, operation and maintenance of electrical plant and equipment in one of the following branches of electrical engineering:—plant and machinery, power generation and supply, industrial electronics. An Intermediate Certificate is awarded to those who successfully complete the first two years of the course, and an Electrical Technicians' Certificate is awarded on successful completion of the third and fourth years.

*Qualifications for entry:* a pass in the first year examination of the General Course in Engineering, *or* completion of a suitable five-year full-time course at a secondary school, *or* a pass in an examination of a standard equivalent to the General Course in Engineering. Students entering the first year of the course should normally be 16 years of age.

**1st Year** (I). *Tutor:* J. Wilson. *Curriculum:* electrical engineering principles, mathematics, materials and drawing, technical reports.

*Attendance:* one day per week

*Examinations:* internal

**2nd Year** (II). *Tutor:* J. Wilson. *Curriculum:* electrical engineering principles, mathematics, materials and drawing, technical reports.

*Attendance:* one day per week

*Examinations:* U.L.C.I. 125–2

*Qualification:* U.L.C.I. Intermediate Certificate in Electrical Technicians' work

**3rd Year** (II). *Tutor:* J. Wilson. *Curriculum:* electrical engineering principles, mathematics, industrial electronics, or electrical power equipment.

*Attendance:* one day per week

*Examinations:* internal

**4th Year** (III NP). *Tutor:* J. Wilson. *Curriculum:* electrical power equipment or industrial electronics—including theory, applications and testing techniques, utilisation and maintenance of electrical plant.

*Attendance:* one day per week

*Examinations:* C.G.L.I. 57

*Final qualification:* City and Guilds of London Institute's Final Electrical Technicians' Certificate

**5th Year** (III NP). **Endorsement subjects**

Students who satisfy the examiners in two endorsement subjects and who possess the Electrical Technicians' Certificate will be awarded a Full Technological Certificate. Students wishing to obtain endorsement subjects in power or electronics should consult the Head of Department about suitable courses.

**Supplementary Studies in Telecommunications and Electronics** (III NP)

*Tutor:* R. J. Simpson

The syllabus for this one-year course has been drawn up by the City and Guilds of London Institute for those who, having already received education and experience of satisfactory standard in telecommunication or electrical engineering or in physics, now wish to further their studies in special applications of telecommunications and electronics in various fields. Normally two subjects will be studied, and a certificate will be awarded in each subject passed in the final examinations. A Full Technological Certificate will be awarded if the candidate already possesses an Intermediate Certificate and a Final Telecommunication Technicians' Certificate and is over the age of 21. Subjects normally available include the following: advanced telecommunication and electronic principles, communications, microwave techniques, line transmission, digital computers, analogue computers.

*Qualifications for entry:* completion of the four-year Telecommunication Technicians' Course (C.G.L.I. Subject No. 49), *or* the older Final Course in Telecommunication Engineering (C.G.L.I. Subject No 50), *or* possession of qualifications of an equivalent standard.

*Attendance:* one day per week

*Examinations:* C.G.L.I. 300

**Telecommunication Technicians**

A four-year course which provides qualifications for technicians engaged in the manufacture, maintenance, and operation of telecommunication apparatus. An Intermediate Certificate is awarded to those who successfully complete the first two years of the course provided that all second year examinations are passed at one sitting. A Telecommunication Technicians' Certificate is awarded on successful completion of the third and fourth years provided that all the fourth year examinations are passed at one sitting. The award of the Full Technological Certificate requires in addition to the Intermediate and Final Certificates, two subject certificates of the Supplementary Studies Course.

*Qualifications for entry:* a pass in the first year examinations of the General Course in Engineering, *or* completion of a suitable five-year full-time course at a secondary school, *or* a pass in an examination of a standard equivalent

to the General Course in Engineering. Students entering the first year of the course should normally be 16 years of age.

**1st Year** (I). *Tutor:* R. J. Simpson. *Curriculum:* science, mathematics, engineering drawing, elementary telecommunications practice.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. 49

**2nd Year** (II). *Tutor:* R. J. Simpson. *Curriculum:* electrical principles, mathematics, either telephony or telegraphy or radio and line transmission.

*Attendance:* one day per week

*Examinations:* C.G.L.I. 49

**3rd Year** (II). *Tutor:* R. J. Simpson. *Curriculum:* electrical principles, mathematics, telephony or radio and line transmission.

*Attendance:* one day per week

*Examinations:* C.G.L.I. 49

**4th Year** (III NP). *Tutor:* R. J. Simpson. *Curriculum:* electrical principles, mathematics, telephony or radio.

*Attendance:* one day per week

*Examinations:* C.G.L.I. 49

*Final qualifications:* City and Guilds of London Institute's Final Telecommunication Technicians' Certificate

**Colour Television Principles** (II)

*Tutor:* D. Baxter

A one-year course devised by the City and Guilds of London Institute and the Radio Trades Examination Board to meet the demand for courses in colour television servicing.

*Qualifications for entry:* a Radio and Television Servicing Certificate or a suitable equivalent qualification.

*Curriculum:* techniques of colour television servicing together with associated practical work.

*Attendance:* one half-day and one evening per week

*Examinations:* C.G.L.I. 48

*Final qualification:* City and Guilds of London Institute's Colour Television Certificate

**Radio and Television Servicing**

*Course adviser:* D. Baxter

A five-year course which provides qualifications for technicians engaged in the servicing of radio and television receivers and associated equipment. An Intermediate Certificate is awarded to those who successfully complete

the first three years of the course, and a Radio and Television Servicing Certificate is awarded on successful completion of the fourth and fifth years.

*Qualifications for entry:* a pass in a Preliminary Craft Course examination, *or* completion of a suitable five-year full-time course at a secondary school, *or* other equivalent qualifications. Students entering the first year of the course should normally be 16 years of age.

**1st Year** (I). *Tutor:* F. Downham. *Curriculum:* radio theory, calculations and drawing, practical work, English.

*Attendance:* one day per week

*Examinations:* internal

**2nd Year** (I). *Tutor:* F. Downham. *Curriculum:* radio theory, calculations and drawing, practical work, English.

*Attendance:* one day per week

*Examinations:* internal

**3rd Year** (I). *Tutor:* F. Downham. *Curriculum:* radio theory, techniques and calculations, practical work.

*Attendance:* one day per week

*Examinations:* C.G.L.I. 48 Intermediate

**4th Year** (II). *Tutor:* D. Baxter. *Curriculum:* television theory, television techniques, practical work.

*Attendance:* one day per week

*Examinations:* internal

**5th Year** (II). *Tutor:* D. Baxter. *Curriculum:* television theory, television techniques, practical work.

*Attendance:* one day per week

*Examinations:* C.G.L.I. 48 Final

*Final qualification:* City and Guilds of London Institute's Final Certificate in Radio and Television Servicing

**Electronics Servicing**

A five-year course which provides qualifications for technicians engaged in the servicing of electronic equipment. An Intermediate Certificate is awarded to those who successfully complete the first three years of the course, and an Electronics Servicing Certificate is awarded on successful completion of the fourth and fifth years. The first three years only are offered during Session 1967–8.

*Qualifications for entry:* a pass in a Preliminary Craft Course examination, *or* completion of a suitable five-year full-time course at a secondary school,

*or* other equivalent qualifications. Students entering the first year of the course should normally be 16 years of age.

**1st Year** (1). *Tutor:* F. Downham. *Curriculum:* theory, calculations and drawing, practical work, English.

*Attendance:* one day per week

*Examinations:* internal

**2nd Year** (1). *Tutor:* F. H. Downham. *Curriculum:* theory, calculations and drawing, practical work, English.

*Attendance:* one day per week

*Examinations:* internal

**3rd Year** (1). *Tutor:* F. H. Downham. *Curriculum:* theory, techniques and calculations, practical work.

*Attendance:* one day per week

*Examinations:* C.G.L.I. 47 (Intermediate)

*Qualification:* City and Guilds of London Institute's Intermediate Certificate in Electronics Servicing

**Electrical Installation—Course A**

A three-year course designed to assist the craft apprentice recruited normally at the age of 15 plus to reach the standard of practical proficiency expected of an electrician engaged to carry out work under supervision. The course is designed to supplement industrial experience, and so improve both his skill and understanding of his work as an installation electrician. Students who have satisfactorily completed the first year of the course may be admitted to the first year of Course B. The first year only is offered.

*Qualifications for entry:* school leavers of 15 years of age who intend to undertake a craft apprenticeship.

**1st Year** (1). *Tutor:* C. Yates. *Curriculum:* craft practice, craft theory, related studies, liberal studies.

*Attendance:* one day per week

*Examinations:* internal

**Electrical Installation—Course B**

A three-year course at the end of which the student should have reached the standard of a journeyman. A certificate is awarded by the City and Guilds of London Institute on successful completion of the course. An apprentice or learner employed by an Electrical Installation Contractor, or a candidate already engaged in electrical installation work who has obtained the Course B Certificate and is desirous of obtaining the Electrician's Certifi-

cate, 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 Electricians' Certificate.

*Qualifications for entry:* a pass in a Preliminary Craft Course Examination, *or* completion of a suitable five year full-time course at a secondary school, *or* other equivalent qualifications.

**1st Year** (I). *Tutor:* C. Yates. *Curriculum:* installation technology and practical work, science, calculations and drawing, English.

*Attendance:* one day per week

*Examinations:* internal

**2nd Year** (I). *Tutor:* C. Yates. *Curriculum:* installation technology and practical work, science, calculations and drawing, English.

*Attendance:* one day per week

*Examinations:* internal

**3rd Year** (II). *Tutor:* C. Yates. *Curriculum:* installation technology and practical work, science, drawing and tutorial, mathematics.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. 51

*Final qualification:* City and Guilds of London Institute's Course B Certificate in Electrical Installation

**Electrical Installation—Course C**

A two-year course designed to afford the requisite technical knowledge to enable a foreman electrician to plan and supervise general types of electrical installation work. The Course C Certificate is awarded on successful completion of the course provided that a Course B Certificate has already been obtained. Students who hold the Electricians' Certificate (see explanatory note on Course B) and the Course C Certificate may apply for the award of the Full Technological Certificate in Electrical Installation Work.

*Qualifications for entry:* a Course B Certificate in Electrical Installation.

**1st Year** (II). *Tutor:* F. Walmsley. *Curriculum:* installation technology and practical work, electrical science, calculations.

*Attendance:* one day per week

*Examinations:* internal

**2nd Year** (II). *Tutor:* F. Walmsley. *Curriculum:* installation technology and practical work, electrical science, calculations.

*Attendance:* one day per week

*Examinations:* C.G.L.I. 51

*Final qualification:* City and Guilds of London Institute's Course C Certificate in Electrical Installation

**Motor Vehicle Electricians**

A three-year course for apprentices engaged in the repair of electrical equipment of motor vehicles. A Motor Vehicle Electricians' Certificate is awarded on successful completion of the course.

*Qualifications for entry:* a pass in a Preliminary Craft Course Examination, *or* completion of a suitable five-year full-time course at a secondary school, *or* other equivalent qualifications. Only the second and third years are offered.

**2nd Year** (1). *Tutor:* F. Walmsley. *Curriculum:* electrical science, automobile electrical technology, workshop practice, English and liberal studies.

*Attendance:* one day per week

*Examinations:* internal

**3rd Year** (1). *Tutor:* F. Walmsley. *Curriculum:* automobile electrical technology, workshop practice and laboratory.

*Attendance:* one day per week

*Examinations:* C.G.L.I. 169

*Final qualification:* City and Guilds of London Institute's Motor Vehicle Electricians' Certificate

**Graduate Membership of the Institution of Electronic and Radio Engineers** (III)

*Tutor:* N. T. Slater

The course is designed to give exemption from the Part V examinations of the Institution of Electronic and Radio Engineers. Students who hold both the Ordinary National Certificate and the Higher National Certificate with credits in the electrical subjects, and who have also obtained credits in certain other endorsement subjects, can claim exemption from Parts I, II, III, and IV of the I.E.R.E. Graduateship Examination.

*Qualifications for entry:* a Higher National Certificate in Electrical and Electronic Engineering, *or* a Higher National Certificate in Electrical Engineering, *or* any other equivalent qualification.

*Curriculum:* electronics, telecommunications, control systems. The subjects offered are on separate evenings and may be taken as required.

*Examinations:* internal, externally assessed

*Final qualification:* endorsement to Higher National Certificate in Electrical and Electronic Engineering

**Higher National Certificate in Electrical and Electronic Engineering** (III)

A two-year course leading to the award of the Higher National Certificate in Electrical and Electronic Engineering. Students are offered either a power or an electronics specialisation.

*Qualifications for entry:* an Ordinary National Certificate in Engineering or an approved equivalent qualification.

**1st Year.** *Tutor:* W. S. Kirkpatrick. *Curriculum:* electrical technology, electrical power, electronics, mathematics.

*Attendance:* three evenings per week

*Examinations:* internal

**2nd Year.** *Tutor:* N. T. Slater. *Curriculum:* electrical measurements, electrical power, electronics, mathematics.

*Attendance:* three evenings per week

*Examinations:* H.N.C.

*Final qualification:* Higher National Certificate in Electrical and Electronic Engineering.

**Endorsements to the Higher National Certificate in Electrical and Electronic Engineering** (III)

Students who hold the Ordinary National Certificate together with the necessary endorsements and who also hold the Higher National Certificate can study endorsement subjects enabling them to claim exemption from certain examinations of the Institution of Electrical Engineers and the Institution of Electronic and Radio Engineers. Information regarding exemption requirements can be obtained from the Head of Department.

*Attendance:* one evening per week

*The subjects available are:* electronics, control systems, telecommunications, mathematics, engineering physics: engineering physics can only be taken by students who have already obtained an O.N.C. qualification in physics. The courses offered each consist of one subject.

*Examinations:* H.N.C. endorsement subjects, externally assessed

*Final qualification:* Endorsement to the Higher National Certificate in Electrical and Electronic Engineering

**Ordinary National Certificate in Engineering** (II)

A three-year course leading to the award of the Ordinary National Certificate in Engineering, which provides an entry qualification for the Higher National Certificate Course in Electrical and Electronic Engineering. A total of eight or nine subjects, equivalent to those studied in the two-year day course, must be studied during the course.

*Qualifications for entry* to the first year of the course: successful completion of the General Engineering Course with credits in mathematics and engineering science and a pass in engineering drawing, *or* G.C.E. 'O' level passes in at least four subjects including mathematics and an approved science subject.

**1st Year.** *Tutor:* R. Duddle. *Curriculum:* mechanical engineering science, physics, electrical science, mathematics, English and liberal studies.

*Attendance:* three evenings per week

*Examinations:* internal

**2nd Year.** *Tutor:* R. Duddle. *Curriculum:* mechanical engineering science, physics, electrical science, mathematics, English and liberal studies.

*Attendance:* three evenings per week

*Examinations:* internal

**3rd Year.** *Tutor:* R. Duddle. *Curriculum:* applied mechanics, physics, electrical engineering, mathematics.

*Attendance:* three evenings per week

*Examinations:* O.N.C.

*Final qualification:* Ordinary National Certificate in Engineering

**Endorsements to the Ordinary National Certificate in Engineering** (II)

The following subjects are available as endorsements to the Ordinary National Certificate in Engineering: English, engineering drawing, applied mechanics, physics.

**Telecommunication Technicians**

A four-year course which provides qualifications for technicians engaged in the manufacture, maintenance and operation of telecommunication apparatus. An Intermediate Certificate is awarded to those who successfully complete the first two years of the course, provided that all second year examinations are passed at one sitting. A Telecommunication Technicians' Certificate is awarded on successful completion of the third and fourth years provided that all fourth year examinations are passed at one sitting. For further details see part-time day course.

*Qualifications for entry:* a pass in the first year examinations of the General Course in Engineering, *or* completion of a suitable five-year full-time course at a secondary school, *or* a pass in an examination of a standard equivalent to the General Course in Engineering.

**1st Year** (I). *Tutor:* R. J. Simpson. *Curriculum:* science, mathematics, either engineering drawing or elementary telecommunications practice.

*Attendance:* three evenings per week

*Examinations:* C.G.L.I. 49

**2nd Year** (II). *Tutor:* R. J. Simpson. *Curriculum:* electrical principles, mathematics, either telephony and telegraphy or radio and line transmission.

*Attendance:* three evenings per week

*Examinations:* C.G.L.I. 49 (Intermediate)

**3rd Year** (II). *Tutor:* R. J. Simpson. *Curriculum:* electrical principles, mathematics, either telephony or line plant practice.

*Attendance:* three evenings per week

*Examinations:* C.G.L.I. 49

**4th Year** (III NP). *Tutor:* R. J. Simpson. *Curriculum:* electrical principles, mathematics, telephony.

*Attendance:* three evenings per week

*Examinations:* C.G.L.I. 49 (Final)

*Final qualification:* City and Guilds of London Institute's Final Certificate in Telecommunication Technicians' Work

**Electrical Installation—Course B**

A three year course, at the end of which the student should have reached the standard of a journeyman. A certificate is awarded by the City and Guilds of London Institute on successful completion of the course. An apprentice or learner employed by an Electrical Installation Contractor, or a candidate already engaged in electrical installation work who has obtained the Course B Certificate and is desirous of obtaining the Electricians' 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 Electricians' Certificate.

*Qualifications for entry:* a pass in a Preliminary Craft Course Examination, *or* completion of a suitable five-year full-time course at a secondary school, *or* other equivalent qualifications.

**1st Year** (I). *Tutor:* C. Yates. *Curriculum:* installation technology and practical work, science, calculations and drawing.

*Attendance:* three evenings per week

*Examinations:* internal

**2nd Year** (I). *Tutor:* C. Yates. *Curriculum:* installation technology and practical work, science, calculations, and drawing.

*Attendance:* three evenings per week

*Examinations:* internal

**3rd Year** (II). *Tutor:* C. Yates. *Curriculum:* installation technology and practical, electrical science, mathematics.

*Attendance:* three evenings per week

*Examinations:* C.G.L.I. 51

*Final qualification:* City and Guilds of London Institute's Course B Certificate in Electrical Installation

**Radio Amateurs' Examination** (I)

*Tutor:* F. H. Downham

The Postmaster-General requires that every applicant for an Amateur (Sound) Licence or an Amateur (Television) Licence must have passed the Radio Amateurs' Examination as evidence of his possessing the requisite theoretical knowledge. Other conditions also apply and information is available from the Postmaster-General.

*Attendance:* one evening per week

*Curriculum:* radio theory

*Examinations:* C.G.L.I. 55

## Special Courses

*Enrolment into Special Courses* will take place separately from the normal enrolment procedure. Leaflets will be supplied on request by the Head of Department, and these will give full details of the courses and will include an application form.

**Supervisory Control Equipment**

*Organiser:* Dr M. F. McKenna

A course of 4 evening lectures commencing on Monday the 8th January, 1968.

**Transmission and Propagation at Very High Frequencies**

*Organiser:* N. T. Slater

A course of 4 evening lectures commencing on Tuesday the 21st November, 1967.

## Administrative Staff

| | |
|---|---|
| *Registrar* | J. Barnacle, D.M.A., F.C.C.S. |
| *Senior Clerks* | E. D. Hardman (Finance and Accounts) |
| | B. Stott (Examinations and Records) |
| *Secretary to the Principal* | Miss F. M. Jones |
| *Section Clerks* | Mrs K. M. Glynn (Accommodation) |
| | Miss E. Stobbart (Services) |
| *Clerks* | Mrs P. K. Hall |
| | Mrs K. Howarth |
| | Mrs D. Hurst |
| | Miss K. Lucas |
| | Mrs B. Metcalf (Secretary to the Industrial Liaison Officer) |
| | Mrs M. A. Simpson |
| | Miss J. H. Slee |
| | Mrs D. M. Sturzaker |
| | Mrs P. Tinsley |
| | Miss C. Tyrer |
| | Miss J. K. Watt |
| *Telephonists* | Mrs B. J. Baker |
| | Mrs P. B. Bamford |
| *Cashiers* | Mrs R. Doherty |
| | Mrs M. Marland |
| *Equipment Maintenance* | E. Goodson (Chief Engineer) |
| | E. Davis |
| | R. Holmes |
| *Refectory* | Mrs M. Hamlyn White (Catering Manageress) |
| | Miss E. Grunshaw (Assistant) |
| *Custodian of Premises* | W. H. Hatton |
| *Caretaker* | L. Whalley (Avenham premises) |
| *Assistant Caretakers* | V. Baron |
| | W. J. Butler |
| | G. Holden |
| | H. Mee |
| | H. Nicholls |
| | W. Pullan |

| | |
|---|---|
| *Assistant Caretakers (contd.)* | W. Saunders |
| | J. Walton |
| | T. K. Wharton |
| *Groundsman* | G. Cowell |
| *Watchmen* | S. Dixon |
| | F. Miller |
| | D. Postlethwaite |

## Calendar

| | | |
|---|---|---|
| 1967 | Thursday, 14th September | General Staff Meeting |
| | ENROLMENT PERIOD | |
| | Monday, 18th September | Enrolment, first day |
| | Tuesday, 19th September | Enrolment, second day |
| | Wednesday, 20th September | Enrolment, last day |
| | AUTUMN TERM | |
| | Monday, 25th September | All day and evening classes commence for the Autumn term |
| | Wednesday, 20th December | All departments close for Christmas after evening classes |
| | SPRING TERM | |
| 1968 | Thursday, 4th January | All classes re-open for the Spring term |
| | Tuesday, 13th February | Foundation Address and Distribution of Awards: all evening classes closed |
| | Friday, 5th April | All departments close for Easter after evening classes |
| | SUMMER TERM | |
| | Monday, 22nd April | All classes re-open for the Summer term |
| | Friday, 31st May | All departments close for Whitsuntide after evening classes |
| | Monday, 10th June | All classes re-open |
| | Friday, 5th July | All classes close: end of session |
| | Friday, 12th July | End of term: submission of reports |

*Note:* There are other important dates with which students must be familiar, for example closing dates for receipt of examination entries, commencement and termination of sandwich and block release courses. These will be found in the appropriate sections of the prospectus.

## Admission to Courses and Examinations

Courses will be provided subject to adequate enrolment; they may be discontinued at the discretion of the Principal at any time during the session should the numbers attending fall below a reasonable level.

The acceptance of a student into a course must have the approval of a Head of Department, and the student must produce satisfactory evidence that he has the necessary qualifications to enter the course.

Full-time and sandwich course students should make application well before the commencement of the session on the form obtainable from the Registrar.

At enrolment each student will receive an admission form bearing an admission number. This form must be shown to the class lecturer when the student attends each class for the first time in the session. Students will not be permitted to attend classes until they have completed the enrolment procedure (see page 40).

To qualify for certificates and to pass on to higher years of a course it is necessary that students should have:

(*a*) reached a prescribed standard of attainment, tested by examinations held at the end of the session, and

(*b*) made satisfactory attendance and progress during the session.

EXAMINATIONS

All Students are required to take prescribed internal or external examinations at the end of each year of the course.

Examination fees must be paid by students at the time of entry to examinations: accounts cannot be sent to employers or grant-aiding Authorities. There are no fees for purely internal examinations of the College.

Students who take the examinations of external examining bodies (*e.g.* the Union of Lancashire and Cheshire Institutes, the Royal Society of Arts, the City and Guilds of London Institute) or General Certificate of Education examinations, must pay the examination fees of these bodies.

Each student entering the final examination for Ordinary or Higher National Diplomas and Certificates must pay an entry fee of 7s. 6d. per

subject, in addition to the examination fee charged by the external examining body whose examinations are adopted. In the event of a Joint Committee agreeing to the re-examination of a student in a subject, the student will be required to pay the full cost of the re-examination, or to share the cost proportionately should more than one student be involved in the same re-examination.

Each student is responsible for his own entry to external examinations and must complete the appropriate entry form and present it with the fee to the College office. Students will not be informed individually of the last dates of entry or of timetables of examinations, but these will be published on notice boards. The last dates of entry for the undermentioned examinations are:

Assessed papers for National Diplomas and Certificates, including endorsements: 15th December, 1967

City and Guilds of London Institute: 19th January, 1968

Union of Lancashire and Cheshire Institutes, series B and C: 2nd February, 1968

General Certificate of Education papers (N.U.J.M.B.): 9th February, 1968

Institute of Linguists: 1st March, 1968

Pitmans: 15th March, 1968

Training Council for Teachers of the Mentally Handicapped: 5th April, 1968

Royal Society of Arts, Summer Series: 26th April, 1968

Students who do not enter by these dates may well be excluded from taking the examinations, and even if accepted late fees are payable ranging from 10s. to £10. 0s. 0d.

### EXAMINATION RESULTS

Sessional Reports will include examination results, but they cannot be completed until after the results are received from external examining bodies. Reports are then sent to each student as soon as possible. It is regretted that in the meantime enquiries cannot be answered. Copies of external examination pass lists will be made available for scrutiny on the College notice board as soon as possible after they are received.

## Tuition Fees

Sessional tuition fees must be paid at the time of enrolment and are returnable only in exceptional cases. Cheques should be made payable to the Corporation of Preston and crossed.

A student whose employer undertakes to pay the fee on his behalf must produce at enrolment a letter from his employer to that effect.

Part-time students from the administrative counties of Lancashire and Westmorland and from Wigan County Borough under age 18 on the 1st September will be enrolled without payment of the tuition fee.

| **Full-time and Sandwich Courses** | | Students under age 18 on 1st September £ s. d. | Students age 18 and over on 1st September £ s. d. |
|---|---|---|---|
| Associate Membership of the Institution of Electrical Engineers, Graduate Membership of the Institution of Electronic and Radio Engineers: | 1st year | 36 17 6 | 38 5 0 |
| | 2nd year | | 38 5 0 |
| | 3rd year | | 56 10 0 |
| | 4th year | | 56 10 0 |
| Institution of Electrical Engineers Part III | | | 56 10 0 |

| **Block Release Course** | All age groups |
|---|---|
| Ordinary National Certificate in Engineering | 13 10 0 |

| **Part-time Courses** | Students under age 21 on 1st September £ s. d. | Students age 21 and over on 1st September £ s. d. |
|---|---|---|
| Group I (introductory level) | 1 7 6 | 2 12 6 |
| Group II (intermediate level) | 1 17 6 | 2 17 6 |
| Group III (advanced level) | 2 12 6 | 3 2 6 |

OVERSEAS STUDENTS

Students from outside the United Kingdom attending full-time and sandwich courses are required to pay special fees. Details of these can be obtained from the Registrar.

RESIDENTIAL LIBERAL STUDIES COURSES

As an integral part of their studies, students in certain advanced full-time and sandwich courses will normally attend each year a three-day residential course. The fee is approximately £3. 10s. 0d. which must be paid by the student. Students in receipt of Local Authority grants will in most cases be reimbursed all or part of the cost by their supporting authorities.

GRANTS

Full-time or College-based Sandwich Course students may apply to the Local Education Authority for the area in which they permanently reside for a grant of fees and maintenance. Works-based Sandwich Course ~~students may also be eligible for financial assistance where the employer do~~ students may also be eligible for financial assistance where the employer does not pay fees or wages during the College periods of a course, or where only partial financial support is offered by the employer.

NOTE TO LOCAL AUTHORITIES

The course grade designation (III NP) indicates an advanced course which is not poolable under D.E.S. regulations. In respect of these courses the normal recoupment procedure will apply.

## Enrolment

Students will be enrolled between the times: 10.0 a.m. to 12.30 p.m., 1.30 to 4.30 p.m. and 5.30 to 8.30 p.m. on the following days:

Monday, 18th September, 1967
Tuesday, 19th September, 1967
Wednesday, 20th September, 1967

Students must enrol during the times and on the dates stated; those who fail to enrol on these dates will be charged a late fee of 10s. 0d. The busiest enrolment periods are in the evenings; students who can enrol during the morning or afternoon periods will help the College and save themselves an appreciable amount of time.

Postal enrolments cannot be accepted.

Enrolment into special courses takes place separately from the procedure detailed on this page. (see page 31).

A student who wishes to enrol into a course demanding entry qualifications must produce documentary evidence at or before enrolment. Documentary evidence is not required in respect of students who have gained their qualifications at the Harris College.

PERMISSION VOUCHERS: all students resident in the County Borough of Preston or in the administrative area of Lancashire County, and part-time students resident in the County Borough of Wigan, will be admitted without the production of an inter-authority voucher. *All other students* must obtain permission vouchers each year from their Local Education Authorities and present them at enrolment.

**Enrolment procedure**
Students should first report to the department in which they wish to enrol. The plan of the College on the opposite page shows the blocks in which departments are situated. The rooms in which enrolment takes place in each department are shown in brackets below, *viz:*

B BLOCK
School of Art (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52 and B55)

E BLOCK

Mechanical, Civil and Production Engineering Department (new students E1, former students E9)

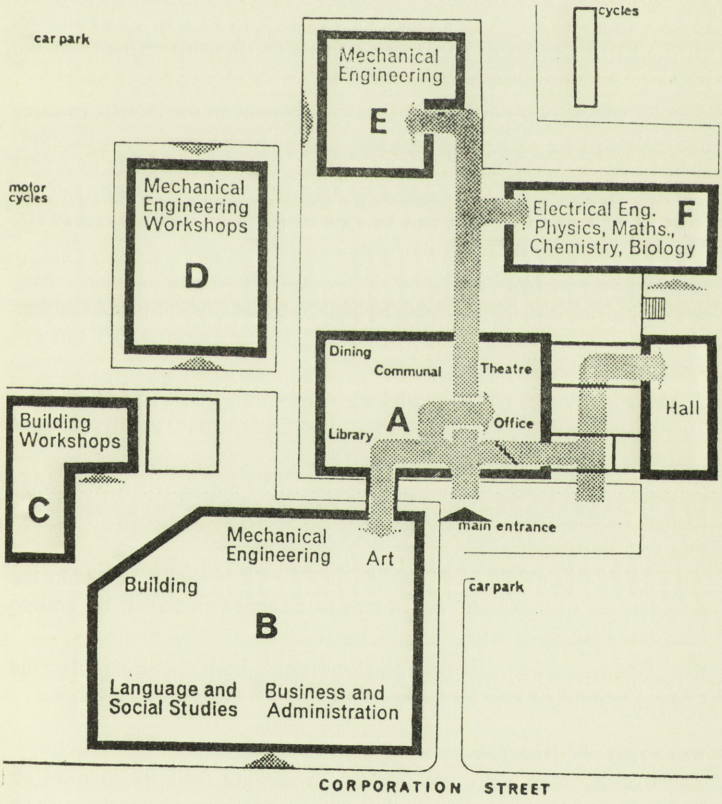
F BLOCK

Chemistry and Biology Department (F37)
Electrical Engineering Department (F8, F9 and F10)
Physics and Mathematics Department (courses which include chemistry F35 and F37: other courses F26)

A BLOCK

College Office and enquiries

*When details of his future course have been determined in the department the student must present his enrolment forms at the Hall (A Block) for enrolment and payment of fees.*



# Regulations

DISCIPLINE

Students are accepted into College courses on the understanding that they abide by the regulations herein and from time to time in force.

The Principal has the authority to suspend students from attendance for any cause which he considers adequate. The Council will exclude from the College premises any student whose continued attendance is undesirable. Suspended or excluded students automatically lose membership of the students' union and College societies.

Students are required to attend classes punctually and regularly, to carry out satisfactorily such work as is set by their tutors, and to sit the prescribed examinations. Employers who grant release to students to attend College courses will, after the fourth week of session, be notified of the absence of their employees, and as soon as possible after the end of the course will receive copies of sessional reports.

Students must conduct themselves in a quiet and orderly manner. They will be held responsible for and required to make good any damage they may cause due to negligence or wilfulness. They are expected at all times to keep the College tidy and free from litter.

Smoking within the College buildings is prohibited, except in the coffee lounge, staff rooms, common rooms, and assembly areas at permitted times.

Hot cooked foods must not be brought into the College, and food must not be consumed on the premises other than in the dining room and coffee lounge. Students who wish to bring packed meals may do so but they must take their meals at the fixed tables in the coffee lounge.

All forms of gambling and card playing on the premises or within the precincts are strictly prohibited. Students who are members of the college card club may, by arrangement, use the students' meeting room.

Musical instruments, including transistor radios, must not be played on the College premises except by arrangement with the Principal.

PARKING FACILITIES

The College does not possess adequate parking facilities to meet all demands. Parking is restricted to the official car parks and cycle sheds where vehicles may be left at the owners' risk.

Students must travel very slowly in the College precincts, and should use the entrance nearest to the point of parking. They must not drive around or within the College premises in break periods. Roadways must be kept clear in case of emergencies.

### PERSONAL PROPERTY

The Council cannot accept responsibility for the safety of students' property. Property found on the premises will be handed to the Custodian of Premises, and students wishing to reclaim lost property should address enquiries to the Custodian.

Cloak lockers are available in all departments for students' use. Full-time, sandwich and block release course students may be allocated lockers for the duration of the course. Part-time students may use a locker during the day and/or evening spent in the College but must remove locker contents and padlocks when leaving the College for the day. Lockers should be secured by the students' own padlocks.

Lockers must be left empty and unlocked at the end of a course or session, otherwise the locks and contents will be removed.

### HEALTH AND SAFETY

Students are required in the interests of cleanliness, health and safety to provide themselves with the recommended kind of protective clothing which must be worn in workshop and laboratory classes. Workshop and laboratory clothes must not be worn whilst attending lectures or whilst in the communal block.

Students must use all protective devices provided.

Students should not attend the College from a house in which there is infectious illness. Cases should be promptly reported to the Registrar.

### FLOOR PROTECTION

It is regretted that ladies wearing stiletto heels will have to be refused admission to parts of the premises where damage to the floor would result. Ordinary footwear will be permitted in the Hall only when the floor drugget is laid.

### COMMUNAL FACILITIES

The Communal Block provides facilities for the educational, social and recreational enjoyment of the students and staff. Besides administrative accommodation and a fully equipped theatre for both lectures and drama, there is a dining room and coffee foyer, a students' common room, students' union office and meeting rooms. The library is situated in this building.

An unusual feature is the Recreation Hall. The hall will be reserved at certain times for examinations, and occasionally for ceremonies or exhibitions, but at other times it is available to student groups, societies, and individuals for games and a very wide variety of physical activities. The bridge over the North courtyard leading to the hall contains changing rooms and showers.

### REFECTORY

The dining room is open from 12.15 to 1.30 p.m. for lunch. A selection of courses at various prices is available. Tea or coffee after lunch may be taken in the adjacent coffee foyer.

Light teas or cooked meals are normally available from 4.30 to 7.00 p.m.

In addition to meals, tea or coffee or soft drinks will be available in the coffee foyer during set periods to cover mid-morning and mid-afternoon breaks between classes. Service from trolleys is available elsewhere at the same times.

Staff and students are requested to observe any restrictions on smoking in the refectory premises.

Requests for any special catering should be made in the first instance to the Registrar, well in advance of the occasion.

### STATIONERY

The College stationery shop is open on three occasions during the day, namely 8.50 to 9.15 a.m., 1.00 to 2.00 p.m., and 6.45 to 7.15 p.m. Students may purchase the usual items of stationery, and also special laboratory and note books necessary for many courses.

## SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of societies and professional bodies are frequently held in the College.

Notice of the lectures will be displayed in the main entrance foyer during the session. Individual students and members of staff are welcome to attend. Application for groups to attend should be made through the Principal to the local secretary of the organisation.

## NATIONAL DIPLOMA AND CERTIFICATE COURSE REQUIREMENTS

An Ordinary National Diploma is awarded at the end of a two-year senior course of full-time study. A Higher National Diploma is awarded at the end of a further three year advanced course of full-time study.

Ordinary National Certificates and Higher National Certificates are corresponding awards following courses of part-time study.

Awards in each case are made by the Department of Education and Science in conjunction with one or more Professional Institutions. To receive an award a candidate must normally:

(*a*) make not less than 80% of the possible attendances in each subject in each year of the course for the award of a diploma, or 60% for the award of a certificate,

(*b*) obtain not less than 40% of the possible marks in each subject in the examinations held at the end of each year,

(*c*) obtain not less than 40% 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, and

(*d*) obtain not less than 50% of the grand total of marks obtainable in the final year. Of this total the possible marks in the examinations constitute 70% and the remaining 30% will be the possible marks for home work, class work, laboratory work, etc.

A 'Distinction' may be awarded to any candidate qualified to receive a diploma or certificate who, in the opinion of the examiners, has shown special merit in the final examination. His certificate will be specially endorsed with the name(s) of the subject(s) in which he has thus distinguished himself.

## CHANGE IN STUDENT PARTICULARS

Changes during the session should be notified immediately to the Registrar on the form available from the College office, for example: change of address, change of employer, change of name on marriage.

## ABSENCES

In the event of absences from classes because of illness or other unavoidable causes a note of explanation should be sent to the Head of Depart-

ment. A student who absents himself for a continuous period of four weeks without the approval of the Head of Department will be deemed to have left the course and his name will be removed from the register.

### OUTSIDE ACCOMMODATION

Shortage of accommodation makes it necessary for some classes to be held in the following premises: Avenham (School of Art Annexe); Blackburn and East Lancashire Royal Infirmary; Blood Transfusion Unit, Lancaster; Cheviot Street Workshop (off Strand Road); Deepdale County Secondary School; Lancashire County Institute of Agriculture, Hutton; N.W.G.B. Training Centre, Moor Lane, Preston; Preston Royal Infirmary; G.P.O. Telephone House, Moor Lane, Preston; and Trinity County Secondary School.

## The Library

Telephone: Preston 51831, ext. 15

| | |
|---|---|
| *Librarian* | A. Lawrence, A.L.A. |
| *Assistant Librarians* | Mrs M. Pye, A.L.A. |
| | Mrs S. M. Hunt |
| *Library Assistants* | Miss J. E Bamford |
| | Mrs I. M. Fuller |

The College library is available to all students for reference purposes. 360 technical journals are received annually in addition to the development of the book stock. An up-to-date set of British Standard Specifications is maintained.

The library is open from Monday to Friday at the following times:

*During term time:* 9.00 a.m. to 9.00 p.m.
*During vacations:* 9.00 a.m. to 5-30 p.m.

The library has facilities for photocopying, and students may obtain copies of pages of books and periodicals subject to the law of copyright. A charge is made for this service.

The library is a local agent for the National Lending Library of Science and Technology, a member of ASLIB and the North Western Regional Library System, and may be able to obtain through these organisations items not in its own stock.

## Physical Education and Recreation

Telephone: Preston 51831, ext. 27

| | |
|---|---|
| *Lecturer* | C. M. Robinson, D.L.C. |
| *Assistant Lecturers* | J. Gridley, A.G.A. |
| | Mrs B. J. Harrison, DIP.P.E., DARTFORD COLLEGE |
| *Visiting Lecturers* | A. Lewis |
| | R. Poole |
| | A. Spavin |
| | D. Stokes |
| | B. Strettle, B.J.A. |
| | G. Wilson, N.A.B.B.A. |
| | S. Wright, B.J.A. |

The Recreation Hall is equipped with fixed apparatus which, together with portable apparatus and equipment the College possesses, allows the pursuit of the following activities: athletics, badminton, basket ball, canoeing and sailing, cricket, dance, fencing, five-a-side football, golf, judo, mountaineering, netball, olympic gymnastics, padder tennis, soccer and rugby training, table tennis, trampolining, volley ball, weight training and lifting.

The recreational facilities of the College are available to all students enrolled into an academic course without payment of a further fee. Anyone interested in any of the activities detailed should contact the Lecturer in Physical Education at enrolment or as soon as possible afterwards. College sports clubs, affiliated to the students' union, are given priority in the evenings.

Lectures and films on a variety of activities, and inter-departmental and inter-College tournaments and competitions, are arranged throughout the session.

The mountaineering club arranges visits to the Lake District and North Wales for rock climbing, rambling and canoeing. For full-time students one week courses in mountain activities are arranged. From time to time arrangements are made for parties to engage in outdoor activities in vacation periods, for example ski-ing, rock climbing, canoeing, pony trekking, etc.

### REGIONAL AND NATIONAL SPORTS ACTIVITIES

The College is a centre for regional and national sports tournaments in badminton, table tennis and trampolining. It is also an Olympic Gym-

nastics Centre; the College gymnastic team competes in the National Team Championships of Great Britain and has also competed abroad.

### RESEARCH

The Physical Education Section in conjunction with the Department of Chemistry and Biology is undertaking research into the effects of different types of exercise on the heart and lungs, and a number of volunteer groups of students are co-operating.

### SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's eight academic departments. Persons not registered as students for academic courses may be admitted to certain scheduled classes in physical education, so far as places are available. The tuition fee payable is £1. 7s. 6d. if under age 21 on the 1st September or £2. 12s. 6d. if age 21 or over.

In order to give academic course students priority, persons who wish to enrol for physical education classes alone are not accepted until the fourth week in the session. No person may be admitted to these classes who is less than 16 years of age on the 1st September.

## Harris Students' Union

Telephone: Preston 53852

B. Hayes, *President*
A. England, *Vice-President*
Miss S. Standing, *Vice-President* (*female students*)
A. Kimm, *Secretary*
I. Horne, *Student Treasurer*
D. Swift, *Honorary Treasurer*

The Harris Students' Union is organised and governed by students, and is affiliated to the National Union of Students. It arranges general social activities, provides a means of helping the formation of student societies, and maintains contact with the students of other colleges. The union is financed by a grant from the Harris Council.

All students other than those enrolled in special courses are automatically admitted to membership of the students' union. A membership card will be issued at enrolment entitling students to participate in all social activities, to join any student society or club, and to vote in the election of members to the Executive Committee.

All clubs and societies in the College are affiliated to the Students' Union, and special subscriptions may be required for membership of particular clubs and societies. A Students' Union Handbook, issued free to members, describes the activities of the union.

Dances and other social events are regularly arranged in the College and in the town. A common room and an office are allocated exclusively for the use of students and recreational facilities are available elsewhere by arrangement with the Lecturer in Physical Education.

Enquiries concerning student activities should be addressed to the Secretary, Harris Students' Union, Corporation Street, Preston.

**College Colours**

A Harris College blazer badge, scarf and tie, designed by the School of Art and Design and approved by the College Governors, are on sale at Messrs. Hellewells, Lune Street, Preston. Prices: 8s. 11d., 28s. 6d. and 8s. 6d. each respectively.

Harris Colllege **Department of Physics and Mathematics 1967–68**

**Harris College, Corporation Street, Preston, Lancashire**
**Telephone: Preston 51831–5**

*Foundation.* On the 4th April, 1956, the Minister of Education made a scheme for the establishment of the Harris College of Further Education, formerly the Harris Institute (comprising the Harris Technical College and the School of Art). In the terms of this scheme, and a later amendment to it, the College is housed in premises provided and maintained by the County Borough of Preston and is governed by the Harris Council of twenty-eight members; namely nine members of Preston Education Committee, nine members appointed by Lancashire Education Authority, nine members representative of industry and commerce, and one member representative of the Universities.

**The Harris Council**

*President:* Alderman W. Beckett, O.B.E., J.P.

*Vice-President:* Councillor J. Hargreaves

*Members:*

Alderman J. Atkinson
Alderman Mrs D. M. Dewhurst, J.P.
Alderman J. F. Gray
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker, J.P. (The Right Worshipful the Mayor of Preston)
Councillor Mrs K. E. Crozier
Councillor T. Dewhurst
Councillor Mrs R. Lytton
Alderman Sir Fred Longworth (Vice-Chairman of Lancashire County Council)
Alderman J. Bradley, M.B.E., J.P.
Councillor T. V. Brown
Councillor C. W. Eastwood
F. Ley
Councillor A. J. Whittall
Councillor Mrs W. Winn
Councillor G. Woods

F. D. Crowe, B.SC.(ENG)., A.F.R.AE.S.
Professor E. Roland Dobbs
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., A.M.I.MECH.E.
P. D. Oakley, B.SC., F.R.I.C.
H. Rogan, O.B.E., B.SC., PH.D., F.R.I.C.
Alderman J. W. Taylor, J.P., F.C.I.S.
J. W. Walker

*Clerk to the Council:* W. R. Tuson, B.SC., Chief Education Officer, Preston

**Research Council**

The research council is a sub-committee of the Harris Council charged with the promotion of research and the administration of research funds.

*Chairman:*
Alderman W. Beckett, O.B.E., J.P., *President of the Harris Council*

*Members:*
Councillor J. Hargreaves, *Vice-President of the Harris Council*
Professor E. Roland Dobbs, *University of Lancaster*
J. Jones, A.M.I.MECH.E.
Dr P. R. Lancaster, *University of Bradford*
W. J. R. Merren, M.A., B.SC., *Director of Research, Pilkington Research Laboratories*
Dr K. Morgan, *University of Lancaster*
P. D. Oakley, B.SC., F.R.I.C., *Member of the Harris Council*
Dr H. Wilkinson, *Principal of the Harris College*
Dr S. Skidmore, *Vice-Principal of the Harris College*

**Principal**: H. Wilkinson, M.SC.TECH., PH.D., A.INST.P.

**Vice-Principal**: S. Skidmore, B.SC., PH.D.(LONDON), F.R.I.C.

*Registrar:* J. Barnacle, D.M.A., F.C.C.S.

*The Harris College* is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are eight teaching departments in the College: the School of Art, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical Engineering, Language and Social Studies, Mechanical Civil and Production Engineering, Physics and Mathematics. All are newly housed, and the facilities include a combined Lecture Hall and Theatre, a Recreation Hall, Student Common Rooms, Library and Refectory.

Strong links exist between the College, Industry and Commerce and these have helped the development of sandwich courses leading to professional qualifications. Extension of these courses into other professional fields of activity is planned. Short courses on specialist or advanced topics are arranged regularly in all departments of the College. Research and consultancy are important features of the work of the College, and the recent appointment of an Industrial Liaison Officer is expected to increase and widen the range of these activities.

*The Department of Physics and Mathematics* offers full-time and sandwich courses for the Graduateship of the Institute of Physics (GRAD.INST.P.) and the Higher National Diploma in Applied Physics for both College-based and industry-based students. It also offers part-time courses for Higher National Certificates in Applied Physics and in Mathematics Statistics and Computing, Licentiateship of the Institute of Physics and the Ordinary National Certificate in Sciences. The department provides tuition in physics and mathematics for courses organised by the other departments of the College. The GRAD.INST.P. and Higher National Diploma courses receive the support of a number of national and research industries which offer training places to course members. Local Education Authorities offer financial support to College-based students.

Special courses in computing techniques are arranged and facilities are available for the production and processing of computer programs.

The department maintains close links with industry and regular meetings of professional bodies are held in the College. These will include meetings of the newly formed branch of the Institute of Physics and the Physical Society.

*Service facilities to industry.* The department houses a number of items of advanced teaching and research equipment which on request and subject to

availability may be used by qualified technologists in industry. The items include i.r. and u.v. spectrographs, a full range of radiation dose measuring devices, and acoustic and noise measuring equipment. Special training courses on the techniques associated with the equipment will be given as required. Collaboration with industry on technical problems will be welcomed.

*Post-Graduate Research.* Full-time research facilities for Graduates are available in the fields of low temperature physics, solid state and superconducting devices. Research is conducted in X-ray crystallography and in medical physics, including work on an artificial kidney. The accommodation of the department includes well equipped research laboratories. The Governing Body of the College offers each year a number of Research Assistantships and the number is further supplemented by Science Research Council Scholarships.

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## Department of Physics and Mathematics

Telephone: Preston 51831, ext. 7

| | |
|---|---|
| *Head of Department* | J. Bagot, B.SC., A.INST.P. |
| *Principal Lecturer* | W. Woodcock, B.SC., F.I.M.A. |
| *Senior Lecturers* | G. R. Marr, M.SC., A.INST.P. |
| | J. S. Moorman, B.SC. |
| | J. D. Rimmer, B.SC. |
| | J. Unsworth, M.SC., A.INST.P. |
| *Lecturers* | J. Ashworth, M.SC.TECH., A.M.C.T., A.T.I., F.C.S. |
| | G. J. Blackledge, B.SC. |
| | T. Davies, M.SC., A.INST.P. |
| | F. R. Dean, M.SC., A.INST.P. |
| | A. R. Howells, B.SC., A.INST.P. |
| | L. R. Peace, M.A., A.F.I.M.A. |
| | M. A. S. Sweet, B.SC., PH.D. |
| | J. B. Wignall, B.A., A.F.I.M.A. |
| *Assistant Lecturers* | P. R. Bissell, B.SC., GRAD.INST.P. |
| | R. T. Egerton, B.SC. |
| | J. S. Fisher, B.SC. |
| | S. B. Lucas, B.SC. |
| | D. K. Monk, B.SC. |
| | A. Payne, B.SC. |
| | J. C. Phillips, B.SC. |
| | E. Webster, PH.D., B.SC. |
| | J. Weeks, B.SC.(ENG.), GRAD.R.AE.S. |
| *Research Assistant* | M. Whittam, M.SC., GRAD.INST.P. |
| *Technicians* | A. M. Kent (*Senior*) |
| | D. J. Ward |
| | P. Floate (*Photographic*) |
| | V. Odehnal |
| | Mrs D. J. Ward |
| *Visiting Lecturers* | K. V. Anand, M.SC. |
| | C. P. Brightling, B.SC. |
| | J. V. Bromiley, B.SC., A.INST.P. |
| | P. G. Craven |
| | W. A. Crookes, B.SC. |
| | F. F. G. Dale |
| | M. J. Damp |

*Visiting Lecturers (contd.)*

A. J. Davey
D. R. Evans
T. Evans, B.SC.
M. A. Greenwood, B.SC.
C. Harling, B.SC.
R. C. Harris, B.SC.
T. Herrod, B.SC.
G. W. Heywood, A.I.S.
G. Littlewood, B.SC.
J. B. Maw, B.SC., A.M.I.MECH.E., A.F.R.AE.S.
A. J. Meadowcroft, A.M.I.E.E., L.INST.P.
A. S. B. Olivine, B.SC.
G. C. Parker
R. I. Price, B.SC.
F. Richardson, B.SC., GRAD.INST.P.
D. Roberts
J. B. Robinson
F. Skuse, PH.D.
G. Slattery, PH.D., M.SC., A.INST.P.
K. Smith
D. C. Spicer, B.SC.
K. Smith
I. H. Stuart, B.SC.
J. Walker, B.SC.
T. H. Wareing, A.R.I.C.
A. J. Welch
W. Underwood
R. N. Yeadon

## List of Courses


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22 Physics, Mathematics, Applied Mathematics: Ancillary subjects for Licentiate and Associate Membership of the Royal Institute of Chemistry
23 Registered Statistical Assistant and Intermediate Examination of the Institute of Statisticians
23 Associateship of the Institute of Statisticians
24 Higher National Certificate in Mathematics, Statistics and Computing
24 Applied Physics
25 Advanced Physics
25 Laboratory Arts

SPECIAL COURSES

page 26 Radiation Protection
26 Nuffield Project Work in Physics
27 Molecular Physics
27 Physics of Materials
27 Computer Programming in Fortran IV
27 Systems Analysis

*Corporate Membership of the Institute of Physics and the Physical Society.* The Institute of Physics and the Physical Society is the acknowledged professional organisation for physicists in this country. Its members are engaged in the advancement, teaching and practice of physics and its application in industry and the public service. The academic requirements for the professional grades of membership are not less than those required for a good Honours degree of a British university. Success in Part II of the Institute's Graduateship examination is recognised by many universities as a qualification for entry to their research schools and subsequent award of a higher degree. There are four grades of corporate membership: Licentiateship (L.INST.P.); Graduateship (GRAD.INST.P.); Associateship (A.INST.P.); Fellowship (F.INST.P.). Candidates for either of the first two grades must have (*a*) an acceptable level of general education and (*b*) suitable academic qualifications in Physics.

The general education requirements are: G.C.E. 'O' level passes in not less than five subjects of which one shall be English language and at least one other shall be from the following subjects: English literature, history, geography, a classical or a modern language; or an approved equivalent.

Academic requirements for admission to Licentiateship are: either Higher National Diploma in Applied Physics, or Higher National Certificate in Applied Physics together with an approved endorsement, or a degree in physics awarded by a British university.

Academic requirements for admission to Graduateship are: either a Higher National Diploma in Applied Physics and success in Part II of the Graduateship examinations or a First or Upper Second class degree awarded by a British University.

Graduate members of the Institute, graduates of British universities, and others holding equivalent qualifications, may apply for Associateship after suitable research, teaching or industrial experience.

**Graduateship of the Institute of Physics** (III)

*Course adviser:* G. R. Marr

A four-year sandwich course. The Higher National Diploma in Applied Physics is taken at the end of the third year; good marks in this examination

will give exemption from Part I of the Institute's Graduateship examinations and qualifies a student to admission to the Licentiateship of the Institute of Physics and the Physical Society. Part II examinations, success in which gives the academic qualifications for admission to Graduateship, are taken at the end of the fourth year.

*Qualifications for entry* to the first year of the course: either G.C.E. 'O' level passes in English language and two other subjects and G.C.E. 'A' level pass in physics with evidence of studying mathematics to the same level, *or* a good pass in the Ordinary National Certificate in Sciences with physics as the elective subject. Success in departmental examinations taken during the course provides the additional qualifications for exemption from Part I and entrance to Part II of the Graduateship examinations.

**1st Year** *Tutor:* J. S. Moorman. *Curriculum:* physics: properties of matter, kinetic theory 1, optics 1, electromagnetism; mathematics; statistics 1, complex numbers 1, differentiation, differential equations; electronics: valve characteristics, rectifiers, amplifiers; high vacuum technology: production of a vacuum, measurement of pressure, vacuum systems; engineering drawing; chemistry; liberal studies.

*College course:* September to March (24 weeks)

*Examinations:* internal

**2nd Year**: *Tutor:* D. K. Monk. *Curriculum:* physics; moduli of elasticity, gas laws, kinetic theory 2, optics 2, acoustics, a.c. theory; Mathematics; statistics 2, complex numbers 2, Laplace transforms, vector alegebra; electronics: transistor characteristics, equivalent circuits, amplifiers, oscillators; x-ray Technology; x-ray diffraction, radiography; metallurgy; liberal studies.

*College course:* September to March (24 weeks)

*Examinations:* internal

**3rd Year**. *Tutor:* G. R. Marr. *Curriculum:* physics: wave mechanics, low temperatures, thermodynamics, physical optics; mathematics: determinants, matrices, Fourier analysis; electronics: feedback theory, stabilization of supplies, electron microscope, switching circuits, computer elements; spectroscopy; photography; liberal studies.

*College course:* September to July (36 weeks)

*Examinations:* H.N.D. in Applied Physics

**4th Year**. *Tutor:* Dr M. A. S. Sweet. *Curriculum:* physics: thermodynamics, optics, solid state physics; electronics or high energy radiations.

*College course:* September to July (36 weeks)

*Examinations:* Grad.Inst.P. Part II

*Final qualification:* Graduateship of the Institute of Physics and the Physical Society

**Graduateship of the Institute of Physics** (III)

*Course adviser:* G. R. Marr

A two-year full-time course leading to the Graduateship examinations of the Institute of Physics and the Physical Society. Part II of the Graduateship examinations is taken at the end of the second year.

*Qualifications for entry:* students may enter directly into the third year of the four-year Grad.Inst.P. course (see page 15) if possessing a good H.N.C. with exemption from Part I of the Graduateship examination and a G.C.E. 'O' level pass in English language. Candidates may be admitted to the final year of the course after consultation with the Head of Department.

**3rd Year.** *Tutor:* G. R. Marr. *Curriculum:* physics: wave mechanics, low temperatures, thermodynamics, physical optics; mathematics; determinants, matrices, Fourier analysis; Electronics; spectroscopy; photography; liberal studies.

*College course:* September to July (36 weeks)

*Examinations:* H.N.D. in Applied Physics

**4th Year.** *Tutor:* Dr M. A. S. Sweet. *Curriculum:* physics: thermodynamics, optics, solid state physics; electronics or high energy radiations.

*College course:* September to July (36 weeks)

*Examinations:* Grad.Inst.P. Part II

*Final qualification:* Graduateship of the Institute of Physics and the Physical Society

**General Certificate of Education: Advanced level** (II)

*Tutor:* R. T. Egerton

A one-year full-time course in preparation for the advanced level G.C.E. examinations of the Northern Universities Joint Matriculation Board. The course will also be appropriate for mature students seeking qualifications for entry to graduate courses.

*Qualifications for entry:* students will have attended G.C.E. Advanced level courses in their chosen subjects.

*Curriculum:* Suitable combinations of subjects chosen from: biology, physics, chemistry, mathematics, computations.

*Examinations:* G.C.E. 'A' level

*Final qualifications:* General Certificate of Education, Advanced level

**Higher National Certificate in Mathematics, Statistics and Computing** (III)

*Course adviser:* W. Woodcock

This two-year course for those whose work in Industry or Commerce has a mathematical foundation. The treatment is such as to ensure that the students can apply their knowledge of mathematics with understanding to problems which they meet in their employment. A significant part of the course work will be concerned with an introduction to programming an automatic digital computer and students will be expected to write successfully a number of simple programs. The Institute of Mathematics and its Applications will accept the Higher National Certificate as giving exemption from some of its professional examinations.

*Qualifications for entry:* an Ordinary National Certificate in Sciences with passes in basic mathematics and elective mathematics; *or* G.C.E. 'A' level in mathematics together with three other subjects at G.C.E. 'O' level, *or* a qualification deemed by the Joint Committee to be equivalent to either of the above, e.g. an Ordinary Certificate or Diploma with sufficiently good passes on a suitable syllabus in mathematics.

**1st Year.** *Tutor:* J. B. Wignall. *Curriculum:* mathematics: functions of a real variable, convergence, ordinary differential equations, functions of a complex variable, Fourier Series, Laplace's equation; numerical analysis; interpolation, numerical differentiation and integration, numerical solution of ordinary differential equations; probability and statistics: theory of probability, descriptive statistics, confidence limits, tests of significance, control charts and their use; general studies; elementary astronomy and economics.

*Attendance:* one day and one evening per week

*Examinations:* internal in mathematics, numerical analysis: externally assessed examination in statistics

**2nd Year.** *Tutor:* G. J. Blackledge. *Curriculum:* mathematics: algebra, vectors and matrices, dynamics; numerical analysis: iterative methods, sets of linear equations, matrices; automatic computations: number systems and codes; Boolean algebra and logic, basic ideas of programming, a high level language; general studies; electronics.

*Attendance:* one day and one evening per week

*Examinations:* internal, externally assessed

*Final qualification:* Higher National Certificate in Mathematics, Statistics and Computing

**Higher National Certificate in Applied Physics** (III)

*Course adviser:* J. Unsworth

A two-year course. The Higher National Certificate is taken at the end of the second year; good marks in this examination will give exemption from Part I of the Graduateship examination of the Institute of Physics and the Physical Society.

*Qualifications for entry:* either an Ordinary National Certificate in Sciences with Physics as the elective subject, or passes in G.C.E. 'A' level physics and mathematics and chemistry at 'O' level.

**1st Year.** *Tutor:* J. C. Phillips. *Curriculum:* physics: elasticity, rotational motion, kinetic theory, thermal conductivity, a.c. theory; mathematics: integration, differentiation, complex numbers, Laplace transforms; applied physics: electronics 1, physical testing 1, liberal studies.

*Attendance:* one day and one evening per week

*Examinations:* internal

**2nd Year.** *Tutor:* J. Unsworth. *Curriculum:* physics, thermodynamics, physical optics, a.c. bridges, surface tension, viscosity, acoustics; mathematics: co-ordinate geometry, determinants, matrices, Fourier analysis; applied physics: electronics 2, physical testing 2; liberal studies.

*Attendance:* one day and one evening per week

*Examinations:* internal, externally assessed

*Final qualification:* Higher National Certificate in Applied Physics

**Licentiateship of the Institute of Physics** (III)

*Tutor:* J. Unsworth

A one or two-year part-time course for endorsements to the Higher National Certificate in Applied Physics. Success in the examinations of three endorsements subjects qualifies a student to admission to the Licentiateship of the Institute of Physics and the Physical Society.

*Qualifications for entry:* a Higher National Certificate in Applied Physics

*Curriculum:* further electronics, nuclear physics, spectroscopy, instrumentation and a project

*Attendance:* one day and one evening per week

*Examinations:* internal, externally assessed

*Final qualification:* Licentiateship of the Institute of Physics and the Physical Society

**Ordinary National Certificate in Sciences** (II)

*Course adviser:* J. Unsworth

A two-year course of six terms. The first four terms will be devoted to a basic study of mathematics, physics and chemistry together with English and general subjects. At the end of the fourth term candidates will sit assessed theory papers in basic chemistry, basic physics and basic mathematics. In the fifth and sixth terms of the course candidates will study their Elective Subject which may be Physics or Chemistry and sit a theory and practical paper in their subject. Students will be awarded an Ordinary National Certificate with elective physics providing they pass elective physics and at least two of the three basic subjects. If passes are obtained in elective physics, basic physics and basic mathematics students will be eligible to proceed to the H.N.C. or H.N.D. Course in applied physics.

*Qualifications for entry:* either four G.C.E. 'O' level subjects *e.g.* mathematics, English and two complementary science subjects, *or* a certificate of the General Course in Science awarded by one of the Regional Examining Unions with passes in three appropriate subjects including Mathematics and a Science at credit level.

**1st Year**. *Tutor:* P. R. Bissell. *Curriculum:* basic physics, basic mathematics, basic chemistry, liberal studies.

*Attendance:* one day and one evening per week

*Examinations:* internal, externally assessed, at the end of the fourth term

**2nd Year**. *Tutor:* E. Webster. *Curriculum:* basic physics (1 term), basic mathematics (1 term), basic chemistry (1 term), elective physics with supplementary mathematics (2 terms), liberal studies.

*Attendance:* one day and one evening per week

*Examinations:* internal, externally assessed, in basic physics, basic mathematics, basic chemistry at the end of fourth term; elective physics theory (internal, externally assessed) and practical (internal) at the end of the sixth term

*Final qualifications:* Ordinary National Certificate in Sciences

**Pre-Degree Course** (II)

*Tutor:* A. R. Howells

A one-year course for student apprentices who are undergoing a period of industrial training prior to their degree course. In most cases entrants will already have passed the G.C.E. 'A' level examination in both mathematics and physics.

*Curriculum:* mathematics, statistics, computation and numerical analysis, applied physics, nuclear physics.

*Attendance:* one day per week

*Examinations:* internal

**General Certificate of Education, Advanced level** (II)

*Tutor:* F. R. Dean

A one-year revision course in preparation for G.C.E. 'A' level examinations.

*Qualifications for entry:* students will have attended courses at this level in their chosen subjects

*Curriculum:* any combination of the subjects mathematics, physics, applied mathematics

*Attendance:* one half day or evening per week for each subject except applied mathematics for which only the evening class will be provided

*Final qualification:* General Certificate of Education, Advanced level

**General Certificate of Education; Ordinary level** (I)

*Tutor:* J. S. Fisher

A one-year revision course in preparation for G.C.E. 'O' level examinations. The course may be used in preparation for entry to the course for O.N.C. in Sciences.

*Qualifications for entry:* students will have attended courses at this level in their chosen subjects.

*Curriculum:* mathematics and/or physics. Courses are also available in chemistry and English language.

*Attendance:* one half day or evening per subject per week

*Final qualification:* General Certificate of Education, Ordinary level

## COURSES IN PHOTOGRAPHY

*Course adviser:* A. H. Thompson

These courses are for trainee photographers wishing to obtain a recognised qualification.

City and Guilds of London Institute Course 107 (Photography) is being replaced by Course 344 (General Photography). Students who have passed the Intermediate examination in Course 107 will proceed to the Final examination in Course 107 in 1968. All other students will be enrolled into the first or second year of the three-year Course 344 in General Photography. The third year of the course will be offered in 1969.

**Photography** (C.G.L.I. 107: FINAL) (II)

*Tutor:* G. R. Marr

*Curriculum:* theory of photography; practical photography.

*Attendance:* one day and one evening per week

*Examinations:* C.G.L.I. 107 (Final)

**General Photography** (C.G.L.I. 344)

**1st Year** (I). *Curriculum:* equipment and materials, processing, studio work, processing techniques, printing, maintenance of equipment.

*Attendance:* one day and one evening per week

*Examinations:* internal

**2nd Year** (II). *Curriculum:* equipment and materials, processing, sensitometry, colour photography, studio work, processing techniques, printing, retouching and finishing, maintenance of equipment.

*Attendance:* one day and one evening per week

*Examinations:* internal

**Physics and Mathematics as Ancillary Subjects for Licentiate and Associate Membership of the Royal Institute of Chemistry** (II)

*Course tutor:* F. R. Dean

A collection of classes either part-time day or evening to prepare students for assessed examinations in subjects appropriate for Royal Institute of Chemistry ancillary subject requirements. Mathematics and physics are compulsory subjects for R.I.C. qualifications and students wishing to proceed to Grad.R.I.C. must pass in a third ancillary subject which may be applied mathematics (theoretical mechanics).

*Qualifications for entry:* mathematics and physics should have been studied beyond G.C.E. 'O' level.

*Curriculum:* mathematics (70 hours), physics (90 hours), applied mathematics (180 hours).

*Attendance:* mathematics and physics, one day or evening per week for one year; applied mathematics one evening per week for two years.

*Examinations:* internal, externally assessed

*Final qualification:* Royal Institute of Chemistry assessed ancillary subject passes

## COURSES IN STATISTICS

*Course adviser:* J. S. Moorman

Courses are provided in preparation for the examinations of the Institute of Statisticians.

**Course for Registered Statistical Assistant and Intermediate Examinations of the Institute of Statisticians** (II)

*Tutor:* L. R. Peace

A one-year course is provided. The course is also eminently suitable for those who, whilst not requiring an examination qualification, desire an introduction to the subject and to whom a knowledge of statistics would be of value in their work.

*Qualifications for entry:* G.C.E. 'O' level (or its equivalent) in mathematics and in English language.

*Curriculum:* collection and compilation of data, statistical calculations, presentation of results, mathematics, elements of statistical methods, industrial statistics.

*Attendance:* two evenings per week

*Examinations:* external

*Final qualification:* Parts I and II of the examinations of the Institute of Statisticians

**Associateship of the Institute of Statisticians** (III)

*Tutor:* J. S. Moorman

A two year course in which the syllabus content is so arranged that the years may be taken in either order. During this session Part IIIb will be studied.

*Qualifications for entry:* Parts I and II of the Institute's examination or exemption therefrom.

*Curriculum:* statistical organisation, theory and practice, logical background of statistics; industrial statistics.

*Attendance:* one evening per week

*Examination:* Part IIIb of the examination of the Institute of Statisticians

*Final qualification:* Associateship of the Institute of Statisticians

**Higher National Certificate in Mathematics; Statistics and Computing** (III)

*Course adviser:* W. Woodcock

A three-year course for mature students whose work or interests make greater mathematical demands than their previous training can support. The treatment of the work is such as to ensure that the students can apply their knowledge of mathematics to real-life problems. A significant part of the course work will be concerned with an introduction to programming an automatic digital computer and students will be expected to write successfully a number of simple programs. The Institute of Mathematics and its Applications will accept the Higher National Certificate as giving exemption from some of its professional examinations.

*Qualifications for entry:* G.C.E. 'A' level in mathematics together with three other subjects at G.C.E. 'O' level, *or* a qualification deemed by the Joint Committee to be of the same standard, *e.g.* an O.N.C. with sufficiently good passes on a suitable course in mathematics. Students may not enter this evening course until they have reached the age of twenty-one years.

**1st Year.** *Tutor:* J. B. Wignall. *Curriculum:* mathematics: algebra, vectors and matrices, dynamics; numerical analysis; iterative methods, solution of sets of linear equations, matrices.

*Attendance:* two evenings per week

*Examinations:* internal

**2nd Year.** *Tutor:* G. J. Blackledge. *Curriculum:* mathematics: functions of a real variable, ordinary differential equations; numerical analysis: interpolation, numerical differentiation and integration; Statistics: probability theory, descriptive statistics, confidence limits, tests of significance, quality control.

*Attendance:* two evenings per week

*Examinations:* internal with statistics paper assessed

**3rd Year.** This will be offered in 1968–69

**Applied Physics** (III)

*Tutor:* J. Unsworth

A one-year course in the following subjects in applied physics. They may be taken as endorsements to existing Higher National Certificates in applied physics or as single subjects for those engaged in the appropriate technologies.

*Qualifications for entry:* physics and mathematics studied to G.C.E. 'A' level.

*Curriculum:* electronics: diode, triode, rectifiers, amplifiers, feedback: p-n junctions, transistors and circuit applications; physical testing, properties of materials, crystal structure, x-ray diffraction, ultrasonics, eddy currents other physical testing methods.

*Attendance:* one evening per week

*Examinations:* internal, externally assessed

*Final qualification:* endorsement to the Higher National Certificate in Applied Physics

**Advanced Physics** (III)

*Tutor:* J. Unsworth

A twenty week course of lectures and tutorials covering topics in degree level physics.

*Qualifications for entry:* G.C.E. 'A' level in physics.

*Curriculum:* physics: properties of matter, optics, heat, magnetism, electricity, modern physics.

*Attendance:* one evening per week

*Examinations:* University of London, External B.Sc. General Degree

**Laboratory Arts** (II)

*Tutor:* P. R. Bissell

A twenty week course of practical work for laboratory technicians.

*Curriculum:* glassblowing, electronics.

*Attendance:* one evening per week

*Examinations:* internal

## Special Courses

*Enrolment into Special Courses* will take place separately from the normal enrolment procedure. Leaflets will be supplied on request by the Head of Department, and these will give full details of the courses and will include an application form.

**Radiation Protection**

*Organiser:* J. Unsworth

This one-day symposium is intended to be of assistance to all who require a knowledge of radiation hazards and protection in their work. Very little initial knowledge in this field will be assumed and the lectures will be supplemented by discussions and demonstrations. The lectures will be given by experts drawn from industry, hospitals, and education.

**Nuffield Project Work in Physics**

**Course A**

*Organiser:* J. Unsworth

This course is designed for teachers who are proposing to introduce the Nuffield Physics Scheme into their schools. It will extend over 10 meetings from 6.00 to 9.00 p.m. on Wednesday evenings from the 27th September. A selection of experiments will be available from the Stages I and II of the Nuffield Physics Scheme and there will be ample opportunity to discuss problems relating to Nuffield work with the demonstrators, who have experience of introducing the Nuffield approach into schools.

**Course B**

*Organisers:* J. Unsworth and F. R. Dean

This course is intended for teachers of G.C.E. Physics in schools. The lectures and demonstrations will be given by teachers who have been directly concerned with teaching Nuffield Physics and designing suitable projects. The duration of the course will be four days during which ample time will be allowed for informal discussion. Several projects will be displayed which are considered to be suitable for G.C.E. 'A' level, including the use of radioactive isotopes. Guidance will be given during the course on the safe handling of radioactive sources. Several firms concerned with the manu-

facture of instruments have been invited to display instruments which are suitable for Nuffield project work. This course will be held during the Summer term so that the laboratories will be available for project work.

**Molecular Physics**

*Organiser:* J. Unsworth

This one day symposium is intended to be of use to those technologists and engineers who are concerned with the physical problems associated with the manufacture and applications of polymers. The lectures will be given by specialists who have dealt with problems associated with polymers for many years. There will also be supplementary lectures on the physical testing of polymers; special techniques of dealing with heat conduction problems during manufacture, and instrumentation.

**Physics of Materials**

*Organiser:* G. R. Marr

A one day course dealing with the Physical properties, and allied theory, of materials particularly metals and semiconductors. A knowledge of Basic Physics and Mathematics will be assumed.

**Computer Programming in Fortran IV**

*Organiser:* J. D. Rimmer

Three courses will be offered as follows:
A course of ten evening lectures in the Autumn term on the basic language, a four day full-time course in the Summer term with similar material content, and a course of evening lectures in the Spring term giving practical applications and exercises in program writing in Fortran IV.

**Systems Analysis**

*Organiser:* J. D. Rimmer

A course of ten evening lectures in the Autumn term arranged jointly with the Extra-Mural Department of Liverpool University.

## Administrative Staff

| | |
|---|---|
| *Registrar* | J. Barnacle, D.M.A., F.C.C.S. |
| *Senior Clerks* | E. D. Hardman (Finance and Accounts) |
| | B. Stott (Examinations and Records) |
| *Secretary to the Principal* | Miss F. M. Jones |
| *Section Clerks* | Mrs K. M. Glynn (Accommodation) |
| | Miss E. Stobbart (Services) |
| *Clerks* | Mrs P. K. Hall |
| | Mrs K. Howarth |
| | Mrs D. Hurst |
| | Miss K. Lucas |
| | Mrs B. Metcalf (Secretary to the Industrial Liaison Officer) |
| | Mrs M. A. Simpson |
| | Miss J. H. Slee |
| | Mrs D. M. Sturzaker |
| | Mrs P. Tinsley |
| | Miss C. Tyrer |
| | Miss J. K. Watt |
| *Telephonists* | Mrs B. J. Baker |
| | Mrs P. B. Bamford |
| *Cashiers* | Mrs R. Doherty |
| | Mrs M. Marland |
| *Equipment Maintenance* | E. Goodson (Chief Engineer) |
| | E. Davis |
| | R. Holmes |
| *Refectory* | Mrs M. Hamlyn White (Catering Manageress) |
| | Miss E. Grunshaw (Assistant) |
| *Custodian of Premises* | W. H. Hatton |
| *Caretaker* | L. Whalley (Avenham premises) |
| *Assistant Caretakers* | V. Baron |
| | W. J. Butler |
| | G. Holden |
| | H. Mee |
| | H. Nicholls |
| | W. Pullan |

| | |
|---|---|
| *Assistant Caretakers (contd.)* | W. Saunders |
| | J. Walton |
| | T. K. Wharton |
| *Groundsman* | G. Cowell |
| *Watchmen* | S. Dixon |
| | F. Miller |
| | D. Postlethwaite |

## Calendar

| | | |
|---|---|---|
| 1967 | Thursday, 14th September | General Staff Meeting |
| | ENROLMENT PERIOD | |
| | Monday, 18th September | Enrolment, first day |
| | Tuesday, 19th September | Enrolment, second day |
| | Wednesday, 20th September | Enrolment, last day |
| | AUTUMN TERM | |
| | Monday, 25th September | All day and evening classes commence for the Autumn term |
| | Wednesday, 20th December | All departments close for Christmas after evening classes |
| | SPRING TERM | |
| 1968 | Thursday, 4th January | All classes re-open for the Spring term |
| | Tuesday, 13th February | Foundation Address and Distribution of Awards: all evening classes closed |
| | Friday, 5th April | All departments close for Easter after evening classes |
| | SUMMER TERM | |
| | Monday, 22nd April | All classes re-open for the Summer term |
| | Friday, 31st May | All departments close for Whitsuntide after evening classes |
| | Monday, 10th June | All classes re-open |
| | Friday, 5th July | All classes close: end of session |
| | Friday, 12th July | End of term: submission of reports |

*Note:* There are other important dates with which students must be familiar, for example closing dates for receipt of examination entries, commencement and termination of sandwich and block release courses. These will be found in the appropriate sections of the prospectus.

## Admission to Courses and Examinations

Courses will be provided subject to adequate enrolment; they may be discontinued at the discretion of the Principal at any time during the session should the numbers attending fall below a reasonable level.

The acceptance of a student into a course must have the approval of a Head of Department, and the student must produce satisfactory evidence that he has the necessary qualifications to enter the course.

Full-time and sandwich course students should make application well before the commencement of the session on the form obtainable from the Registrar.

At enrolment each student will receive an admission form bearing an admission number. This form must be shown to the class lecturer when the student attends each class for the first time in the session. Students will not be permitted to attend classes until they have completed the enrolment procedure (see page 36).

To qualify for certificates and to pass on to higher years of a course it is necessary that students should have:

(*a*) reached a prescribed standard of attainment, tested by examinations held at the end of the session, and

(*b*) made satisfactory attendance and progress during the session.

EXAMINATIONS

All Students are required to take prescribed internal or external examinations at the end of each year of the course.

Examination fees must be paid by students at the time of entry to examinations: accounts cannot be sent to employers or grant-aiding Authorities. There are no fees for purely internal examinations of the College.

Students who take the examinations of external examining bodies (*e.g.* the Union of Lancashire and Cheshire Institutes, the Royal Society of Arts, the City and Guilds of London Institute) or General Certificate of Education examinations, must pay the examination fees of these bodies.

Each student entering the final examination for Ordinary or Higher National Diplomas and Certificates must pay an entry fee of 7s. 6d. per

subject, in addition to the examination fee charged by the external examining body whose examinations are adopted. In the event of a Joint Committee agreeing to the re-examination of a student in a subject, the student will be required to pay the full cost of the re-examination, or to share the cost proportionately should more than one student be involved in the same re-examination.

Each student is responsible for his own entry to external examinations and must complete the appropriate entry form and present it with the fee to the College office. Students will not be informed individually of the last dates of entry or of timetables of examinations, but these will be published on notice boards. The last dates of entry for the undermentioned examinations are:

Assessed papers for National Diplomas and Certificates, including endorsements: 15th December, 1967

City and Guilds of London Institute: 19th January, 1968

Union of Lancashire and Cheshire Institutes, series B and C: 2nd February, 1968

General Certificate of Education papers (N.U.J.M.B.): 9th February, 1968

Institute of Linguists: 1st March, 1968

Pitmans: 15th March, 1968

Training Council for Teachers of the Mentally Handicapped: 5th April, 1968

Royal Society of Arts, Summer Series: 26th April, 1968

Students who do not enter by these dates may well be excluded from taking the examinations, and even if accepted late fees are payable ranging from 10s. to £10. 0s. 0d.

### EXAMINATION RESULTS

Sessional Reports will include examination results, but they cannot be completed until after the results are received from external examining bodies. Reports are then sent to each student as soon as possible. It is regretted that in the meantime enquiries cannot be answered. Copies of external examination pass lists will be made available for scrutiny on the College notice board as soon as possible after they are received.

## Tuition Fees

Sessional tuition fees must be paid at the time of enrolment and are returnable only in exceptional cases. Cheques should be made payable to the Corporation of Preston and crossed.

A student whose employer undertakes to pay the fee on his behalf must produce at enrolment a letter from his employer to that effect.

Part-time students from the administrative counties of Lancashire and Westmorland and from Wigan County Borough under age 18 on the 1st September will be enrolled without payment of the tuition fee.

| **Full-time and Sandwich Courses** | | Students under age 18 on 1st September £ s. d. | Students age 18 and over on 1st September £ s. d. |
|---|---|---|---|
| Graduateship of Institute of Physics: | 1st year | 36 17 6 | 38 5 0 |
| | 2nd year | | 38 5 0 |
| | 3rd year | | 56 10 0 |
| | 4th year | | 56 10 0 |
| General Certificate of Education, 'A' level | | 30 2 6 | 31 10 0 |

| **Part-time Courses** | Students under age 21 on 1st September £ s. d. | Students age 21 and over on 1st September £ s. d. |
|---|---|---|
| Group I (introductory level) | 1 7 6 | 2 12 6 |
| Group II (intermediate level) | 1 17 6 | 2 17 6 |
| Group III (advanced level) | 2 12 6 | 3 2 6 |

OVERSEAS STUDENTS

Students from outside the United Kingdom attending full-time and sandwich courses are required to pay special fees. Details of these can be obtained from the Registrar.

RESIDENTIAL LIBERAL STUDIES COURSES

As an integral part of their studies, students in certain advanced full-time and sandwich courses will normally attend each year a three-day resi-

dential course. The fee is approximately £3. 10s. 0d. which must be paid by the student. Students in receipt of Local Authority grants will in most cases be reimbursed all or part of the cost by their supporting authorities.

GRANTS

Full-time or College-based Sandwich Course students may apply to the Local Education Authority for the area in which they permanently reside for a grant of fees and maintenance. Works-based Sandwich Course students may also be eligible for financial assistance where the employer does not pay fees or wages during the College periods of a course, or where only partial financial support is offered by the employer.

NOTE TO LOCAL AUTHORITIES

The course grade designation (III NP) indicates an advanced course which is not poolable under D.E.S. regulations. In respect of these courses the normal recoupment procedure will apply.

## Enrolment

Students will be enrolled between the times: 10.0 a.m. to 12.30 p.m., 1.30 to 4.30 p.m. and 5.30 to 8.30 p.m. on the following days:

Monday, 18th September, 1967
Tuesday, 19th September, 1967
Wednesday, 20th September, 1967

Students must enrol during the times and on the dates stated; those who fail to enrol on these dates will be charged a late fee of 10s. 0d. The busiest enrolment periods are in the evenings; students who can enrol during the morning or afternoon periods will help the College and save themselves an appreciable amount of time.

Postal enrolments cannot be accepted.

Enrolment into special courses takes place separately from the procedure detailed on this page. (see page 26).

A student who wishes to enrol into a course demanding entry qualifications must produce documentary evidence at or before enrolment. Documentary evidence is not required in respect of students who have gained their qualifications at the Harris College.

PERMISSION VOUCHERS: all students resident in the County Borough of Preston or in the administrative area of Lancashire County, and part-time students resident in the County Borough of Wigan, will be admitted without the production of an inter-authority voucher. *All other students* must obtain permission vouchers each year from their Local Education Authorities and present them at enrolment.

**Enrolment procedure**

Students should first report to the department in which they wish to enrol. The plan of the College on the opposite page shows the blocks in which departments are situated. The rooms in which enrolment takes place in each department are shown in brackets below, *viz:*

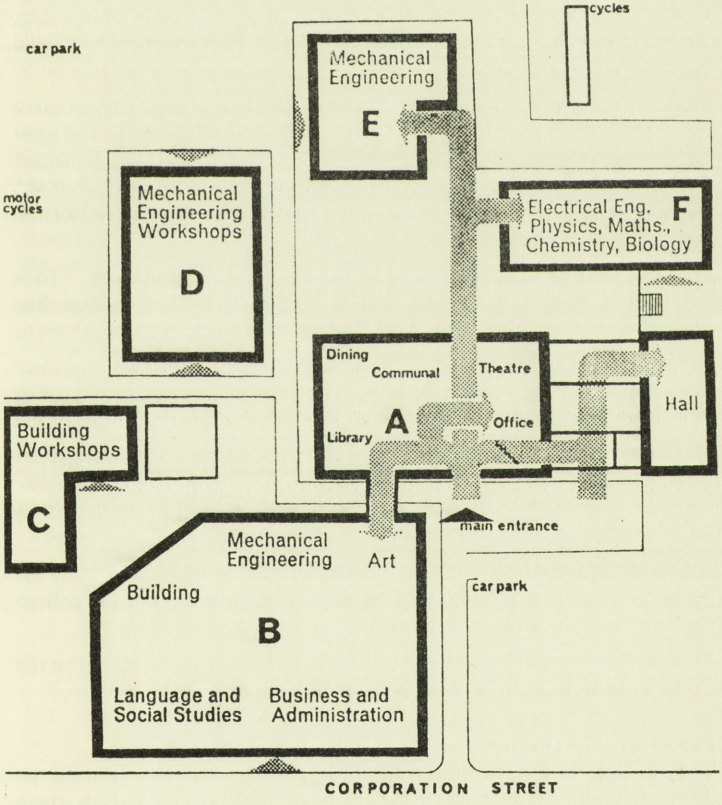
B BLOCK
School of Art (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52 and B55)

E BLOCK
Mechanical, Civil and Production Engineering Department (new students E1, former students E9)

F BLOCK
Chemistry and Biology Department (F37)
Electrical Engineering Department (F8, F9 and F10)
Physics and Mathematics Department (courses which include chemistry F35 and F37: other courses F26)

A BLOCK
College Office and enquiries

*When details of his future course have been determined in the department the student must present his enrolment forms at the Hall (A Block) for enrolment and payment of fees.*



# Regulations

## DISCIPLINE

Students are accepted into College courses on the understanding that they abide by the regulations herein and from time to time in force.

The Principal has the authority to suspend students from attendance for any cause which he considers adequate. The Council will exclude from the College premises any student whose continued attendance is undesirable. Suspended or excluded students automatically lose membership of the students' union and College societies.

Students are required to attend classes punctually and regularly, to carry out satisfactorily such work as is set by their tutors, and to sit the prescribed examinations. Employers who grant release to students to attend College courses will, after the fourth week of session, be notified of the absence of their employees, and as soon as possible after the end of the course will receive copies of sessional reports.

Students must conduct themselves in a quiet and orderly manner. They will be held responsible for and required to make good any damage they may cause due to negligence or wilfulness. They are expected at all times to keep the College tidy and free from litter.

Smoking within the College buildings is prohibited, except in the coffee lounge, staff rooms, common rooms, and assembly areas at permitted times.

Hot cooked foods must not be brought into the College, and food must not be consumed on the premises other than in the dining room and coffee lounge. Students who wish to bring packed meals may do so but they must take their meals at the fixed tables in the coffee lounge.

All forms of gambling and card playing on the premises or within the precincts are strictly prohibited. Students who are members of the college card club may, by arrangement, use the students' meeting room.

Musical instruments, including transistor radios, must not be played on the College premises except by arrangement with the Principal.

## PARKING FACILITIES

The College does not possess adequate parking facilities to meet all demands. Parking is restricted to the official car parks and cycle sheds where vehicles may be left at the owners' risk.

Students must travel very slowly in the College precincts, and should use the entrance nearest to the point of parking. They must not drive around or within the College premises in break periods. Roadways must be kept clear in case of emergencies.

### PERSONAL PROPERTY

The Council cannot accept responsibility for the safety of students' property. Property found on the premises will be handed to the Custodian of Premises, and students wishing to reclaim lost property should address enquiries to the Custodian.

Cloak lockers are available in all departments for students' use. Full-time, sandwich and block release course students may be allocated lockers for the duration of the course. Part-time students may use a locker during the day and/or evening spent in the College but must remove locker contents and padlocks when leaving the College for the day. Lockers should be secured by the students' own padlocks.

Lockers must be left empty and unlocked at the end of a course or session, otherwise the locks and contents will be removed.

### HEALTH AND SAFETY

Students are required in the interests of cleanliness, health and safety to provide themselves with the recommended kind of protective clothing which must be worn in workshop and laboratory classes. Workshop and laboratory clothes must not be worn whilst attending lectures or whilst in the communal block.

Students must use all protective devices provided.

Students should not attend the College from a house in which there is infectious illness. Cases should be promptly reported to the Registrar.

### FLOOR PROTECTION

It is regretted that ladies wearing stiletto heels will have to be refused admission to parts of the premises where damage to the floor would result. Ordinary footwear will be permitted in the Hall only when the floor drugget is laid.

COMMUNAL FACILITIES

The Communal Block provides facilities for the educational, social and recreational enjoyment of the students and staff. Besides administrative accommodation and a fully equipped theatre for both lectures and drama, there is a dining room and coffee foyer, a students' common room, students' union office and meeting rooms. The library is situated in this building.

An unusual feature is the Recreation Hall. The hall will be reserved at certain times for examinations, and occasionally for ceremonies or exhibitions, but at other times it is available to student groups, societies, and individuals for games and a very wide variety of physical activities. The bridge over the North courtyard leading to the hall contains changing rooms and showers.

REFECTORY

The dining room is open from 12.15 to 1.30 p.m. for lunch. A selection of courses at various prices is available. Tea or coffee after lunch may be taken in the adjacent coffee foyer.

Light teas or cooked meals are normally available from 4.30 to 7.00 p.m.

In addition to meals, tea or coffee or soft drinks will be available in the coffee foyer during set periods to cover mid-morning and mid-afternoon breaks between classes. Service from trolleys is available elsewhere at the same times.

Staff and students are requested to observe any restrictions on smoking in the refectory premises.

Requests for any special catering should be made in the first instance to the Registrar, well in advance of the occasion.

STATIONERY

The College stationery shop is open on three occasions during the day, namely 8.50 to 9.15 a.m., 1.00 to 2.00 p.m., and 6.45 to 7.15 p.m. Students may purchase the usual items of stationery, and also special laboratory and note books necessary for many courses.

## SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of societies and professional bodies are frequently held in the College.

Notice of the lectures will be displayed in the main entrance foyer during the session. Individual students and members of staff are welcome to attend. Application for groups to attend should be made through the Principal to the local secretary of the organisation.

## NATIONAL DIPLOMA AND CERTIFICATE COURSE REQUIREMENTS

An Ordinary National Diploma is awarded at the end of a two-year senior course of full-time study. A Higher National Diploma is awarded at the end of a further three year advanced course of full-time study.

Ordinary National Certificates and Higher National Certificates are corresponding awards following courses of part-time study.

Awards in each case are made by the Department of Education and Science in conjunction with one or more Professional Institutions. To receive an award a candidate must normally:

(*a*) make not less than 80% of the possible attendances in each subject in each year of the course for the award of a diploma, or 60% for the award of a certificate,

(*b*) obtain not less than 40% of the possible marks in each subject in the examinations held at the end of each year,

(*c*) obtain not less than 40% 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, and

(*d*) obtain not less than 50% of the grand total of marks obtainable in the final year. Of this total the possible marks in the examinations constitute 70% and the remaining 30% will be the possible marks for home work, class work, laboratory work, etc.

A 'Distinction' may be awarded to any candidate qualified to receive a diploma or certificate who, in the opinion of the examiners, has shown special merit in the final examination. His certificate will be specially endorsed with the name(s) of the subject(s) in which he has thus distinguished himself.

## CHANGE IN STUDENT PARTICULARS

Changes during the session should be notified immediately to the Registrar on the form available from the College office, for example: change of address, change of employer, change of name on marriage.

## ABSENCES

In the event of absences from classes because of illness or other unavoidable causes a note of explanation should be sent to the Head of Depart-

ment. A student who absents himself for a continuous period of four weeks without the approval of the Head of Department will be deemed to have left the course and his name will be removed from the register.

### OUTSIDE ACCOMMODATION

Shortage of accommodation makes it necessary for some classes to be held in the following premises: Avenham (School of Art Annexe); Blackburn and East Lancashire Royal Infirmary; Blood Transfusion Unit, Lancaster; Cheviot Street Workshop (off Strand Road); Deepdale County Secondary School; Lancashire County Institute of Agriculture, Hutton; N.W.G.B. Training Centre, Moor Lane, Preston; Preston Royal Infirmary; G.P.O. Telephone House, Moor Lane, Preston; and Trinity County Secondary School.

## The Library

Telephone: Preston 51831, ext. 15

| | |
|---|---|
| *Librarian* | A. Lawrence, A.L.A. |
| *Assistant Librarians* | Mrs M. Pye, A.L.A. |
| | Mrs S. M. Hunt |
| *Library Assistants* | Miss J. E Bamford |
| | Mrs I. M. Fuller |

The College library is available to all students for reference purposes. 360 technical journals are received annually in addition to the development of the book stock. An up-to-date set of British Standard Specifications is maintained.

The library is open from Monday to Friday at the following times:

*During term time:* 9.00 a.m. to 9.00 p.m.
*During vacations:* 9.00 a.m. to 5-30 p.m.

The library has facilities for photocopying, and students may obtain copies of pages of books and periodicals subject to the law of copyright. A charge is made for this service.

The library is a local agent for the National Lending Library of Science and Technology, a member of ASLIB and the North Western Regional Library System, and may be able to obtain through these organisations items not in its own stock.

## Physical Education and Recreation

Telephone: Preston 51831, ext. 27

| | |
|---|---|
| *Lecturer* | C. M. Robinson, D.L.C. |
| *Assistant Lecturers* | J. Gridley, A.G.A. |
| | Mrs B. J. Harrison, DIP.P.E., DARTFORD COLLEGE |
| *Visiting Lecturers* | A. Lewis |
| | R. Poole |
| | A. Spavin |
| | D. Stokes |
| | B. Strettle, B.J.A. |
| | G. Wilson, N.A.B.B.A. |
| | S. Wright, B.J.A. |

The Recreation Hall is equipped with fixed apparatus which, together with portable apparatus and equipment the College possesses, allows the pursuit of the following activities: athletics, badminton, basket ball, canoeing and sailing, cricket, dance, fencing, five-a-side football, golf, judo, mountaineering, netball, olympic gymnastics, padder tennis, soccer and rugby training, table tennis, trampolining, volley ball, weight training and lifting.

The recreational facilities of the College are available to all students enrolled into an academic course without payment of a further fee. Anyone interested in any of the activities detailed should contact the Lecturer in Physical Education at enrolment or as soon as possible afterwards. College sports clubs, affiliated to the students' union, are given priority in the evenings.

Lectures and films on a variety of activities, and inter-departmental and inter-College tournaments and competitions, are arranged throughout the session.

The mountaineering club arranges visits to the Lake District and North Wales for rock climbing, rambling and canoeing. For full-time students one week courses in mountain activities are arranged. From time to time arrangements are made for parties to engage in outdoor activities in vacation periods, for example ski-ing, rock climbing, canoeing, pony trekking, etc.

### REGIONAL AND NATIONAL SPORTS ACTIVITIES

The College is a centre for regional and national sports tournaments in badminton, table tennis and trampolining. It is also an Olympic Gym-

nastics Centre; the College gymnastic team competes in the National Team Championships of Great Britain and has also competed abroad.

### RESEARCH

The Physical Education Section in conjunction with the Department of Chemistry and Biology is undertaking research into the effects of different types of exercise on the heart and lungs, and a number of volunteer groups of students are co-operating.

### SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's eight academic departments. Persons not registered as students for academic courses may be admitted to certain scheduled classes in physical education, so far as places are available.The tuition fee payable is £1. 7s. 6d. if under age 21 on the 1st September or £2. 12s. 6d. if age 21 or over.

In order to give academic course students priority, persons who wish to enrol for physical education classes alone are not accepted until the fourth week in the session. No person may be admitted to these classes who is less than 16 years of age on the 1st September.

## Harris Students' Union

Telephone: Preston 53852

B. Hayes, *President*
A. England, *Vice-President*
Miss S. Standing, *Vice-President* (*female students*)
A. Kimm, *Secretary*
I. Horne, *Student Treasurer*
D. Swift, *Honorary Treasurer*

The Harris Students' Union is organised and governed by students, and is affiliated to the National Union of Students. It arranges general social activities, provides a means of helping the formation of student societies, and maintains contact with the students of other colleges. The union is financed by a grant from the Harris Council.

All students other than those enrolled in special courses are automatically admitted to membership of the students' union. A membership card will be issued at enrolment entitling students to participate in all social activities, to join any student society or club, and to vote in the election of members to the Executive Committee.

All clubs and societies in the College are affiliated to the Students' Union, and special subscriptions may be required for membership of particular clubs and societies. A Students' Union Handbook, issued free to members, describes the activities of the union.

Dances and other social events are regularly arranged in the College and in the town. A common room and an office are allocated exclusively for the use of students and recreational facilities are available elsewhere by arrangement with the Lecturer in Physical Education.

Enquiries concerning student activities should be addressed to the Secretary, Harris Students' Union, Corporation Street, Preston.

**College Colours**

A Harris College blazer badge, scarf and tie, designed by the School of Art and Design and approved by the College Governors, are on sale at Messrs. Hellewells, Lune Street, Preston. Prices: 8s. 11d., 28s. 6d. and 8s. 6d. each respectively.