The Harris College: Session 1969–70

Harris College, Corporation Street, Preston, Lancashire
Telephone: Preston 51831–7

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, M.M., O.B.E., J.P.

Vice-President: County Councillor T. V. Brown

Members:

Alderman J. Atkinson
Alderman H. Beaumont
Alderman Mrs D. M. Dewhurst, J.P.
Alderman Mrs R. Lytton
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker
Councillor Mrs K. E. Crozier
Councillor Mrs D. Smith

County Alderman J. Bradley, M.B.E., J.P.
County Alderman J. P. Ennis, J.P.
County Alderman Sir Fred Longworth (Deputy Lieutenant of Lancashire; Vice-Chairman of Lancashire County Council)
County Councillor C. W. Eastwood
County Councillor M. J. Fitzherbert-Brockholes, J.P.
County Councillor A. J. Whittall
County Councillor Mrs W. Winn
County Councillor G. Woods

F. D. Crowe, B.SC., C.ENG., F.R.AE.S.
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., 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.

Professor E. Roland Dobbs

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, M.M., O.B.E., J.P., *President of the Harris Council*

Members:
County Councillor T. V. Brown, *Vice-President of the Harris Council*
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

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 nine 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 increasing use by industrialists of the Industrial Liaison Centre is expected to 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 37 to 39.

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

The Academic Board

Subject to the ultimate responsibility of the Harris Council the responsibility for the planning, co-ordination, development and oversight of the academic work of the College is delegated to an Academic Board of 30 members which includes representatives from all departmental Boards of Studies, representatives of the teaching staff generally, and students' representatives. The Board has power to co-opt specialist advisors from Universities, Colleges and other bodies when appropriate.

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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.)
	D. M. Glen
	L. Penrice, A.R.C.A.
Lecturers and	D. F. Bates, A.R.C.A.
Assistant Lecturers	J. Ditchfield, F.I.B.D.
	R. V. Flitcroft
	S. Good, A.R.C.A.
	Miss P. Harrison, A.T.D.
	K. D. Hicks, A.R.C.A.
	S. Hogg, M.I.PTG.M.
	G. F. Hollingworth
	D. Q. King, M.A.(PITTSBURGH)
	A. E. Parkinson
	G. R. Parry
	A. D. Powell, CERT.R.A.S.
	I. T. Sharp
	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	J. Simm
Studio Assistants	G. Coxhead
	K. Mackenzie

SANDWICH COURSES

Specialist Designers' Course in Dress Design and Manufacture

Specialist Designers' Course in Graphic Design

A full-time foundation course in preparation for entry to Specialist Designers' courses and courses leading to the Diploma in Art and Design.

A full-time course for printing trade apprentices.

Part-time courses in Compositors' Work, Letterpress Machine Printing, Painting Decorating and Signwriting, Photography, The General Certificate of Education in Art.

The Specialist Designers' courses offered by the School of Art and Design are three-year higher level vocational sandwich courses leading to the Licentiateship of the Society of Industrial Artists and Designers in Dress Design and Manufacture and in Graphic Design.

These 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 Specialist Designers 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.

For students interested in the design aspect of engineering the School of Art and Design co-operates with the Department of Mechanical and Production Engineering in offering a Higher National Diploma in Mechanical Engineering with an Industrial Design option. Applicants interested in this course should have G.C.E. qualifications in mathematics and physics, full details of which will be found in the prospectus for the Department of Mechanical Civil and Production Engineering.

Department of Building

Telephone: Preston 51831, ext 33

Head of Department	J. G. V. Proudman, A.M.C.T., A.I.O.B.
Senior Lecturers	W. H. Roberts, A.I.O.B., A.B.S.I., A.I.C.W., F.I.B.I.C.C.
	T. M. Ryan, A.R.I.C.S., A.I.Q.S.
Lecturers and Assistant Lectures	R. Abrahams, A.M.INST.W.H.S.
	W. Bell
	S. R. Cardwell, A.I.A.S., A.I.O.B.
	G. Cheetham
	B. Coyne
	T. H. Crisp, L.I.O.B., M.I.W.H.S.
	J. Cross, A.B.I.C.C.
	M. Eyre
	W. S. Hunter, A.I.O.B.
	L. J. Pulford, M.R.S.H., M.R.P.A.
Technicians	W. A. Crossley
	B. H. Lush
Stewards	R. David
	J. Swarbrick

SANDWICH COURSES

Higher National Diploma in Building. A three-year course providing education and training for careers with professional status in the Construction Industry and allied professions.

Ordinary National Diploma in Building. A two-year course leading eventually to qualifications for employment as Builders' Manager, Agent, Surveyor, Estimator, Building Inspector, Architectural Technician.

A one-year full-time course to prepare students for entry to the Ordinary National Diploma in Building course.

PART-TIME COURSES

Higher National Certificate in Building

Part-time Courses to meet the needs of the Construction Industry and leading to appropriate qualifications, including: the Construction Technicians' Certificate, the General Course in Construction, the Associateship of the Institute of Works and Highways Superintendents, and the Advanced and Full Technological Certificates 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 and metrication for builders.

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.
	R. J. Munro. LL.B., M.B.I.M.
	E. Schofield, B.A.(COM.), A.C.I.S.
	J. R. Topping, B.SC.(ECON.), F.R.G.S., A.C.C.S.
Lecturers and Assistant Lecturers	Mrs E. J. G. Bairsto, B.A., F.R.G.S.
	J. L. Bullas
	W. Butler, B.A.(ADMIN.), A.I.M.T.A.
	Mrs B. D. Cave, F.S.C.T., F.F.T.COM.
	P. J. Gaule, B.COMM.(DUBLIN)
	R. J. Hudson, B.SC.(ECON.), A.A.C.C.A.
	W. E. Illston, A.C.W.A., A.I.W.S.P., M.I.W.M.
	J. Isherwood, A.I.B.
	D. Jones, B.SC.(ECON.)
	R. J. Kendle, M.A.(ECON.)
	E. Newell, DIP. JOURNALISM
	Miss I. Parsonage, A.C.I.S.
	Miss E. M. Rigg, B.A.
	A. C. Roylance
	Mrs T. M. Stableford, F.S.C.T.
	J. E. Varley, B.A.(ADMIN.)
	H. Warburton, A.C.A., A.T.I.I.
Technician	R. Parker

FULL-TIME AND SANDWICH COURSES

Higher National Diploma in Business Studies. A three-year sandwich course with a bias towards cost accountancy, company secretaryship or personnel management.

Ordinary National Diploma in Business Studies. A two-year full-time course 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.

Certificate of the National Council for the Training of Journalists. A one-year full-time course designed to give students a practical and academic background before entering the profession.

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.

Institute of Municipal Treasurers and Accountants, Intermediate and Final: between six and eight weeks full-time study linked by day release during the remainder of the session.

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 and Associateship
Chartered Insurance Institute, Parts A, B and C

Part-time courses for:
Diploma in Works Management
Institute of Work Study Practitioners
Diploma in Marketing, Parts 1, 2 and 3
Industrial Administration
Certificate in Supervisory Studies
Certificate in Office Studies
Ordinary National Certificate in Business Studies
Ordinary National Certificate in Public Administration
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, 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.
Principal Lecturers	J. Donnelly, B.SC.
	C. A. Russell, M.SC., PH.D., F.R.I.C.
Senior Lecturers	D. Brattan, B.SC., PH.D., A.R.I.C.
	H. E. G. Emmett, B.SC., A.R.C.S., M.I.BIOL.
	D. J. Marks, B.SC., PH.D.
	A. Ottewell, B.SC., A.I.M.
	F. Ramsden, F.I.M.L.T., F.R.S.H.
Lecturers	N. G. Allen, B.SC.
	S. Blake, B.A., PH.D., A.R.I.C.
	S. Britland, B.SC.
	K. Edgar, M.SC., PH.D., A.R.I.C.
	D. Mason, B.SC., PH.D., A.R.I.C.
	L. H. G. Morton, B.SC., L.I.BIOL.
	G. Newton, B.SC., PH.D.
	A. Sherrington, A.R.I.C.
	J. H. Taylor, B.SC., PH.D.
	J. J. Waring, B.SC., PH.D.
Research Assistants	C. E. Crawforth, GRAD.R.I.C.
	R. Kellie, GRAD.R.I.C.
	J. T. Nicholson, B.SC.
	S. D. Steel, M.A.
Technicians	T. Nicol (Senior)
	G. R. Cunliffe, I.M.TECH.
	Miss A. B. Fazackerley (Research)
	Mrs J. M. Garner
	Miss S. L. Nixon
	H. Smith, F.R.S.H.
	J. L. Stoker
	Miss T. 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.

Higher National Certificate in Medical Laboratory Subjects: a two-year day release course with studies in specialist medical laboratory subjects.

Associateship and Fellowship of the Institute of Medical Laboratory Technology with specialisation in bacteriological techniques, haematology and blood transfusion, histapatholigical techniques, or chemical pathology.

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; G.C.E. subjects.

Part-time courses for Pharmaceutical or Chemical Technicians' Certificates.

POST GRADUATE RESEARCH

Full-time research facilities for Graduates are available in the fields of reaction kinetics, surface properties of cells, co-ordination chemistry, radiation chemistry, heterocyclic syntheses. The accommodation of the department includes eight 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 four-year Grad R.I.C. sandwich course offered by the College will appeal to students with strong interests in experimental chemistry. A two-year full-time Grad R.I.C. course is offered for students with appropriate entry qualifications.

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 n.m.r., i.r. and u.v. spectrometers, 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 and Electronic 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.
Senior Lecturers	R. N. Abbott, B.SC., C.ENG., M.I.E.E.
	J. A. Askew, M.SC., C.ENG., M.I.E.E.
	R. O. Hall, B.SC.TECH., A.M.C.T., C.ENG., M.I.E.E.
	J. K. Moss, B.SC., C.ENG., M.I.E.E.
	H. C. Parker, B.SC.(ENG.), C.ENG., M.I.E.E., M.I.MECH.E.
	N. T. Slater, B.SC., C.ENG., M.I.E.E.
Lecturers and Assistant Lecturers	D. Baxter, A.I.E.R.E., M.I.S.M., A.M.INST.E.
	J. M. Berry
	K. Bowker
	T. H. Cowperthwaite
	F. H. Downham
	H. Duckworth, C.ENG., M.I.E.E.
	R. Duddle, GRAD.I.E.R.E.
	S. E. Egerton, GRAD.I.E.R.E.
	J. Gargan, M.SC.
	T. G. Izatt, M.A.
	W. S. Kirkpatrick, C.ENG., M.I.E.E.
	B. Moore, B.SC.
	R. J. Simpson, B.SC.
	F. Walmsley, A.M.A.S.E.E., A.M.I.T.E.
	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
	R. W. Baxter
	N. Faulkner
	J. J. Wilson

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

Council of Engineering Institutions' Part 2 Examinations. A one-year course with specialisation in electromagnetic fields and circuits, mathematics, electronics, electrical power engineering, communication engineering, electrical energy, systems and control engineering.

PART-TIME COURSES

Institution of Electrical Engineers' Part III Examinations for which the following subjects are offered: electricity supply, utilisation of electrical plant, applied electronics.

Graduate Membership of the Institution of Electronic and Radio Engineers with specialisation in electronic engineering, control systems and telecommunication engineering.

Higher National Certificate in Electrical and Electronic Engineering with specialisation in either electrical power or electronic 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 Certificate 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, electrical installation craftsmen.

The Council of Engineering Institutions representing fourteen 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. After a further year of study, students will normally sit the Part 2 Examinations.

If success in the C.E.I. Part 2 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 two years of the course, students will spend alternate periods of six months in industry and in full-time study at the College. The final two years 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.

The Department also offers a one-year full-time course leading to the Council of Engineering Institutions' Part II Examinations, intended for students who have passed or who are exempted from the C.E.I. Part I Examinations.

Department of Language and Social Studies

Telephone: Preston 51831, ext 37

Head of Department	H. E. Probyn, B.A.
Principal Lecturer	H. Bowden, B.A., DIP. IN PUBLIC AND SOCIAL ADMINISTRATION, DIP. IN APPLIED SOCIAL WORK
Senior Lecturers	Miss M. A. Coulson, B.A.
	Miss R. H. Gibbins, B.SC., CERT. IN CHILD CARE
	R. Gordon, B.SC.(ECON.)
	J. M. McMaster, DIP.ED., DIP.P.E., DIP.REM.ED., M.ED.
	R. Quinn, B.A., DIP. ECON. AND POL.
	D. Swift, B.A.
Lecturers and Assistant Lecturers	R. Anderson, B.A.
	Miss J. B. Barker, CERT. IN PSYCHIATRIC SOCIAL WORK
	K. C. Bodfish, B.A.
	G. T. Eddy, B.A.
	A. D. Feachnie, DIP.ED., DIP.E.S.N.
	Mrs D. M. Gibson
	Mrs L. M. Godsell, CERT. IN PSYCHIATRIC SOCIAL WORK
	W. J. N. Hackl, F.I.L.
	Mrs A. M. Hallam, B.A.
	A. Hardman, DIP.ED., DIP.E.S.N.
	D. Hargreaves, B.A.
	R. H. Hodson, S.T.A.C., F.I.A.L.
	R. G. Hornby, DIP.TEACHERS OF E.S.N., DIP.ED.
	Mrs J. Hughes, B.A.
	J. A. Kettle, DIP. TEACHERS OF E.S.N.
	Mrs S. A. C. McMaster, DIP.ED.
	D. Maddox
	Miss M. W. Nesbitt, B.A., DIP.ED.
	R. Pope, B.A.
	R. Sandbach, A.R.C.M.
	J. S. Whitefield, B.A.
	Mrs J. Wragg, DIP. TEACHERS OF E.S.N.

FULL-TIME COURSES

B.Sc.(Hons.) in Sociology of the University of London. A three-year honours degree course (Branch III) for those who contemplate careers in social work, or industry or commerce in management or personnel management.

London University Diploma in Social Studies. A two-year course providing 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 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.

General Certificate of Education. One-year intensive courses in G.C.E. 'A' level subjects in the options: general arts and music, social studies, and modern languages.

PART-TIME COURSES

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

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., M.I.C.E.
Principal Lecturers	N. A. Butterworth, C.G.I.A., C.ENG., F.I.MECH.E., F.I.PROD.E.
	D. M. Clapp, B.SC., PH.D., C.ENG., M.I.C.E., M.I.MECH.E.
	A. G. Parker, B.SC.(ENG.), M.SC.
Senior Lecturers	J. Briscoe, B.SC., C.ENG., M.I.MECH.E.
	M. J. Manning, B.SC., C.ENG., A.F.R.AE.S.
	H. Ogden, C.ENG., F.I.PROD.E., M.I.MECH.E., A.M.I.E.I.
	H. Roberts, DIPL.ING., C.ENG., M.I.MECH.E.
	P. J. Thompson, B.SC., M.SC., C.ENG., M.I.PROD.E.
	J. Tirrell, B.SC., A.C.T.(BIRM.)
	P. Tucker, B.SC.TECH., C.ENG., M.I.MECH.E.
Lecturers and Assistant Lecturers	K. Bennett, C.ENG., M.I.MECH.E., A.M.I.E.D.
	E. L. Bibby, C.ENG., M.I.MECH.E., M.I.PROD.E., M.I.W.M.
	J. Braddock, A.M.INST.W.
	J. Brennand, C.ENG., M.I.PROD.E.
	R. H. Bryan, D.C.AE., C.ENG., A.F.R.AE.S.
	J. A. Burton, C.ENG., M.I.MECH.E., M.I.PROD.E.
	J. Caunce
	A. Dickson, A.S.E.
	A. Diggles
	L. J. Eccles
	B. T. Fitton, B.SC.
	R. Greenhalgh
	F. Griffiths, C.ENG., M.I.PROD.E.
	F. W. Grimshaw, C.ENG., M.I.MECH.E., M.I.E.D.
	R. Hatton, C.ENG., M.I.MECH.E., M.I.PROD.E.
	T. A. Hulton, A.M.I.M.I.
	G. E. S. Jepson, A.M.I.M.I.
	I. J. Lund, A.M.I.E.I.
	J. McRory
	B. P. Mann, M.I.M.I.
	R. H. Mason
	J. E. Meadows, C.ENG., M.I.MECH.E.
	A. B. Morrison, B.SC., C.ENG., M.I.MECH.E.
	A. Murray, C.ENG., M.I.PROD.E., M.I.MECH.E.

Lecturers and Assistant Lecturers (contd.)	J. R. Nuttall, M.SC.
	W. E. Pannell, A.M.INST.W.
	F. K. Pearson, A.I.R.T.E., A.M.I.M.I.
	G. Podmore, C.ENG., M.I.MECH.E., A.M.I.E.D.
	G. T. Ramsden
	W. H. Sharples, M.J.INST.E.
	F. Tattersall, C.ENG., M.I.MECH.E., M.I.PROD.E.
	M. A. Wahhab, B.A., B.SC., D.I.C., C.ENG., M.I.PROD.E., A.M.INST.FUEL.
	K. Walker
	F. Whelan, M.J.INST.E.
	R. Wood, C.ENG., M.I.MECH.E., M.I.PROD.E.
Technicians	J. H. Dickens (*Chief*)
	C. E. Dickens (*Senior*)
	W. E. Duxbury (*Senior*)
	R. C. Cookson
	K. Day
	B. Duckworth (*Technician-in-Charge, Owen Street Annexe*)
	D. B. Jones
	R. C. Leach
	J. St. Romaine
	J. E. Shires
	J. T. Slater
	M. J. Wade
	T. E. Dean (*Research*)
Storekeepers	A. H. Ormerod (*Storekeeper-in-Charge*)
	T. F. Guest
	L. Shiers

SANDWICH COURSES

Higher National Diploma in Production Engineering (Leaflet MPE 1/68).

Higher National Diploma in Mechanical Engineering (Leaflet MPE 2/68) with specialisation in Mechanical Engineering or Aero-Mechanical Engineering, or Mechanical Engineering with Structures.

Higher National Diploma in Mechanical Engineering (Industrial Design) (Leaflet MPE 2/68).

Chartered Engineer (C.Eng.). This course prepares students for the Part 2 examinations of the Council of Engineering Institutions (C.E.I.) together with endorsements to the above Diplomas.

PART-TIME COURSES

Higher National Certificate in Engineering with opportunity to specialise in one of the following fields: Aeronautics, Mechanical Engineering, Production Engineering, Engineering Design.

Post Higher National Certificate Course in Industrial Administration.

Post Higher National Certificate Course in Mechanical Engineering (Old Regulations) for exemption from the requirements of the Professional Engineering Institutions.

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.

General and Basic Engineering courses are also available.

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 does not 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.

The Department offers three-year Higher National Diploma courses which 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 or its equivalent are therefore advised to consult their employers with a view to seeking admission to a Higher National Diploma Course if they intend to seek professional status.

Students who hold Higher National Certificates should consult the Head of Department or the relevant Professional Institution for information regarding transitional regulations governing exemptions from C.E.I. examinations.

Department of Physics

Telephone: Preston 51831

Head of Department	To be appointed
Senior Lecturers	G. R. Marr, M.SC., A.INST.P.
	M. A. S. Sweet, B.SC., PH.D.
Lecturers	P. R. Bissell, B.SC., GRAD.INST.P.
	T. Davies, M.SC., A.INST.P.
	F. R. Dean, M.SC., A.INST.P.
	R. T. Egerton, B.SC.
	J. S. Fisher, B.SC.
	A. R. Howells, B.SC., A.INST.P.
	E. Webster, B.SC., PH.D.
Research Assistant	C. J. Wareing, GRAD.INST.P.
Technicians	A. M. Kent (*Senior*)
	R. R. Gray (*Research*)
	Mrs M. E. Brown
	V. Odehnal
	P. Floate (*Photographic*)

Department of Mathematics and Computer Studies

Telephone: Preston 51831

Head of Department	W. Woodcock, B.SC., F.I.M.A., M.B.C.S.
Senior Lecturers	J. S. Moorman, B.SC.
	J. D. Rimmer, B.SC., M.B.C.S.
Lecturers	J. Ashworth, M.SC.TECH., A.M.C.T., A.T.I.
	G. J. Blackledge, B.SC.
	A. Lewis, C.ENG., M.I.E.E.
	S. B. Lucas, B.SC.
	D. K. Monk, B.SC.
	A. Payne, B.SC.
	L. R. Peace, M.A., A.F.I.M.A.
	R. L. Pickering, M.SC.
	J. B. Wignall, B.A., A.F.I.M.A.
Computer Manager	F. Fowler
Operator/Programmer	M. Black
Punch Operator	Mrs C. M. Hoyle

Department of Physics
Department of Mathematics and Computer Studies

FULL-TIME AND SANDWICH COURSES

Graduateship of the Institute of Physics. A four-year sandwich course

Higher National Diploma in Applied Physics. A three-year sandwich course

Higher National Diploma in Computer Studies. A two-year full-time course.

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, for the Associateship of the Institute of Statisticians, for Licentiateship of the Institute of Mathematics and Its Applications, and Data Processing for Computer Users.

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 luminescence in compounds made from elements in groups II and VI. Accommodation includes well equipped research laboratories. The governing body of the College offers each year several Research Assistantships.

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.

Department of Physics
Department of Mathematics and Computer Studies

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 of Mathematics and Computer Studies is equipped with an I.C.L. 1901A computer, and full facilities are available for the production and processing of computer programs.

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

Service facilities to industry. The departments house 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. The Department of Mathematics and Computer Studies is able to offer advice and assistance to organisations which wish to consider the feasability of transferring the work of their data processing departments to a computerised system, and enquiries are welcomed.

Calendar

1969	Thursday, 11th September	General Staff Meeting
	ENROLMENT PERIOD	
	Thursday, 11th September	Enrolment, first day
	Friday, 12th September	Enrolment, second day
	Monday, 15th September	Enrolment, third day
	Tuesday, 16th September	Enrolment, last day
	Autumn Term (13 weeks)	
	Monday, 22nd September	All day and evening classes commence for the Autumn term
	Friday, 19th December	All departments close for Christmas after evening classes
	Spring Term (11 weeks)	
1970	Monday, 5th January	All classes re-open for the Spring term
	Tuesday, 10th February	Foundation Celebration and Address: all evening classes closed
	Friday, 20th March	All departments close for Easter after evening classes
	Summer Term (12 weeks)	
	Monday, 6th April	All classes re-open for the Summer term
	Friday, 22nd May	All departments close for Spring Holiday after evening classes
	Monday, 1st June	All classes re-open
	Friday, 3rd July	All classes close: end of term
	Friday, 10th July	Submission of reports: end of session

Admission to Courses and Examinations

The acceptance of a student into a course must have the approval of the Head of Department, and the students must produce satisfactory evidence that he has the necessary qualifications to enter the course. Generally, students under age 16 on the 1st September cannot be admitted.

Courses will be provided subject to adequate enrolment and within the limits of available teaching accommodation and staff. They may be discontinued at the discretion of the Principal at any time during the session should the number of students attending fall below a reasonable level.

Full-time and sandwich course students should make application well before the commencement of the session on the form obtainable from the Registrar. Part-time students should make application in person during the enrolment period.

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 that body.

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 categories C, B and A corresponding to the academic level of the course, in terms of introductory, intermediate, and advanced stages. The appropriate grading 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 who are age 16 and 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
Grade C	30	2	6	31	10	0
Grade B	42	2	6	43	10	0
Grades A2 and A1	75	2	6	76	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 £4 2s. 6d. to £33 10s. 0d. according to the grade and duration of the course. Actual fees are detailed in departmental prospectuses.

Part-time Courses	Students under age 18 on 1st September	Students age 18 and over on 1st September
	£ s. d.	£ s. d.
Gradde C	1 17 6	3 12 6
Gradde B	3 0 0	4 12 6
Graddes A2 and A1	5 2 6	6 2 6

RESIIDENTIAL GENERAL STUDIES COURSES

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

GRAANTS

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

OVEERSEAS STUDENTS

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

NOTTE TO LOCAL AUTHORITIES

Thee course grade category (A2 NP) in departmental prospectuses indicatees an advanced course which is not poolable under D.E.S. regulations. In rrespect of these courses the normal recoupment procedure will apply.

Enrolment

Students will be enrolled on the following days and during the times shown:

	morning	*afternoon*	*evening*
Thursday, 11th September	none	2.00 to 4.00	6.00 to 8.30
Friday, 12th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Monday, 15th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Tuesday, 16th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30

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. od. The busiest enrolment periods are in the evenings; students who can enrol during the morning or afternoon periods will 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.

Permission Vouchers

All students must obtain permission vouchers each year and present them at enrolment except (*a*) those normally resident in the County Borough of Preston, the administrative area of Lancashire County or the City of Manchester and (*b*) part-time students normally resident in the County Borough of Wigan.

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.

The Recreation 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, socieities, 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.

Student lodgings

The College Authorities prepare each year a register of householders and hotel keepers who are willing to offer lodging accommodation. This register is kept by the College Lodgings Officer, who initially approves and thereafter regularly inspects all registered accommodation.

Some accommodation is available in Preston and surrounding districts, but many students will have to be accommodated some distance from the College, possibly in Blackpool and Lytham. Students who are grant-aided will generally be assisted by their supporting Local Authorities if their necessary travelling expenses exceed the amount included in the grant.

Intending students should write to the College Lodgings Officer as soon as they receive confirmation of their acceptance into a course. Priority will be given to those students whose homes are 20 miles or more from the College.

The Library

Telephone: Preston 51831, ext 15

Librarian	A. Lawrence, A.L.A.
Assistant Librarians	Miss S. M. Brindle
	Miss E. Jenkins
Library Assistants	Mrs. J. E. Swarbrick
	Mrs I. M. Fuller

The College library is available to all students for reference purposes. 400 journals are now received in addition to the continuing expansion of the book stock. A set of British Standard Specifications is maintained, as also is a comprehensive set of bibliographic research works and a considerable number of indexing and abstracting publications.

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.

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

Computing Facilities

Telephone: Preston 51831, ext 43

Computer Manager	F. Fowler
Operator/Programmer	M. Black
Punch Operator	Mrs C. M. Hoyle

The College's computer configuration consists of an ICL1901A central processing unit of 16K words of core storage, two twin exchangeable disc stores, paper tape reader/punch, card reader, line printer and console typewriter which are housed, together with adequate data preparation equipment, in a specially designed suite of rooms in the Department of Mathematics and Computer Studies.

Computer appreciation and programming is taught in advanced courses which require these modern techniques. Short courses in various computer languages, and more extensive courses in data processing and systems analysis, are arranged throughout the session. Increasing demands are being made on the computer for research and consultancy work undertaken by the teaching staff of the College.

It is proposed to collaborate with local schools in introducing modern computing methods to Sixth Form pupils.

The computer will eventually be used as the focal point of specialist degree and diploma courses in computer studies.

The Computer Manager will be pleased to give advice to representatives of industrial or commercial undertakings who may be considering the use of a computer for their own needs.

Industrial Liaison Centre

Telephone: Preston 51831, ext 41

Industrial Liaison Officer G. A. Redhead, B.SC.
Secretary Mrs J. C. Horsley

Technological knowledge and innovation are progressing so rapidly that it is difficult for any one individual to keep himself up to date. Particular difficulties are felt by small and medium sized manufacturing firms, many of which would welcome information about the results of industrial research or would appreciate access to local and national sources of information relevant to their own particular problems.

To help firms of this kind the Ministry of Technology, in conjunction with selected Technical Colleges, has established a network of Industrial Liaison Centres with the specific intention of offering assistance with technical and management problems and of encouraging the use of modern techniques.

Industrial Liaison Centres are financed from public funds and no charge is made for advice offered. However, some individuals or organisations brought in to help (only at the firm's invitation) might expect to negotiate fees. Consultations will take place in the strictest confidence, and if solutions to particular problems are found these would not be revealed outside without the firm's consent.

Close co-operation between College and Industry is intended, and the Industrial Liaison Officer is a member of the College staff; he will be pleased to visit any firm regardless of whether problems exist or not.

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.
J. Montgomery, DIP.P.E.

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

P. F. Sanger, *President*
J. D. Callon, *Vice-President (Internal Affairs)*
K. N. Tolladay, *Vice-President (External Affairs)*
Miss J. A. Davies, *Vice-President (Female Students) and Secretary*
P. C. Johnson, *Student Treasurer*
A. G. Cottam, *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.

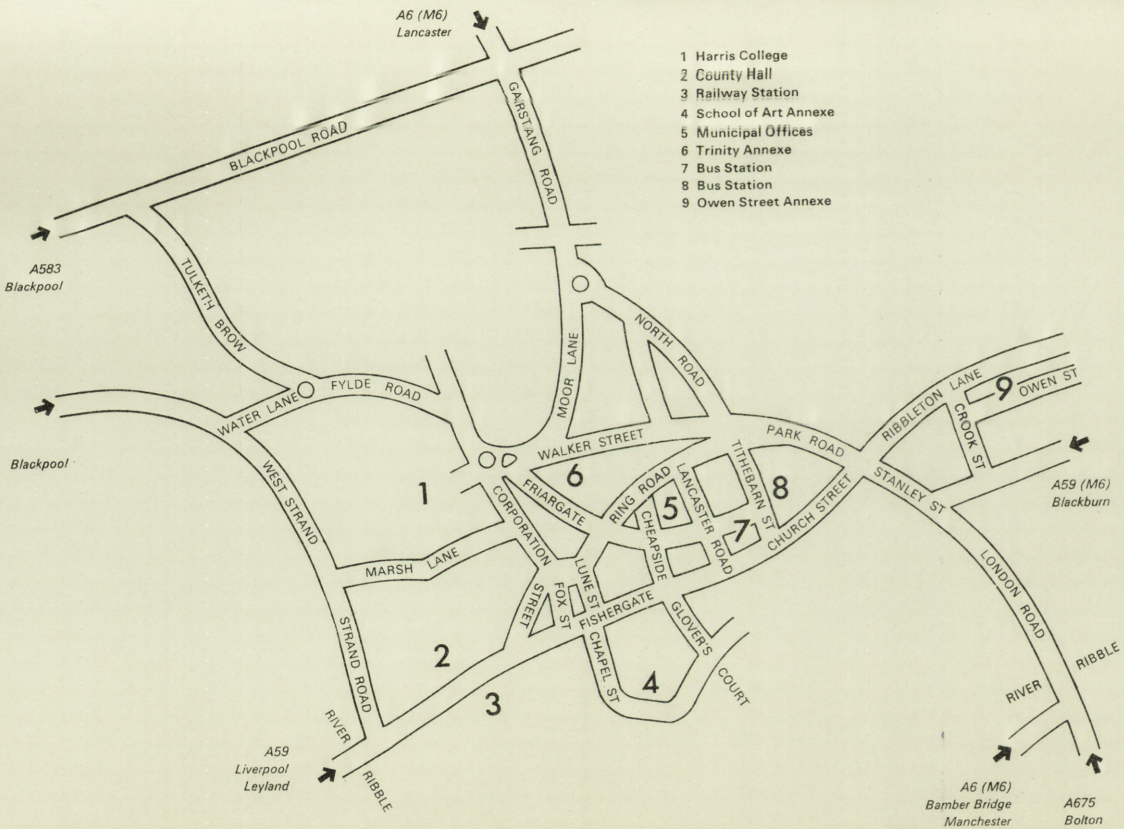
The Harris Students' Union Fund

The Students' Union in December 1966 established by deed a trust fund called the 'Harris Students' Union Fund.' They appointed four Trustees and invested in the fund a small sum of accumulated moneys. The fund has been registered as a charitable trust.

The fund is in two parts: capital moneys and revenue moneys. Both are invested by the Trustees and the annual interest from the total fund is paid to the Union as income to be expended on those of the Union's activities which 'are of an educational or otherwise charitable nature.' The capital moneys remain permanently in the fund, and as they are increased by donations they provide an increasing income to the Union.

It is intended to accumulate money in the 'revenue' section of the fund to be withdrawn at some future time for a major charitable project (such as the acquisition of property for the Union), and the trust deed prescribes that the Union may request the Trustees to sell investments and realise securities in this section of the fund to provide the outlay for such a project as is proper.

The total fund at present stands at approximately £1,000. It is in the interest of all students, present and future, to assist in augmenting it.


A6 (M6)
Lancaster
1 Harris College
2 County Hall
3 Railway Station
4 School of Art Annexe
5 Municipal Offices
6 Trinity Annexe
7 Bus Station
8 Bus Station
9 Owen Street Annexe
BLACKPOOL ROAD
GARSTANG ROAD
A583
Blackpool
TUKETH BROW
FYLDE ROAD
WATER LANE
Blackpool
MOOR LANE
NORTH ROAD
WALKER STREET
PARK ROAD
RIBBLETON LANE
OWEN ST
CROOK ST
A59 (M6)
Blackburn
WEST STRAND
FRIARGATE
RING ROAD
LANCASTER ROAD
TITHEBARN ST
CHURCH STREET
STANLEY ST
CORPORATION
CHEAPSIDE
MARSH LANE
LUNE ST
FOX ST
FISHERGATE
GLOVER'S COURT
CHAPEL ST
STRAND ROAD
LONDON ROAD
RIVER
RIBBLE
A59
Liverpool
Leyland
A6 (M6)
Bamber Bridge
Manchester
A675
Bolton

Harris College
School of Art and Design
Session 1969–70

Harris College, Corporation Street, Preston, Lancashire
Telephone: Preston 51831–7

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, M.M., O.B.E., J.P.

Vice-President: County Councillor T. V. Brown

Members:

Alderman J. Atkinson
Alderman H. Beaumont
Alderman Mrs D. M. Dewhurst, J.P.
Alderman Mrs R. Lytton
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker
Councillor Mrs K. E. Crozier
Councillor Mrs D. Smith

County Alderman J. Bradley, M.B.E., J.P.
County Alderman J. P. Ennis, J.P.
County Alderman Sir Fred Longworth (Deputy Lieutenant of Lancashire; Vice-Chairman of Lancashire County Council)
County Councillor C. W. Eastwood
County Councillor M. J. Fitzherbert-Brockholes, J.P.
County Councillor A. J. Whittall
County Councillor Mrs W. Winn
County Councillor G. Woods

F. D. Crowe, B.SC., C.ENG., F.R.AE.S.
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., 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.

Professor E. Roland Dobbs

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 chargeed with the promotion of research and the administration of research funds..

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

Members:
County Councillor T. V. Brown, *Vice-President of the Harris Council*
Dr P. R. Lancaster, *University of Bradford*
W. J. R. Merren, M.A., B.SC., *Director of Research, Pilkington Researeeh 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

The Harris College is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are nine teaching departments in the College: the School of Art and Design, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical and Electronic Engineering, Language and Social Studies, Mathematics and Computer Studies, Mechanical Civil and Production Engineering, and Physics. 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 increasing use by industrialists of the Industrial Liaison Centre is expected to widen the range of these activities.

The Academic Board

Subject to the ultimate responsibility of the Harris Council the responsibility for the planning, co-ordination, development and oversight of the academic work of the College is delegated to an Academic Board of 30 members which includes representatives from all departmental Boards of Studies, representatives of the teaching staff generally, and students' representatives. The Board has power to co-opt specialist advisers from Universities, Colleges and other bodies when appropriate.

The School of Art and Design

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. Full-time courses are offered in Dress Design and Manufacture, and in Graphic Design (with specialisation in either publicity design or typography) which lead to the

Licentiateship of the Society of Industrial Artists and Designers. The school 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.

Part-time day courses are arranged in Painting and Decorating, Printing and Photography.

The Departmental Board of Studies

The Board of Studies is directly responsible to the Academic Board, offering advice on the planning, co-ordination and development of the academic work of the Department. Members include senior teaching staff, representatives of the teaching staff of the department generally, and students' representatives.

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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.)
	D. M. Glen
	L. Penrice, A.R.C.A.
Lecturers and Assistant Lecturers	D. F. Bates, A.R.C.A.
	J. Ditchfield, F.I.B.D.
	R. V. Flitcroft
	S. Good, A.R.C.A.
	Miss P. Harrison, A.T.D.
	K. D. Hicks, A.R.C.A.
	S. Hogg, M.I.PTG.M.
	G. F. Hollingworth
	D. Q. King, M.A.(PITTSBURGH)
	A. E. Parkinson
	G. R. Parry
	A. D. Powell, CERT.R.A.S.
	I. T. Sharp
	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	J. Simm
Studio Assistants	G. Coxhead
	K. Mackenzie
Visiting Lecturers	W. Corbisley
	Mrs E. Evans
	G. Harrison
	C. Hogarth
	Mrs J. Liptrot
	N. Mason
	Mrs M. Murray
	D. Roberts
	S. Sartin, A.T.D.
	T. Shaw
	R. Stewart
	N. Tudor Thomas

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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.

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 in 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 (A2) (DES3923)

Course adviser: Mrs J. M. Thompson

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

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, textile technology.

College course: 22nd September to 8th May (29 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, history of art, history of costume, textile technology.

College course: 13th October to 1st May (25 weeks)

Examinations: internal

3rd Year. *Tutor:* Mrs M. G. Stockdale. *Curriculum:* dress design, accessories, millinery or jewellery, embroidery (hand and machine), methods of production, pattern cutting and garment assembly, specialist lectures, history of costume, private study and tutorials.

College course: 13th October to 3rd July (33 weeks)

Examinations: internal and L.S.I.A.

Qualification: Licentiateship of the Society of Industrial Artists and Designers

Graphic Design (A2) (DES3922)

Course adviser: Mr D. Glen

Graphic design covers a wide range of activities, and therefore students may take up one of two options designated 'A' and 'B', each of which provides for a degree of specialisation within the field as a whole. Students taking up option 'A' will find employment in advertising agencies, commercial design studios, the promotions departments of manufacturing and public service organisations, and in graphic design studios generally, including those of film and television companies. Students taking up option 'B' will, for the most part, find employment with printing and publishing houses, though some will work as typographic designers in advertising agencies, the promotions departments of manufacturing industries, etc.

Option 'A'

1st Year. *Tutor:* Mr D. Glen. *Curriculum:* communication (language), history of art and design, typographic theory, methods of graphic reproduction, production technology, visual communication theory, illustration and photography, typographic and graphic design.

College course: 22nd September to 8th May (29 weeks)

Examinations: internal

2nd Year. *Tutor:* Mr I. T. Sharp. *Curriculum:* communication (language), a second language, history of art and design, typographic theory, visual communication, production technology, statistics, marketing, drawing, design, photography, illustration.

College course: 13th October to 1st May (25 weeks)

Examinations: internal

3rd Year. *Tutor:* Mr G. F. Hollingworth. *Curriculum:* typographic theory, production technology, professional practice, visual communication studies, illustration, graphic design.

College course: 22nd September to 3rd July (36 weeks)

Examinations: internal and L.S.I.A.

Qualification: Licentiateship of the Society of Industrial Artists and Designers

Option 'B'

1st Year. *Tutor:* Mr D. Glen. *Curriculum:* communication (language), history of art and design, typographic theory, production technology, methods of graphic reproduction, business practice, visual communication theory, illustration and photography, typographic and graphic design.

College course: 22nd September to 8th May (29 weeks)

Examinations: internal

2nd Year. *Tutor:* Mr I. T. Sharp. *Curriculum:* communication (language). history of art and design, statistics, marketing, typographic theory, production technology, professional practice, visual communication studies, design, photography, illustration.

College course: 13th October to 1st May (25 weeks)

Examinations: internal

3rd Year. *Tutor:* Mr G. F. Hollingworth. *Curriculum:* typographic theory, production technology, professional practice, visual communication studies, illustration, design.

College course: 22nd September to 3rd July (36 weeks)

Examinations: internal and L.S.I.A.

Qualification: Licentiateship of the Society of Industrial Artists and Designers

Two-year Foundation Course in Art and Design (B) (DES3054)

Course adviser: Miss P. Harrison

This full-time course provides 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. The course will consist of 35 hours per week of study including 5 hours of supervised private study in the studio. The curriculum provides for a degree of specialisation in either Fine Art or Design.

Qualifications for entry: students must be not less than 16 years of age on the 1st September 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. *Tutor:* Mr A. D. Powell. *Curriculum:* English, history and appreciation of art and design, design analysis, basic design, drawing, photography, psychology of perception, science of colour and optics, biology, visual communication.

College course: 22nd September to 3rd July (36 weeks)

Examinations: internal

2nd Year. *Tutor:* Miss P. Harrison. *Curriculum:* two-dimensional design, three-dimensional design, drawing, craft projects, painting, photography and print-making or sculpture, history of art and design. English, short lecture courses on design analysis, visual communication, business studies.

College course: 22nd September to 3rd July (36 weeks)

Examinations: internal

Qualification: entry to Advanced Specialist Designers courses and to courses for the Diploma in Art and Design. In special circumstances students may apply to enter the Specialist Designers' Course at the end of the first year of the foundation course provided (*a*) they will be aged 18 by the 1st October of that year and (*b*) permission is given by the Course Adviser.

Basic Course in Printing (C) (DES1866)

Tutor: Mr S. Hogg

This is a full-time course for young people wishing to become printing trade apprentices. The course is accepted as equivalent to one year of apprenticeship and in subsequent years students proceed to part-time day and evening courses in either Composing Subjects or Letterpress Machine Printing. (See page 22). A total of 10 weeks is spent working in industry during the course.

Qualifications for entry: Boys hoping to obtain printing trade apprenticeships 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, since entry to the trade is strictly limited by agreements between the Trades Unions and Employers' Associations.

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

College course: 22nd September to 5th December; 5th January to 6th February; 16th February to 19th June (31 weeks)

Examinations: U.L.C.I. 279–1

Part-time Courses

General Certificate of Education in Art

Course adviser: Mr D. F. Bates

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)

'A' level (B) (DES1195)

Tutor: Mr S. Good

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

'O' level (C) (DES1193)

Tutor: Mr S. Good

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

Painters' and Decorators' Work: Craft Certificate (DES1622)

Course adviser: Mr J. Ditchfield

These courses prepare students for the examinations of the City and Guilds of London Institute. Students entering the Craft course after leaving school at age 16 may join the 1st Year of the course instead of the Introductory Year.

Introductory Year (C). *Tutor:* Mr R. V. Flitcroft. *Curriculum:* technology, drawing, workshop practice, English.

Attendance: one day and one evening per week

Examinations: U.L.C.I. 291–0

1st Year (C). *Tutor:* Mr R. V. Flitcroft. *Curriculum:* technology, design, workshop practice, drawing.

Attendance: one day and one evening per week

Examinations: U.L.C.I. 291–1

2nd Year (C). *Tutor:* Mr R. V. Flitcroft. *Curriculum:* technology, design craft science, workshop practice.

Attendance: one day and one evening per week

Examinations: U.L.C.I. 291–2

Qualification: Union of Lancashire and Cheshire Institutes' Certificate in Painters' and Decorators' Work

Painters' and Decorators' Work: Advanced Craft Certificate (DES123)

Course adviser: Mr J. Ditchfield

1st Year (B). *Curriculum:* design, craft science, workshop practice.

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

Examinations: internal

2nd Year (B). *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)

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

Painters' and Decorators' Work: Full Technological Certificate (A2 NP) (DES124)

Course adviser: Mr J. Ditchfield

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

Attendance: three evenings per week

Qualification: City and Guilds of London Institute's Full Technological Certificate in Painters' and Decorators' Work

General Photography (DES430)

Course adviser: Mr A. H. Thompson

A three-year course in general photography for trainee photographers wishing to obtain a recognised qualification.

1st Year (C). *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 (C). *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

3rd Year (B). *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: C.G.L.I. 344

Qualification: City and Guilds of London Institute's Certificate in General Photography

PRINTING COURSES

Course adviser: Mr S. Hogg

These courses prepare printing trade apprentices for the examinations of the City and Guilds of London Institute. There is an alternative full-time course for first year apprentices (see page 19).

Composing Subjects: Craft Certificate (DES1864)

Tutor: Mr G. R. Parry

1st Year (C). *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 (C). *Curriculum:* compositors' and letterpress machine work general theory, compositors' work theory, compositors' work practice, applied science, typographic design, English.

Attendance: one day and one evening per week

Examinations: U.L.C.I. 279–2

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

Attendance: one day and one evening per week

Examinations: U.L.C.I. 279–3

Qualification: Union of Lancashire and Cheshire Institutes' Certificate in Composing Subjects

Composing Subjects: Advanced Craft Certificate (DES531)

Tutor: Mr S. Hogg

1st Year (B). *Curriculum:* typographic design, composing theory, general printing theory, applied science, photography, practical composing, Monotype operation.

Attendance: one day and one evening per week

Examinations: internal

2nd Year (A2 NP). *Curriculum:* typographic design, composing theory, general printing theory, applied science, photography, practical composing, Monotype operation.

Attendance: one day and one evening per week

Examinations: C.G.L.I. 381 (Advanced Craft)

Qualification: City and Guilds of London Institute's Advanced Craft Certificate in Composing Subjects

Letterpress Machine Printing: Craft Certificate (DES273)

Tutor: Mr A. E. Parkinson

1st Year (C). *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 (C). *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 (B). *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 (Craft)

Qualification: City and Guilds of London Institute's Craft Certificate in Letterpress Machine Work

Recreational Courses

Course adviser: Mr D. F. Bates

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 (C)

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

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

Portrait Painting (C)

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

Attendance: one evening per week

Still Life Painting (C)

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

Attendance: one evening per week

Pottery (C)

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 (C)

Curriculum: design for jewellery and silversmithing, craft techniques.

Attendance: one or more evenings per week

Administrative Staff

Registrar	J. Barnacle, D.M.A., F.C.C.S.
Assistant Registrar	E. D. Hardman
Senior Clerks	Miss E. Stobbart (Examinations and Records)
	R. G. Walton (Finance and Accounts)
Secretary to the Principal	Miss F. M. Jones
Section Clerks	Mrs R. McNamara
	Mrs P. Tinsley
Clerks	Mrs A. Allen
	Miss N. B. Chapman
	Miss E. I. A. Buggy
	Mrs M. Caunce
	Mrs S. Cooper
	Mrs E. V. Crook
	Mrs E. Gower
	Mrs J. Halstead
	Mrs M. J. Livesey
	Mrs C. Matthewson
	Miss J. H. Slee
	Mrs M. Taylor
	Miss J. K. Watt
	Mrs J. C. Horsley (Secretary to the Industrial Liaison Officer)
	Mrs. K. Howarth (Clerk to the Child Care Tutors)
Telephonists	Mrs P. B. Bamford
	Miss M. Eccles
Cashiers	Mrs R. Doherty
	Mrs M. Marland
College Lodgings Officer	Mrs P. M. Cross
Equipment Maintenance	E. Goodson (Chief Engineer)
	E. Davies
	P. Young
Refectory	Mrs M. Hamlyn White (Catering Manageress)
	Miss E. Grunshaw (Assistant Manageress)

Custodian of Premises	W. H. Hatton, M.B.I.C.SC.
Caretakers	L. Whalley (Avenham premises)
	L. Posner (Owen Street premises)
Assistant Caretakers	V. S. Baron
	J. C. Christian
	C. T. Day
	R. A. McConochie
	H. Mee
	H. Nicholls
	E. Parker
	W. Pullan
	T. C. Ritchie
	W. Sanders
	R. Seed
	J. Spencer
Groundsman	G. Cowell
Watchmen	C. Ashton
	S. Dixon
	T. W. Gregson
	A. E. Manley
	F. Miller
	F. E. Oldham
	J. Smith

Calendar

1969	Thursday, 11th September	General Staff Meeting
	ENROLMENT PERIOD	
	Thursday, 11th September	Enrolment, first day
	Friday, 12th September	Enrolment, second day
	Monday, 15th September	Enrolment, third day
	Tuesday, 16th September	Enrolment, last day
	Autumn Term (13 weeks)	
	Monday, 22nd September	All day and evening classes commence for the Autumn term
	Friday, 19th December	All departments close for Christmas after evening classes
	Spring Term (11 weeks)	
1970	Monday, 5th January	All classes re-open for the Spring term
	Tuesday, 10th February	Foundation Celebration and Address: all evening classes closed
	Friday, 20th March	All departments close for Easter after evening classes
	Summer Term (12 weeks)	
	Monday, 6th April	All classes re-open for the Summer term
	Friday, 22nd May	All departments close for Spring Holiday after evening classes
	Monday, 1st June	All classes re-open
	Friday, 3rd July	All classes close: end of term
	Friday, 10th July	Submission of reports: end of session

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

The acceptance of a student into a course must have the approval of the Head of Department. Generally, students under age 16 on the 1st September cannot be admitted.

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

Courses will be provided subject to adequate enrolment and within the limits of available teaching accommodation and staff. They may be discontinued at the discretion of the Principal at any time during the session should the number of students attending fall below a reasonable level.

Full-time and Sandwich Course Students

Application to join a course should be made before the commencement of session on the form obtainable from the Registrar. Students accepted into full-time or sandwich courses must undertake the formal enrolment procedure (described on page 32) either on one of the four advertised enrolment days or during the first two days of the course at a time arranged by the Head of Department.

Each full-time and sandwich course student will be placed under the supervision of a Course Tutor who will supervise the student's progress throughout the session and to whom the student may refer for advice about his or her course of study.

GRANTS: most students will qualify for a grant from a Local Education Authority, and it is the student's responsibility to make application for this to the Local Education Authority of the County or County Borough Council within whose area he permanently resides. Grants are assessed according to the financial position of the student, taking account of parental income and other circumstances. Generally, grants cover tuition fees (this payment is normally made direct to the College), an allowance for books, materials, examination fees, and in the case of students in advanced courses a maintenance grant (see also page 31).

Part-time Students

Intending students wishing for advice should write to the Head of Department. Application to join a course should be made in person during the enrolment period (see page 32).

Overseas Students

An overseas student wishing to join a full-time or sandwich course must complete the special application form obtainable from the Registrar. This form, when completed, should be sent by the student to the student authority in his own country; this authority will forward the form to the College through its London office.

A Certificate of Competence in the English language will be required, stating that the applicant has sufficient proficiency in written and spoken English to be able to follow a course of study conducted in English.

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 course of advanced 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 67% 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 set work, 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 set 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 noted with the name(s) of the subject(s) in which he has thus distinguished himself.

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. The only students excused paying the tuition fee at the time of enrolment are:

(*a*) full-time and sandwich course students who are to be grant-aided by a Local Education Authority; documentary evidence will be required of the offer of a grant, and

(*b*) those whose employers undertake to pay the tuition fees on their behalf; they must produce at enrolment a letter from the employer to that effect.

Fees are graded into three categories corresponding to the academic level of the course, namely:

Grade C: work of an introductory character, for example leading to G.C.E. Ordinary level.

Grade B: work of an intermediate character, above the level of Grade C and leading for example to Ordinary National Diplomas or Certificates and G.C.E. Advanced level.

Grades A2 and A1: work of an advanced character, above the level of Grade B and leading for example to Higher National Diplomas or Certificates, final professional qualifications, degrees.

The grade of each course is shown in brackets after the course title, or after the year of the course where a full course covers more than one grade of work.

Part-time students from the administrative counties of Lancashire and Westmorland and all students from Wigan County Borough who are age 16 and under age 18 on the 1st September will be enrolled without payment of the tuition fee.

NOTE TO LOCAL AUTHORITIES

The course grade designation (A2 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.

Full-time and Sandwich Courses		Students under age 18 on 1st September £ s. d.	Students age 18 and over on 1st September £ s. d.
Specialist Designers' Courses:	1st year	50 2 6	51 10 0
	2nd year		51 10 0
	3rd year		76 10 0
Two-year Foundation Course:		42 2 6	43 10 0
Basic Course in Printing:		30 2 6	

Part-time Courses	Students under age 18 on 1st September £ s. d.	Students age 18 and over on 1st September £ s. d.
Grade C	1 17 6	3 12 6
Grade B	3 0 0	4 12 6
Grades A2 and A1	5 2 6	6 2 6

RESIDENTIAL GENERAL 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 period of a course, or where only partial financial support is offered by the employer.

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.

Enrolment

Students will be enrolled on the following days and during the times shown:

	morning	*afternoon*	*evening*
Thursday, 11th September	none	2.00 to 4.00	6.00 to 8.30
Friday, 12th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Monday, 15th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Tuesday, 16th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30

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 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.

Permission Vouchers

All students must obtain permission vouchers each year and present them at enrolment except (*a*) those normally resident in the County Borough of Preston or in the administrative area of Lancashire County and (*b*) part-time students normally resident in the County Borough of Wigan.

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

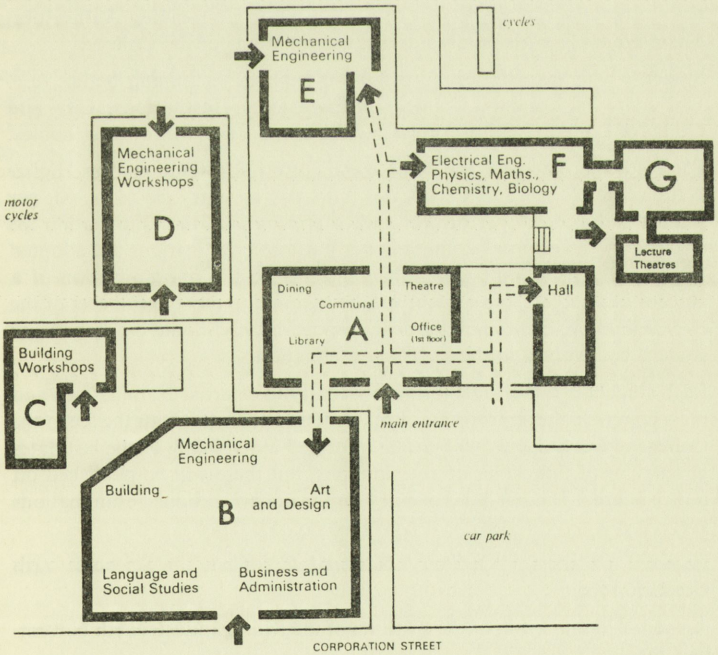
School of Art and Design (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52)

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

F BLOCK
Chemistry and Biology Department (F37)
Electrical and Electronic Engineering Department (F1, F8, F9 and F10)
Physics Department, Mathematics and Computer Studies 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.



Students will not be permitted to attend classes until they have completed the enrolment procedure. 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.

Examinations

ENTRY TO 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.* University of London, Council of Engineering Institutions, City and Guilds of London Institute) 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 and 15s. od. per project and, if appropriate, 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 Ordinary National Certificate in Sciences: 24th October, 1969

Associate Membership of the Institute of the Motor Industry: 7th November, 1969

Assessed papers for National Diplomas and Certificates, including endorsements: 19th December, 1969

London University B.Sc. (Sociology): 16th January, 1970

Assessed papers for Ordinary National Certificate in Business Studies: 30th January, 1970

Union of Lancashire and Cheshire Institutes, series B and C: 30th January 1970

City and Guilds of London Institute: 6th February, 1970

General Certificate of Education papers (N.U.J.M.B.): 6th February, 1970

Pitmans: 20th March, 1970

Training Council for Teachers of the Mentally Handicapped: 20th March, 1970

Royal Society of Arts, Summer Series: 1st May, 1970

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.

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. Roadway and delivery areas 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.

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.

The Recreation 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 11-45 a.m. 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.

In the interests of hygiene staff and students are requested to observe any restrictions on smoking in the dining room.

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.

STUDENT LODGINGS

The College Authorities prepare each year a register of householders and hotel keepers who are willing to offer lodging accommodation. This register is kept by the College Lodgings Officer, who initially approves and thereafter regularly inspects all registered accommodation.

Some accommodation is available in Preston and surrounding districts, but many students will have to be accommodated some distance from the College, possibly in Blackpool and Lytham. Students who are grant-aided will generally be assisted by their supporting Local Authorities if their necessary travelling expenses exceed the amount included in the grant.

Intending students should write to the College Lodgings Officer as soon as they receive confirmation of their acceptance into a course. Priority will be given to those students whose homes are 20 miles or more from the College.

CHANGES 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 home or lodgings 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 Department. 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 outside the main College premises. These classes are indicated by room number prefixes as follows in the several College documents dealing with teaching accommodation:

Av	School of Art Annexe, Avenham Lane, Preston
BTU	Blood Transfusion Unit, Lancaster
NWGB	North Western Gas Board Training Centre, Moor Lane, Preston
On	Owen Street Annexe, off Crook Street, Ribbleton Lane, Preston
PRI	Preston Royal Infirmary, Deepdale Road, Preston
TH	G.P.O. Telephone House, Moor Lane, Preston
Ty	Trinity County Secondary School, Great Shaw Street, Preston

SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of socieities 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.

The Library

Telephone: Preston 51831, ext 15

Librarian	A. Lawrence, A.L.A.
Assistant Librarians	Miss S. M. Brindle
	Miss E. Jenkins
Library Assistants	Miss J. E. Bamford
	Mrs I. M. Fuller

The College library is available to all students for reference purposes. 400 journals are now received in addition to the continuing expansion of the book stock. A set of British Standard Specifications is maintained, as also is a comprehensive set of bibliographic research works and a considerable number of indexing and abstracting publications.

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.

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.

Computing Facilities

Telephone: Preston 51831, ext 43

Computer Manager	F. Fowler
Operator/Programmer	Vacancy
Punch Operator	Mrs C. M. Hoyle

The College's computer configuration consists of an ICL1901 Acentrall processing unit of 16K words of core storage, two twin exchangeable disc stores, paper tape reader/punch, card reader, line printer and console typewriter which are housed, together with adequate data preparation equipment, in a specially designed suite of rooms in the Department of Mathematics and Computer Studies.

Computer appreciation and programming is taught in advanced courses which require these modern techniques. Short courses in various computer languages, and more extensive courses in data processing and systems analysis, are arranged throughout the session. Increasing demands are being made on the computer for research and consultancy work undertaken by the teaching staff of the College.

It is proposed to collaborate with local schools in introducing modern computing methods to Sixth Form pupils.

The computer will eventually be used as the focal point of specialist degree and diploma courses in computer studies.

The Computer Manager will be pleased to give advice to representatives of industrial or commercial undertakings who may be considering the use of a computer for their own needs.

Industrial Liaison Centre

Telephone: Preston 51831, ext 41

Industrial Liaison Officer G. A. Redhead, B.SC.
Secretary Mrs J. C. Horsley

Technological knowledge and innovation are progressing so rapidly that it is difficult for any one individual to keep himself up to date. Particular difficulties are felt by small and medium sized manufacturing firms, many of which would welcome information about the results of industrial research or would appreciate access to local and national sources of information relevant to their own particular problems.

To help firms of this kind the Ministry of Technology, in conjunction with selected Technical Colleges, has established a network of Industrial Liaison Centres with the specific intention of offering assistance with technical and management problems and of encouraging the use of modern techniques.

Industrial Liaison Centres are financed from public funds and no charge is made for advice offered. However, some individuals or organisations brought in to help (only at the firm's invitation) might expect to negotiate fees. Consultations will take place in the strictest confidence, and if solutions to particular problems are found these would not be revealed outside without the firm's consent.

Close co-operation between College and Industry is intended, and the Industrial Liaison Officer is a member of the College staff; he will be pleased to visit any firm regardless of whether problems exist or not.

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.
	J. Montgomery, DIP.P.E.
Visiting Lecturers	J. H. Dickens
	R. Hindle
	A. Lewis
	R. Poole
	B. Strettle, B.J.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.

SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's nine 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 17s. 6d. if under age 18 on the 1st September or £3 12s. 6d. if age 18 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

P. F. Sanger, *President*
J. D. Callon, *Vice-President (Internal Affairs)*
K. N. Tolladay, *Vice-President (External Affairs)*
Miss J. A. Davies, *Vice-President (Female Students) and Secretary*
P. C. Johnson, *Student Treasurer*
A. G. Cottam, *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.

The Harris Students' Union Fund

The Students' Union in December 1966 established by deed a trust fund called the 'Harris Students' Union Fund.' They appointed four Trustees and invested in the fund a small sum of accumulated moneys. The fund has been registered as a charitable trust.

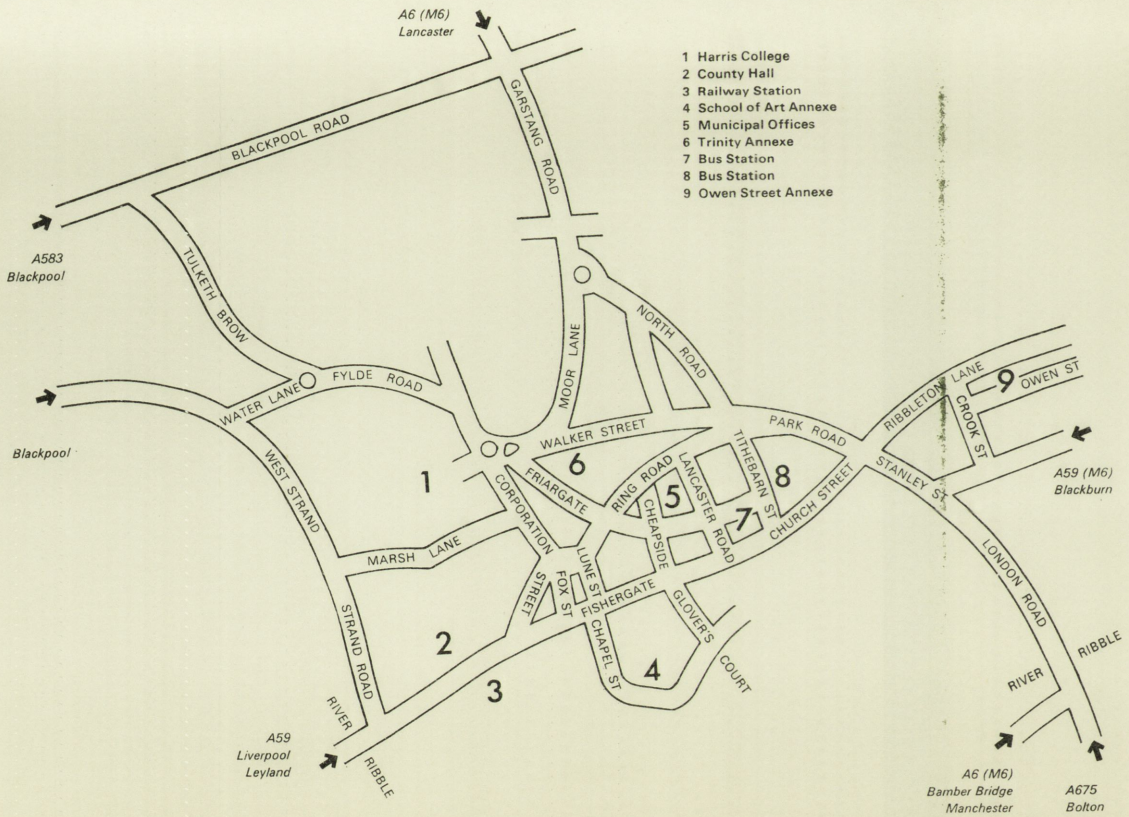
The fund is in two parts: capital moneys and revenue moneys. Both are invested by the Trustees and the annual interest from the total fund is paid to the Union as income to be expended on those of the Union's activities which 'are of an educational or otherwise charitable nature.' The capital moneys remain permanently in the fund, and as they are increased by donations they provide an increasing income to the Union.

It is intended to accumulate money in the 'revenue' section of the fund to be withdrawn at some future time for a major charitable project (such as the acquisition of property for the Union), and the trust deed prescribes that the Union may request the Trustees to sell investments and realise securities in this section of the fund to provide the outlay for such a project as is proper.

The total fund at present stands at approximately £1,000. It is in the interest of all students, present and future, to assist in augmenting it.

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. 6d., 32s. 6d. and 8s. 11d. each respectively.


A6 (M6)
Lancaster
1 Harris College
2 County Hall
3 Railway Station
4 School of Art Annexe
5 Municipal Offices
6 Trinity Annexe
7 Bus Station
8 Bus Station
9 Owen Street Annexe
BLACKPOOL ROAD
GARSTANG ROAD
A583
Blackpool
TULKETH BROW
FYLDE ROAD
WATER LANE
Blackpool
MOOR LANE
NORTH ROAD
WALKER STREET
PARK ROAD
RIBBLETON LANE
CROOK ST
OWEN ST
A59 (M6)
Blackburn
WEST STRAND
CORPORATION
FRIARGATE
RING ROAD
CHEAPSIDE
LANCASTER ROAD
TITHEBARN ST
CHURCH STREET
STANLEY ST
MARSH LANE
LUNE ST
FOX ST
FISHERGATE
GLOVER'S COURT
CHAPEL ST
STRAND ROAD
LONDON ROAD
RIVER
RIBBLE
A59
Liverpool
Leyland
A6 (M6)
Bamber Bridge
Manchester
A675
Bolton

Harris College
Department of Building
Session 1969–70

Harris College, Corporation Street, Preston, Lancashire
Telephone: Preston 51831–7

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, M.M., O.B.E., J.P.

Vice-President: County Councillor T. V. Brown

Members:

Alderman J. Atkinson
Alderman H. Beaumont
Alderman Mrs D. M. Dewhurst, J.P.
Alderman Mrs R. Lytton
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker
Councillor Mrs K. E. Crozier
Councillor Mrs D. Smith

County Alderman J. Bradley, M.B.E., J.P.
County Alderman J. P. Ennis, J.P.
County Alderman Sir Fred Longworth (Deputy Lieutenant of Lancashire; Vice-Chairman of Lancashire County Council)
County Councillor C. W. Eastwood
County Councillor M. J. Fitzherbert-Brockholes, J.P.
County Councillor A. J. Whittall
County Councillor Mrs W. Winn
County Councillor G. Woods

F. D. Crowe, B.SC., C.ENG., F.R.AE.S.
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., 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.

Professor E. Roland Dobbs

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 chargeed with the promotion of research and the administration of research funds.

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

Members:
County Councillor T. V. Brown, *Vice-President of the Harris Council*
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

The Harris College is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are nine teaching departments in the College: the School of Art and Design, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical and Electronic Engineering, Language and Social Studies, Mathematics and Computer Studies, Mechanical Civil and Production Engineering, and Physics. 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 increasing use by industrialists of the Industrial Liaison Centre is expected to widen the range of these activities.

The Academic Board

Subject to the ultimate responsibility of the Harris Council the responsibility for the planning, co-ordination, development and oversight of the academic work of the College is delegated to an Academic Board of 30 members which includes representatives from all departmental Boards of Studies, representatives of the teaching staff generally, and students' representatives. The Board has power to co-opt specialist advisers from Universities, Colleges and other bodies when appropriate.

The Department of Building

The Department of Building provides courses leading to the Ordinary and Higher National Diplomas in Building, 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.

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

The Departmental Board of Studies

The Board of Studies is directly responsible to the Academic Board, offering advice on the planning, co-ordination and development of the academic work of the Department. Members include senior teaching staff, representatives of the teaching staff of the department generally, and students' representatives.

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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 Lecturers	W. H. Roberts, A.I.O.B., A.B.S.I., A.I.C.W., F.I.B.I.C.C.
	T. M. Ryan, A.R.I.C.S., A.I.Q.S.
Lecturers and Assistant Lectures	R. Abrahams, A.M.INST.W.H.S.
	W. Bell
	S. R. Cardwell, A.I.A.S., A.I.O.B.
	G. Cheetham
	B. Coyne
	T. H. Crisp, L.I.O.B., M.I.W.H.S.
	J. Cross, A.B.I.C.C.
	M. Eyre
	W. S. Hunter, A.I.O.B.
	L. J. Pulford, M.R.S.H., M.R.P.A.
Technicians	W. A. Crossley
	B. H. Lush
Stewards	R. David
	J. Swarbrick

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Higher National Diploma in Building (A2) (DES1084)

Course adviser: Mr T. M. Ryan

A three-year sandwich course providing education and training for careers with professional status in the construction industry and allied professions. In each of the first and second years students will spend two terms in full-time study at the College, followed by up to five months in gaining practical experience of site and/or office work. The third year will consist entirely of full-time study at the College.

Qualifications for entry: students must be not less than 18 years of age by the end of the first term of the course and should possess:

(*a*) four G.C.E. subjects including mathematics or applied mathematics or physics at Advanced level (an alternative Advanced level subject may be accepted provided that both mathematics and physics have been passed at the Ordinary level), or (*b*) an Ordinary National Diploma in Building, or (*c*) an Ordinary National Certificate in Building with appropriate endorsements.

1st Year. *Tutor:* Mr T. M. Ryan. *Curriculum:* selected subjects, dependent on entry qualifications, taken from: building technology, science of building materials, theory of structures, land surveying, economics, introduction to law, mathematics and statistics, accounting and office routines, a foreign language and general studies.

College course: 22nd September to 17th April (26 weeks)

Examinations: internal

2nd Year. *Curriculum:* selected subjects taken from: building technology, science of building materials, design of structural elements, builders quantities, history of building and structure of the industry, appreciation of architectural design, computer appreciation and programming, principles of management, a foreign language and general studies.

College course: (26 weeks)

Examinations: internal

3rd Year. *Curriculum:* building technology, builders quantities, estimatting, specifications, building services, economics, law, management in practice and general studies.

College course: (34 weeks)

Examinations: internal, externally assessed

Qualification: Higher National Diploma in Building

Ordinary National Diploma in Building (B) (DES1055)

Course adviser: Mr W. H. Roberts

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 five months in gaining practical experience of site and/or office work. The second session will consist of full-time study at the College.

Qualification 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. Applicants must have reached the age of 16 on the 1st September.

1st Year. *Tutor:* Mr W. H. Roberts. *Curriculum:* technology of construction, related studies, drawing office practice, elements of surveying, science and properties of materials, mechanics, mathematics, general studies, physical education.

College course: 22nd September to 17th April (26 weeks)

Examinations: internal

2nd Year. *Tutor:* Mr W. H. Roberts. *Curriculum:* technology of construction, materials, structures, measurement of building work, economics, accounting, law, science, mathematics, general studies, physical education.

College course: 22nd September to 3rd July (36 weeks)

Examinations: internal, externally assessed

Qualification: Ordinary National Diploma in Building

Pre-Diploma in Building (C) (DES1193)

Tutor: Mr W. Bell. 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.

College course: 22nd September to 19th June (34 weeks)

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

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

GAS SERVICE COURSES

Course adviser: Mr 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 26 for part-time day courses.

Gas Fitting, Intermediate (DES11)

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

College course: nine periods between 18th August and 12th June (116 weeks in all)

Examinations: internal

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

College course: Group A: 10 periods between 14th July and 1st May (16 weeks in all)

Group B: 10 periods between 28th July and 8th May (16 weeks in all)

Examinations: C.G.L.I. 13 (Intermediate)

Qualification: City and Guilds of London Institute's Intermediate Certificate in Gas Fitting

Gas Fitting, Final (A2 NP) (DES12)

Curriculum: theory and practice, related subjects, calculations, science, geometry, general studies.

College course: Group A: 10 periods between 14th July and 1st May (16 weeks in all)

Group B: 10 periods between 28th July and 8th May (16 weeks in all)

Examinations: C.G.L.I. 13 (Final)

Qualification: City and Guilds of London Institute's Final Certificate in Gas Fitting

Gas Utilisation, Intermediate (B) (DES9)

Tutor: Mr N. B. Tindale

Curriculum: theory of gas utilisation for domestic purposes, with related calculations, science and drawing.

College course: eight periods between 18th August and 5th June (8 weeks in all)

Examinations: C.G.L.I. 12 (Intermediate in Domestic Gas Utilisation)

Qualification: City and Guilds of London Institute's Intermediate Certificate in Gas Utilisation

Part-time Day Courses

Higher National Certificate in Building (A2) (DES1063)

Course adviser: Mr W. H. Roberts

A two-year course leading to the award of the Higher National Certificate and to Institute of Building 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:* Mr W. H. Roberts. *Curriculum:* technology of construction, services and equipment, measurement and economics.

Attendance: one day and two evenings per week

Examinations: internal

2nd Year. *Tutor:* Mr T. M. Ryan. *Curriculum:* technology of construction, services and equipment, measurement and economics.

Attendance: one day and two evenings per week

Examinations: internal, externally assessed

Qualification: the Higher National Certificate in Building

Construction Technicians' Certificate

Course adviser: Mr 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 1st year of Part II is normally from the second year of Part I, 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.

Part I (DES382)

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

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

Attendance: one day and one evening per week

Examinations: C.G.L.I. 314 (Part I)

Qualification: City and Guilds of London Institute's Construction Technicians' Certificate, Part I

Part II (DES381)

1st Year (B). *Tutor:* Mr 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 measurement of building work.

Attendance: one day and one evening per week

Examinations: internal

2nd Year (A2 NP). *Tutor:* Mr 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; measurement of building work.

Attendance: one day and one evening per week

Examinations: C.G.L.I. 314 (Part II)

Qualification: City and Guilds of London Institute's Construction Technicians' Certificate, Part II

Full Technological Certificate in Building Crafts (A2 NP) (DES352)

Tutor: Mr 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, building calculations and building science

Qualifications for entry: the minimum requirement is a C.G.L.I. Craft Certificate

Curriculum: study of the fundamental principles of construction techniques used in building, related science and calculations.

Attendance: one day and one evening per week

Examinations: C.G.L.I. 291

Qualification: City and Giulds of London Institute's Full Technological Certificate in Building Crafts

Pre HNC Bridging Course (B) (DES3254)

Tutor: Mr W. S. Hunter

A one-year course for holders of the Full Technological Certificate in Building Crafts wishing to extend their qualifications to become eligible for entry to the Higher National Certificate in Building course.

Curriculum: technology of construction, science, mathematics

Attendance: one day and one evening per week

Examinations: internal, externally assessed

General Course in Construction (C) (DES1620)

Tutor: Mr W. Bell

A one-year special course for students who will ultimately 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 days and one evening per week

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

Qualification: the U.L.C.I. General Course in Construction Certificate. Note: to be elibigle 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 another of these subjects provided that science is included at either pass or credit level.

Institute of Works and Highways Superintendents

Course adviser: Mr R. Abrahams

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).

Intermediate (B) (DES1650)

1st Year. *Tutor:* Mr R. Abrahams. *Curriculum:* technology of carriageway and footway construction with related science, calculations, geometry and construction drawing.

Attendance: one day per week

2nd Year. *Tutor:* Mr R. Abrahams. *Curriculum:* technology of carriageway and footway construction with related science, calculations, geometry and construction drawing.

Attendance: one day per week

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

Attendance: one day per week

Examinations: C.G.L.I. 99 and I.W.H.S. Intermediate in Highways Construction and Maintenance

Final (A2 NP) (DES1656)

Tutor: R. Abrahams.

Curriculum: technology of carriageway and footway construction, maintenance, safety and administration, law, supervision, estimating, office routine.

Attendance: one day per week

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

Qualification: Associate of the Institute of Works and Highways Superintendents

BUILDING CRAFTS COURSES

Course advisers: Messrs. T. H. Crisp (Brickwork), J. Cross (Carpentry and Joinery), and 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 (DES116)

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

Attendance: one day and one evening per week

Examinations: C.G.L.I. 82 (Craft)

Qualification: City and Guilds of London Institute's Craft Certificate in Brickwork

Brickwork: Advanced Craft Certificate (DES117)

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

Attendance: one day and one evening per week

2nd Year (A2 NP). *Tutor:* Mr T. H. Crisp. *Curriculum:* technology and practice of brickwork with related science, calculations, geometry and construction drawing, related studies.

Attendance: one day and one evening per week

Examinations: C.G.L.I. 82 (Advanced Craft)

Qualification: City and Guilds of London Institute's Advanced Craft Certificate in Brickwork

Carpentry and Joinery: Craft Certificate (DES111)

1st Year (C). *Tutor:* Mr M. Eyre. *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 (C). *Tutor:* Mr G. Cheetham. *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 (B). *Tutor:* Mr J. Cross. *Curriculum:* technology and practice of carpentry and joinery work with related science, calculations, geometry and construction drawing, related studies.

Attendance: one day and one evening per week

Examinations: C.G.L.I. 80 (Craft)

Qualification: City and Guilds of London Institute's Craft Certificate in Carpentry and Joinery

Carpentry and Joinery: Advanced Craft Certificate (DES112)

1st Year (B). *Tutor:* Mr J. Cross. *Curriculum:* technology and practice of carpentry and joinery work with related science, calculations, geometry and construction drawing, related studies.

Attendance: one day and one evening per week

2nd Year (A2 NP). *Tutor:* Mr J. Cross. *Curriculum:* technology and practice of carpentry and joinery work with related science, calculations, geometry and construction drawing, related studies.

Attendance: one day and one evening per week

Examinations: C.G.L.I. 80 (Advanced Craft)

Qualification: City and Guilds of London Institute's Advanced Craft Certificate in Carpentry and Joinery

Plumbers' Work: Craft Certificate (DES125)

1st Year (C). *Tutor:* Mr 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

2nd Year (C). *Tutor:* Mr 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 (B). *Tutor:* Mr L. J. Pulford. *Curriculum:* technology and practice of plumbers' work with related science, calculations, geometry and construction drawing, related studies.

Attendance: one day and one evening per week

Examinations: C.G.L.I. 86 (Craft)

Qualification: City and Guilds of London Institute's Craft Certificate in Plumbers' Work

Plumber's Work: Advanced Craft Certificate (DES126)

1st Year (B). *Tutor:* Mr B. Coyne. *Curriculum:* technology and practice of plumbers' work in water supply and hydraulics, hot-water supply and heating, ventilation, sanitation, drainage, materials, specifications, related studies.

Attendance: one day and one evening per week

Examinations: internal

2nd Year (A2 NP). *Tutor:* Mr L. J. Pulford. *Curriculum:* technology and practice of plumbers' work in water supply and hydraulics, hot-water supply and heating, ventilation, sanitation, drainage, materials, specifications, related studies.

Attendance: one day and one evening per week

Examinations: C.G.L.I. 86 (Advanced Craft)

Qualification: City and Guilds of London Institute's Advanced Craft Certificate in Plumbers' Work

Gas Utilisation (B) (DES10)

Tutor: Mr N. B. Tindale

A one-year course for the study of industrial and commercial gas utilisation

Curriculum: theory of gas utilisation for industrial and commercial purposes, related calculations and science.

Attendance: one day per week

Examinations: C.G.L.I. 12 (Final in Commercial and Industrial Gas Utilisation)

Qualification: City and Guilds of London Institute's Final Certificate in Commercial and Industrial Gas Utilisation

Higher National Certificate in Building, Endorsement Subjects (A2)

Tutor: Mr T. M. Ryan

A one-year course for holders of the Higher National Certificate (or Diploma) in Building who require to qualify for exemption from the Final (Part I) Examination of the Institute of Building.

Curriculum: law (DES1119), economics of industry (DES1127), estimating (DES1118)

Attendance: one evening per week per subject

Examinations: internal, externally assessed

Full Technological Certificate in Building Crafts (A2 NP) (DES352)

Tutor: Mr 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 building science.

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

Attendance: three evenings per week

Examinations: C.G.L.I. 291

Qualification: The City and Guilds of London Institute's Full Technological Certificate in Building Crafts

Carpentry and Joinery: Craft Certificate (DES111)

Tutor: Mr J. Cross

3rd Year (B). 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 a 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. 80 (Craft)

Qualification: City and Guilds of London Institute's Craft Certificate in Carpentry and Joinery

Carpentry and Joinery: Advanced Craft Certificate (DES112)

Course adviser: Mr J. Cross

A three-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 (B). *Tutor:* Mr 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 (B). *Tutor:* Mr J. Cross. *Curriculum:* technology and practice of carpentry and joinery work with related science calculations, geometry and construction drawing.

Attendance: three evenings per week

3rd Year (A2 NP). *Tutor:* Mr 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. 80 (Advanced Craft)

Qualification: City and Guilds of London Institute's Advanced Craft Certificate in Carpentry and Joinery

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: Mr 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, commencing on the 24th October, 1969. If there is sufficient demand the course will be repeated, commencing on the 23rd January, 1970.

Metrication for Builders

Course organiser: Mr T. M. Ryan

A course of six evening lectures for builders, commencing on Tuesday, the 6th January, 1970. Topics covered will include interpretation of architects' drawings and bills of quantities in metric units.

Administrative Staff

Registrar	J. Barnacle, D.M.A., F.C.C.S.
Assistant Registrar	E. D. Hardman
Senior Clerks	Miss E. Stobbart (Examinations and Records)
	R. G. Walton (Finance and Accounts)
Secretary to the Principal	Miss F. M. Jones
Section Clerks	Mrs R. McNamara
	Mrs P. Tinsley
Clerks	Mrs A. Allen
	Miss N. B. Chapman
	Miss E. I. A. Buggy
	Mrs M. Caunce
	Mrs S. Cooper
	Mrs E. V. Crook
	Mrs E. Gower
	Mrs J. Halstead
	Mrs M. J. Livesey
	Mrs C. Matthewson
	Miss J. H. Slee
	Mrs M. Taylor
	Miss J. K. Watt
	Mrs J. C. Horsley (Secretary to the Industrial Liaison Officer)
	Mrs. K. Howarth (Clerk to the Child Care Tutors)
Telephonists	Mrs P. B. Bamford
	Miss M. Eccles
Cashiers	Mrs R. Doherty
	Mrs M. Marland
College Lodgings Officer	Mrs P. M. Cross
Equipment Maintenance	E. Goodson (Chief Engineer)
	E. Davies
	P. Young
Refectory	Mrs M. Hamlyn White (Catering Manageress)
	Miss E. Grunshaw (Assistant Manageress)

Custodian of Premises	W. H. Hatton, M.B.I.C.SC.
Caretakers	L. Whalley (Avenham premises)
	L. Posner (Owen Street premises)
Assistant Caretakers	V. S. Baron
	J. C. Christian
	C. T. Day
	R. A. McConochie
	H. Mee
	H. Nicholls
	E. Parker
	W. Pullan
	T. C. Ritchie
	W. Sanders
	R. Seed
	J. Spencer
Groundsman	G. Cowell
Watchmen	C. Ashton
	S. Dixon
	T. W. Gregson
	A. E. Manley
	F. Miller
	F. E. Oldham
	J. Smith

Calendar

1969	Thursday, 11th September	General Staff Meeting
	ENROLMENT PERIOD	
	Thursday, 11th September	Enrolment, first day
	Friday, 12th September	Enrolment, second day
	Monday, 15th September	Enrolment, third day
	Tuesday, 16th September	Enrolment, last day
	Autumn Term (13 weeks)	
	Monday, 22nd September	All day and evening classes commence for the Autumn term
	Friday, 19th December	All departments close for Christmas after evening classes
	Spring Term (11 weeks)	
1970	Monday, 5th January	All classes re-open for the Spring term
	Tuesday, 10th February	Foundation Celebration and Address: all evening classes closed
	Friday, 20th March	All departments close for Easter after evening classes
	Summer Term (12 weeks)	
	Monday, 6th April	All classes re-open for the Summer term
	Friday, 22nd May	All departments close for Spring Holiday after evening classes
	Monday, 1st June	All classes re-open
	Friday, 3rd July	All classes close: end of term
	Friday, 10th July	Submission of reports: end of session

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

The acceptance of a student into a course must have the approval of the Head of Department. Generally, students under age 16 on the 1st September cannot be admitted.

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

Courses will be provided subject to adequate enrolment and within the limits of available teaching accommodation and staff. They may be discontinued at the discretion of the Principal at any time during the session should the number of students attending fall below a reasonable level.

Full-time and Sandwich Course Students

Application to join a course should be made before the commencement of session on the form obtainable from the Registrar. Students accepted into full-time or sandwich courses must undertake the formal enrolment procedure (described on page 38) either on one of the four advertised enrolment days or during the first two days of the course at a time arranged by the Head of Department.

Each full-time and sandwich course student will be placed under the supervision of a Course Tutor who will supervise the student's progress throughout the session and to whom the student may refer for advice about his or her course of study.

GRANTS: most students will qualify for a grant from a Local Education Authority, and it is the student's responsibility to make application for this to the Local Education Authority of the County or County Borough Council within whose area he permanently resides. Grants are assessed according to the financial position of the student, taking account of parental income and other circumstances. Generally, grants cover tuition fees (this payment is normally made direct to the College), an allowance for books, materials, examination fees, and in the case of students in advanced courses a maintenance grant (see also page 37).

Part-time Students

Intending students wishing for advice should write to the Head of Department. Application to join a course should be made in person during the enrolment period (see page 38).

Overseas Students

An overseas student wishing to join a full-time or sandwich course must complete the special application form obtainable from the Registrar. This form, when completed, should be sent by the student to the student authority in his own country; this authority will forward the form to the College through its London office.

A Certificate of Competence in the English language will be required, stating that the applicant has sufficient proficiency in written and spoken English to be able to follow a course of study conducted in English.

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 course of advanced 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 67% 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 set work, 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 set 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 noted with the name(s) of the subject(s) in which he has thus distinguished himself.

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. The only students excused paying the tuition fee at the time of enrolment are:

(*a*) full-time and sandwich course students who are to be grant-aided by a Local Education Authority; documentary evidence will be required of the offer of a grant, and

(*b*) those whose employers undertake to pay the tuition fees on their behalf; they must produce at enrolment a letter from the employer to that effect.

Fees are graded into three categories corresponding to the academic level of the course, namely:

Grade C: work of an introductory character, for example leading to G.C.E. Ordinary level.

Grade B: work of an intermediate character, above the level of Grade C and leading for example to Ordinary National Diplomas or Certificates and G.C.E. Advanced level.

Grades A2 and A1: work of an advanced character, above the level of Grade B and leading for example to Higher National Diplomas or Certificates, final professional qualifications, degrees.

The grade of each course is shown in brackets after the course title, or after the year of the course where a full course covers more than one grade of work.

Part-time students from the administrative counties of Lancashire and Westmorland and all students from Wigan County Borough who are age 16 and under age 18 on the 1st September will be enrolled without payment of the tuition fee.

NOTE TO LOCAL AUTHORITIES

The course grade designation (A2 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.

Full-time and Sandwich Courses		Students under age 18 on 1st September			Students age 18 and over on 1st September		
		£	s.	d.	£	s.	d.
Higher National Diploma in Building		50	2	6	51	10	0
Ordinary National Diploma in Building:	1st Year	28	2	6	29	10	0
	2nd Year	42	2	6	43	10	0
Pre-Diploma in Building		30	2	6	31	10	0

Block Release Courses		All age groups		
		£	s.	d.
Gas Fitting:	1st year	13	10	0
	2nd year	18	17	6
	3rd year	33	10	0
Gas Utilisation		9	10	0

Part-time Courses	Students under age 18 on 1st September			Students age 18 and over on 1st September		
	£	s.	d.	£	s.	d.
Grade C	1	17	6	3	12	6
Grade B	3	0	0	4	12	6
Grades A2 and A1	5	2	6	6	2	6

RESIDENTIAL GENERAL 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 period of a course, or where only partial financial support is offered by the employer.

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.

Enrolment

Students will be enrolled on the following days and during the times shown:

	morning	*afternoon*	*evening*
Thursday, 11th September	none	2.00 to 4.00	6.00 to 8.30
Friday, 12th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Monday, 15th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Tuesday, 16th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30

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 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.

Permission Vouchers

All students must obtain permission vouchers each year and present them at enrolment except (*a*) those normally resident in the County Borough of Preston or in the administrative area of Lancashire County and (*b*) part-time students normally resident in the County Borough of Wigan.

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

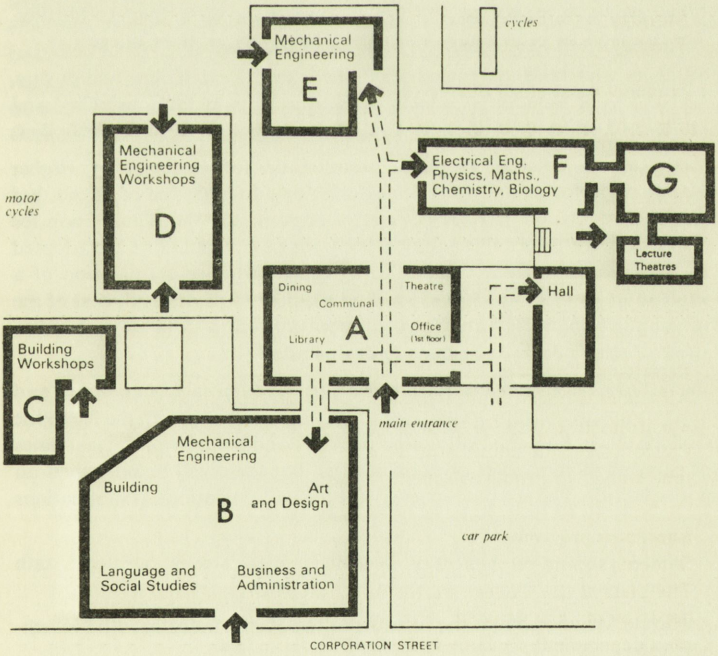
School of Art and Design (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52)

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

F BLOCK
Chemistry and Biology Department (F37)
Electrical and Electronic Engineering Department (F1, F8, F9 and F10)
Physics Department, Mathematics and Computer Studies 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.



Students will not be permitted to attend classes until they have completed the enrolment procedure. 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.

Examinations

ENTRY TO 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.* University of London, Council of Engineering Institutions, City and Guilds of London Institute) 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 and 15s. 0d. per project and, if appropriate, 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 Ordinary National Certificate in Sciences: 24th October, 1969

Associate Membership of the Institute of the Motor Industry: 7th November, 1969

Assessed papers for National Diplomas and Certificates, including endorsements: 19th December, 1969

London University B.Sc. (Sociology): 16th January, 1970

Assessed papers for Ordinary National Certificate in Business Studies: 30th January, 1970

Union of Lancashire and Cheshire Institutes, series B and C: 30th January 1970

City and Guilds of London Institute: 6th February, 1970

General Certificate of Education papers (N.U.J.M.B.): 6th February, 1970

Pitmans: 20th March, 1970

Training Council for Teachers of the Mentally Handicapped: 20th March, 1970

Royal Society of Arts, Summer Series: 1st May, 1970

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.

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. Roadway and delivery areas 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.

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.

The Recreation 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 11-45 a.m. 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.

In the interests of hygiene staff and students are requested to observe any restrictions on smoking in the dining room.

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.

STUDENT LODGINGS

The College Authorities prepare each year a register of householders and hotel keepers who are willing to offer lodging accommodation. This register is kept by the College Lodgings Officer, who initially approves and thereafter regularly inspects all registered accommodation.

Some accommodation is available in Preston and surrounding districts, but many students will have to be accommodated some distance from the College, possibly in Blackpool and Lytham. Students who are grant-aided will generally be assisted by their supporting Local Authorities if their necessary travelling expenses exceed the amount included in the grant.

Intending students should write to the College Lodgings Officer as soon as they receive confirmation of their acceptance into a course. Priority will be given to those students whose homes are 20 miles or more from the College.

CHANGES 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 home or lodgings 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 Department. 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 outside the main College premises. These classes are indicated by room number prefixes as follows in the several College documents dealing with teaching accommodation:

Av	School of Art Annexe, Avenham Lane, Preston
BTU	Blood Transfusion Unit, Lancaster
NWGB	North Western Gas Board Training Centre, Moor Lane, Preston
On	Owen Street Annexe, off Crook Street, Ribbleton Lane, Preston
PRI	Preston Royal Infirmary, Deepdale Road, Preston
TH	G.P.O. Telephone House, Moor Lane, Preston
Ty	Trinity County Secondary School, Great Shaw Street, Preston

SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of socieities 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.

The Library

Telephone: Preston 51831, ext 15

Librarian	A. Lawrence, A.L.A.
Assistant Librarians	Miss S. M. Brindle
	Miss E. Jenkins
Library Assistants	Miss J. E. Bamford
	Mrs I. M. Fuller

The College library is available to all students for reference purposes. 400 journals are now received in addition to the continuing expansion of the book stock. A set of British Standard Specifications is maintained, as also is a comprehensive set of bibliographic research works and a considerable number of indexing and abstracting publications.

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.

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.

Computing Facilities

Telephone: Preston 51831, ext 43

Computer Manager	F. Fowler
Operator/Programmer	Vacancy
Punch Operator	Mrs C. M. Hoyle

The College's computer configuration consists of an ICL1901A central processing unit of 16K words of core storage, two twin exchangeable disc stores, paper tape reader/punch, card reader, line printer and console typewriter which are housed, together with adequate data preparation equipment, in a specially designed suite of rooms in the Department of Mathematics and Computer Studies.

Computer appreciation and programming is taught in advanced courses which require these modern techniques. Short courses in various computer languages, and more extensive courses in data processing and systems analysis, are arranged throughout the session. Increasing demands are being made on the computer for research and consultancy work undertaken by the teaching staff of the College.

It is proposed to collaborate with local schools in introducing modern computing methods to Sixth Form pupils.

The computer will eventually be used as the focal point of specialist degree and diploma courses in computer studies.

The Computer Manager will be pleased to give advice to representatives of industrial or commercial undertakings who may be considering the use of a computer for their own needs.

Industrial Liaison Centre

Telephone: Preston 51831, ext 41

Industrial Liaison Officer G. A. Redhead, B.SC.
Secretary Mrs J. C. Horsley

Technological knowledge and innovation are progressing so rapidly that it is difficult for any one individual to keep himself up to date. Particular difficulties are felt by small and medium sized manufacturing firms, many of which would welcome information about the results of industrial research or would appreciate access to local and national sources of information relevant to their own particular problems.

To help firms of this kind the Ministry of Technology, in conjunction with selected Technical Colleges, has established a network of Industrial Liaison Centres with the specific intention of offering assistance with technical and management problems and of encouraging the use of modern techniques.

Industrial Liaison Centres are financed from public funds and no charge is made for advice offered. However, some individuals or organisations brought in to help (only at the firm's invitation) might expect to negotiate fees. Consultations will take place in the strictest confidence, and if solutions to particular problems are found these would not be revealed outside without the firm's consent.

Close co-operation between College and Industry is intended, and the Industrial Liaison Officer is a member of the College staff; he will be pleased to visit any firm regardless of whether problems exist or not.

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.
	J. Montgomery, DIP.P.E.
Visiting Lecturers	J. H. Dickens
	R. Hindle
	A. Lewis
	R. Poole
	B. Strettle, B.J.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-

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

SCHIEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's nine 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 17s. 6d. if under age 18 on the 1st September or £3 12s. 6d. if age 18 or over.

In order to give academic course students priority, persons who wish to enroll 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

P. F. Sanger, *President*
J. D. Callon, *Vice-President (Internal Affairs)*
K. N. Tolladay, *Vice-President (External Affairs)*
Miss J. A. Davies, *Vice-President (Female Students) and Secretary*
P. C. Johnson, *Student Treasurer*
A. G. Cottam, *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.

The Harris Students' Union Fund

The Students' Union in December 1966 established by deed a trust fund called the 'Harris Students' Union Fund.' They appointed four Trustees and invested in the fund a small sum of accumulated moneys. The fund has been registered as a charitable trust.

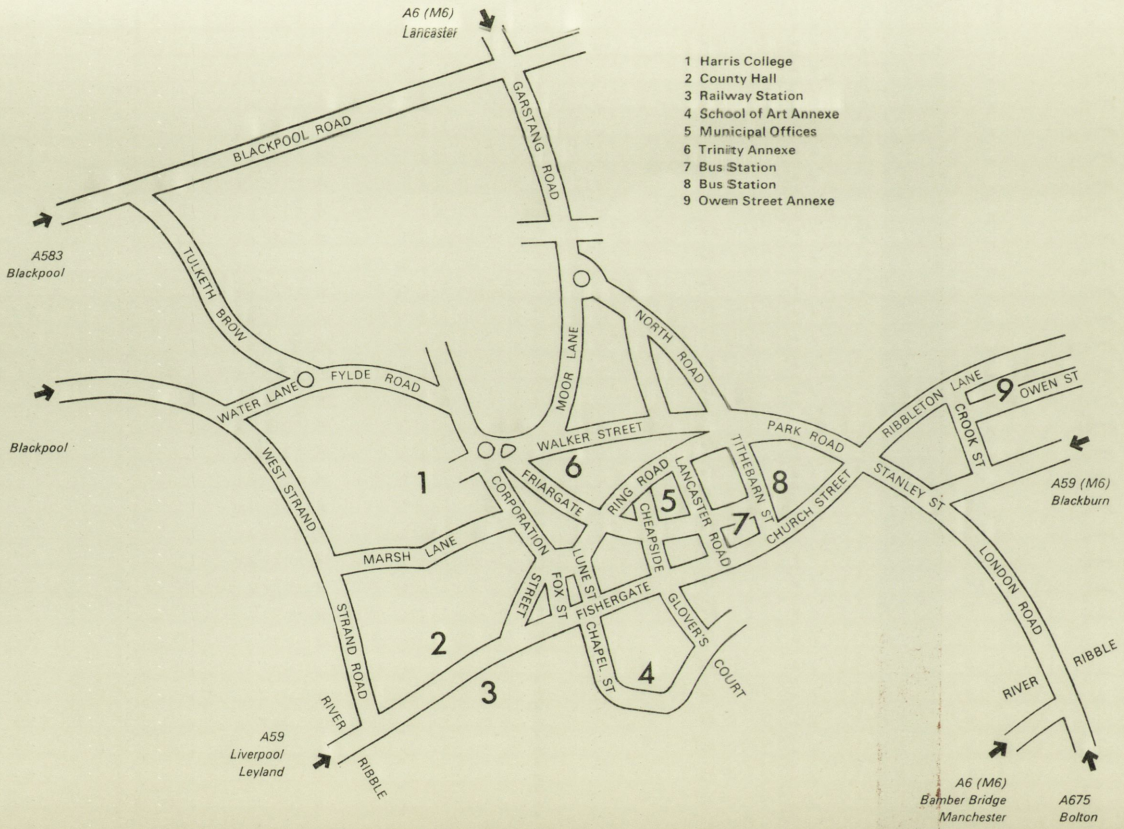
The fund is in two parts: capital moneys and revenue moneys. Both are invested by the Trustees and the annual interest from the total fund is paid to the Union as income to be expended on those of the Union's activities which 'are of an educational or otherwise charitable nature.' The capital moneys remain permanently in the fund, and as they are increased by donations they provide an increasing income to the Union.

It is intended to accumulate money in the 'revenue' section of the fund to be withdrawn at some future time for a major charitable project (such as the acquisition of property for the Union), and the trust deed prescribes that the Union may request the Trustees to sell investments and realise securities in this section of the fund to provide the outlay for such a project as is proper.

The total fund at present stands at approximately £1,000. It is in the interest of all students, present and future, to assist in augmenting it.

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. 6d., 32s. 6d. and 8s. 11d. each respectively.


A6 (M6)
Lancaster
BLACKPOOL ROAD
GARSTANG ROAD
A583
Blackpool
TULKETH BROW
FYLDE ROAD
WATER LANE
Blackpool
MOOR LANE
NORTH ROAD
WALKER STREET
PARK ROAD
RIBBLETON LANE
OWEN ST
CROOK ST
WEST STRAND
FRIARGATE
CORPORATION
RING ROAD
LANCASTER ROAD
TITHEBARN ST
CHURCH STREET
STANLEY ST
A59 (M6)
Blackburn
MARSH LANE
CHEARSIDE
LUNE ST
FOX ST
FISHERGATE
GLOVER'S
COURT
CHAPEL ST
STRAND ROAD
STREET
LONDON ROAD
RIVER
RIBBLE
A59
Liverpool
Leyland
A6 (M6)
Bamber Bridge
Manchester
A675
Bolton
1 Harris College
2 County Hall
3 Railway Station
4 School of Art Annexe
5 Municipal Offices
6 Trinity Annexe
7 Bus Station
8 Bus Station
9 Owen Street Annexe

Harris College

Department of Business and Administration

Session 1969–70

Harris College, Corporation Street, Preston, Lancashire
Telephone: Preston 51831–7

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, M.M., O.B.E., J.P.

Vice-President: County Councillor T. V. Brown

Members:

Alderman J. Atkinson
Alderman H. Beaumont
Alderman Mrs D. M. Dewhurst, J.P.
Alderman Mrs R. Lytton
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker
Councillor Mrs K. E. Crozier
Councillor Mrs D. Smith

County Alderman J. Bradley, M.B.E., J.P.
County Alderman J. P. Ennis, J.P.
County Alderman Sir Fred Longworth (Deputy Lieutenant of Lancashire; Vice-Chairman of Lancashire County Council)
County Councillor C. W. Eastwood
County Councillor M. J. Fitzherbert-Brockholes, J.P.
County Councillor A. J. Whittall
County Councillor Mrs W. Winn
County Councillor G. Woods

F. D. Crowe, B.SC., C.ENG., F.R.AE.S.
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., 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.

Professor E. Roland Dobbs

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, M.M., O.B.E., J.P., *President of the Harris Council*

Members:
County Councillor T. V. Brown, *Vice-President of the Harris Council*
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

The Harris College is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are nine teaching departments in the College: the School of Art and Design, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical and Electronic Engineering, Language and Social Studies, Mathematics and Computer Studies, Mechanical Civil and Production Engineering, and Physics. 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 increasing use by industrialists of the Industrial Liaison Centre is expected to widen the range of these activities.

The Academic Board

Subject to the ultimate responsibility of the Harris Council the responsibility for the planning, co-ordination, development and oversight of the academic work of the College is delegated to an Academic Board of 30 members which includes representatives from all departmental Boards of Studies, representatives of the teaching staff generally, and students' representatives. The Board has power to co-opt specialist advisers from Universities, Colleges and other bodies when appropriate.

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 and for the Ordinary and Higher National Diplomas covering general business studies.

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.

The Departmental Board of Studies

The Board of Studies is directly responsible to the Academic Board, offering advice on the planning, co-ordination and development of the academic work of the Department. Members include senior teaching staff, representatives of the teaching staff of the department generally, and students' representatives.

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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.
	R. J. Munro, LL.B., M.B.I.M.
	E. Schofield, B.A.(COM.), A.C.I.S.
	J. R. Topping, B.SC.(ECON.), F.R.G.S., A.C.C.S.
Lecturers and Assistant Lecturers	Mrs E. J. G. Bairsto, B.A., F.R.G.S.
	J. L. Bullas
	W. Butler, B.A.(ADMIN.), A.I.M.T.A.
	Mrs B. D. Cave, F.S.C.T., F.F.T.COM.
	P. J. Gaule, B.COMM.(DUBLIN)
	R. J. Hudson, B.SC.(ECON.), A.A.C.C.A.
	W. E. Illston, A.C.W.A., A.I.W.S.P., M.I.W.M.
	J. Isherwood, A.I.B.
	D. Jones, B.SC.(ECON.)
	E. Newell, DIP. JOURNALISM
	Miss I. Parsonage, A.C.I.S.
	Miss E. M. Rigg, B.A.
	A. C. Roylance
	Mrs T. M. Stableford, F.S.C.T.
	J. E. Varley, B.A.(ADMIN.)
	H. Warburton, A.C.A., A.T.I.I.
Technician	R. Parker
Visiting Lecturers	A. Allen, B.A.(ECON.)
	D. Asquith, A.I.B., A.C.I.S.
	W. M. Balmer, LL.B.
	J. G. R. Barker, M.I.P.M., A.M.B.I.M.
	E. S. Bell, F.C.I.I.
	W. Bone, M.I.MECH.E., M.I.PROD.E.
	Mrs E. F. Bradshaw
	J. Brooks
	R. E. Campbell, F.C.I.I.
	D. J. Carlo, F.C.I.I.
	G. Carter, A.C.I.I.

Visiting Lecturers (contd.)

G. A. Chapman
R. Cocker, A.C.W.A.
Mrs O. M. Cork
P. J. Craven
J. M. Duffin, B.A., F.C.I.I.
P. T. Eagle, M.I.MECH.E.
A. F. Fell, A.C.C.S.
S. Graham, A.A.C.C.A.
J. Greenwood, B.SC.(ECON.)
H. Grimshaw
J. R. Hartley, B.A., A.I.M.T.A.
R. K. Harwood, F.C.I.I.
G. W. Heywood, A.I.S.
Mrs C. Higgins
C. Hill
E. Hindle, C.ENG., M.I.MECH.E.
F. D. Jones, B.A.
E. Lee, A.C.C.S.
J. E. Lynam, B.A.
D. Lyon, A.C.A.
T. B. Maund, A.M.INST.T.
W. Mitchell, M.I.M.S.M.
C. Musgrave, B.SC.
C. J. Owen
Mrs. B. Pierce
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
Mrs C. M. Rowley
D. G. Sedgley
B. A. Sharples, A.M.INST.T.
Miss I. Sharples
P. S. Simpson
M. J. Stewart, B.COMM.
R. Sumner, A.C.C.S.
B. Taberner
Mrs E. Walker
P. Walton, LL.B.
M. Watkins
Mrs F. Westwood
E. J. Whittle, B.A.
C. Wilcock, A.I.B.
J. G. R. Wilson, A.C.I.I.
Mrs C. Woods
Mrs S. Woof

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Higher National Diploma in Business Studies (A2) (DES1094)

Course adviser: Mr 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 thesis of approximately 5,000 words upon an approved business topic, and (4) the passing of an oral examination on the subject of the thesis.

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:* Mr R. J. Hudson. *Curriculum:* economics, business organisation, statistics, general law, accounting, general studies.

College course: 22nd September to 20th March (24 weeks)

Examinations: internal

2nd Year. *Tutor:* Mr R. J. Munro. *Curriculum:* applied economics 1, advanced accounting, mercantile law, costing *or* human relations, office organisation *or* application of statistics, general studies.

College course: 22nd September to 20th March (24 weeks)

Examinations: internal

3rd Year. *Tutor:* Mr 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, general studies, and a research project.

College course: 5th January to 3rd July (23 weeks)

Examinations: internal, externally assessed

Qualification: the Higher National Diploma in Business Studies

Ordinary National Diploma in Business Studies (B) (DES1058)

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 on the 1st September 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:* *Curriculum:* accounting 1, structure of commerce, English 1, economic history, statistics, office practice, and either (i) a modern foreign language, *or* (ii) shorthand and typewriting.

College course: 22nd September to 3rd July (36 weeks)

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

2nd Year. *Tutor:* Miss E. M. Rigg. *Curriculum:* accounting 2, economics, English 2, principles of law, economic geography, 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 tutor.

College course: 22nd September to 3rd July (36 weeks)

Examinations: internal, externally assessed

Qualification: the Ordinary National Diploma in Business Studies

Certificate of the National Council for the Training of Journalists: full-time pre-entry course (A2) (DES3906)

Course adviser: Mr E. Newell

A one-year full-time course designed to give students a practical and academic background before entering the profession. The course is run in conjunction with the National Council for the Training of Journalists. After successful completion of the course students can expect to be offered three-year identured apprenticeships with provincial newspapers. At the end of this period, during which they will receive practical training, they will take the final part of the examination for the Proficiency Certificate in Journalism.

The course begins in September each year. Entry will be through the National Council for the Training of Journalists, and intending applicants should write in the first place to The Director, National Council for the Training of Journalists, 8 Bouverie Street, London E.C.4. Interviews and aptitude tests will normally be held between March and June.

Qualifications for entry: students must be under 20 years of age on the 1st September and should possess two G.C.E. 'A' level subjects and three G.C.E. 'O' level subjects, including English.

Curriculum: government, newspaper law, newspaper practice, English, shorthand and typewriting

College course: 22nd September to 3rd July (36 weeks)

Examinations: internal

Qualification: exemption from appropriate subjects of the examinations for the Proficiency Certificate in Journalism

Certificate of the National Council for the Training of Journalists: two-year block release course (DES2368)

Course adviser: Mr 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 1969–70 are as follows:

First year: 22nd September to 14th November 1969; 24th November 1969 to 30th January 1970; 9th February to 17th April 1970; and 27th April to 26th June 1970.

Second year: 29th September to 21st November 1969; 1st December 1969 to 6th February 1970; 16th February to 24th April 1970; and 4th May to 3rd July 1970

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

Examinations: internal

2nd Year (A2 NP). *Tutor:* Mr E. Newell. *Curriculum:* English, newspaper practice, shorthand, newspaper law.

Examinations: internal

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, 8 Bouverie Street, London E.C.4.

Institute of Chartered Accountants Intermediate Examination: Introductory Course for Articled Clerks (B) (DES2166)

Course adviser: Mr H. Warburton

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 1969 will be as follows:

First course: 3rd November to 28th November 1969

Additional courses will be arranged according to demand.

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

The aim of these courses 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.

Applicants for admission to the courses should apply in the first instance to Mr P. Hamspon, F.C.A., Hon. Secretary to the Education Committee, North West Society of Chartered Accountants, 6 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.

Institute of Municipal Treasurers and Accountants

Course adviser: Mr W. Butler

Intermediate examination (B) (DES2183)

The College course will cover two years of study as at present.

1st Year. In the first year of the Intermediate course the classes will be held between 9 a.m. and 7.15 p.m. on Wednesdays from the 24th September 1969 to 3rd July 1970.

Examinations: R.S.A. in appropriate subjects as an interim test of progress

2nd Year. In the second year of the Intermediate course the day release course will be augmented by two short periods of block release and the pattern of the course will be as follows:

13th October to 31st October 1969, Mondays to Fridays from 9 a.m. to 5 p.m. each day—a three week period of block release.

6th November 1969 to 9th April 1970, Thursdays from 9 a.m. to 7.15 p.m. —release on one day per week.

13th April to 1st May 1970, Mondays to Fridays from 9 a.m. to 5 p.m. each day—a three week period of block release.

This arrangement will give students a considerable stimulus at the start of their second year course for the Intermediate, and will provide an intensive period of preparation just before the examination takes place.

Final examination (A1) (DES2184)

The College course will cover two years of study as at present.

1st Year. In the course for Part 1 of the final examination the day release course will be augmented by one period of eight weeks block release at the least inconvenient time of the year for the employing authorities, and the pattern of the course will be as follows:

22nd September 1969 to 12th January 1970, Mondays from 9 a.m. to 7.15 p.m.—release on one day per week for fifteen weeks.

19th January to 13th March 1970, Mondays to Fridays from 9 a.m. to 5 p.m. each day—an eight week period of block release.

16th March to 27th April 1970, Mondays from 9 a.m. to 7.15 p.m.— release on one day per week for five weeks.

2nd Year. In the course for Part 2 of the final examination the classes will be held between 9 a.m. and 7.15 p.m. on Tuesdays from 23rd September 1969 to 28th April 1970.

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.

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, the Institute of Legal Executives and the Diploma in Marketing.

In most cases students may attend day-time classes for all or 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 (B) (DES2161) **and Section 3** (A1) (DES2162)

Course adviser: Mr 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 (B) (DES2172) **and Part 2** (A2) (DES2173)

Course adviser: Mr J. Isherwood

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 1 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 1 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 (B) (DES2178), **and 3, 4 and 5** (A1) (DES2179)

Course adviser:

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.

Diploma in Municipal Administration: Local Government Training Board Administrative Examination

Course adviser: Mr J. E. Varley

Intermediate examination (B) (DES2205). Classes for Part 1 will be held on Wednesdays. Classes for Part 2 will be held on Fridays.

Final examination (A2) (DES2206). 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 Training Board, Alembic House, 93 Albert Embankment, London, S.E.1.

Institute of Hospital Administrators, Intermediate (B) (DES2203), **and Final** (A2) (DES2204)

Course adviser: Mr J. E. Varley

The course for the Intermediate examination is held on Thursdays. Courses for the Final examination are to be arranged in 1970–71 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 (B) (DES2273), **and Final** (A2) (DES2274)

Course adviser: Mr 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: Mr P. J. Gaule

Associate examination (B) (DES2219). 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 (A2) (DES2220). 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 (B) (DES2565). Part-time day and evening classes are arranged for both parts of this examination.

Associate Membership Examination Part 1 (A2) (DES2559). 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 exemption 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 (DES2180)

Course adviser: Mr H. Warburton

Part A (B). *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 (B) **and C** (A2). The following specialist classes are arranged: Day-time classes in fire insurance and accident insurance. Evening classes in life assurance, accident insurance law and claims, fire insurance law and claims, motor insurance, employers' 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 (B) (DES410)

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.

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 (CGLI examination 352) on behalf of the National Examinations Board in Supervisory Studies, 76 Portland Place, London W1.

Institution of Works Managers

Course adviser: Mr J. R. Meredith

Certificate in Works Management (A2 NP) (DES2240). This is a course covering two years of study on one half day and one evening 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 F. A. White, M.I.W.M., 41 Hoghton Road, Leyland, Preston (or at his office: Chorley 5511 ext 507).

1st Year. *Curriculum:* economics of industry, works management in theory and practice, statistics, psychology and sociology.

Classes will be held on Monday evenings and on Wednesday afternoons.

2nd Year. *Curriculum:* industrial law, management techniques, industrial accountancy, the works manager and personnel.

Classes will be held on Wednesday evenings and on Tuesday afternoons.

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 White, and students are responsible for submitting them to the I.W.M. head office before the closing date.

Diploma in Works Management (A2) (DES2241). 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 arrangement for 1969–70 session at present include one period of residential study at Alston Hall Residential College.

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 White 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 Work Study Practitioners

Course adviser: Mr W. E. Illston

These courses will include a considerable amount of practical work in a fully equipped work study laboratory.

Technician Certificate (C)

A one-year part-time course for students who do not possess the G.C.E. entry requirements for the Graduate Certificate course.

Qualifications for entry: students must satisfy the Principal, through the Head of Department, of their ability to benefit from the course.

Curriculum: method study, work measurement, incentives.

Attendance: one afternoon and one evening per week

Qualification: Technician Certificate of the Institute of Work Study Practitioners. Exemption from the 1st Year of the Graduate Certificate course, on a subject for subject basis, if possessing the necessary G.C.E. "O" level subjects.

Graduate Certificate

A three-year part-time course leading to the Graduate Certificate of the Institute of Work Study Practitioners. Applicants must have been accepted as a Student or Affiliate of the Institute of Work Study Practitioners and syllabuses and regulations may be obtained from the General Secretary, I.W.S.P., 9-10 River Front, Enfield, Middlesex.

Qualifications for entry: students must hold the General Certificate of Education at Ordinary level in at least three subjects including English and mathematics, and must be not less than 21 years of age before entering the final (3rd year) part of the written examinations.

1st Year (C). *Curriculum:* method study, work measurement, incentives.

2nd Year (B). *Curriculum:* industrial relations, business organisation, costing aspects.

3rd Year (A2). *Curriculum:* method study and work measurement, associated techniques A and B.

Attendance: one afternoon and one or two evenings per week

Qualification: Graduate Certificate of the Institute of Work Study Practitioners

Institute of Marketing: Diploma in Marketing (DES2353)

Course adviser: Mr 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 (B). *Curriculum:* business history of the United Kingdom, economics, economic geography, marketing 1.

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

3rd Year (A2). *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 (B) (DES2374)

Course adviser: Mr J. R. Topping

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 (A2) (DES1140)

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 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 1 course.

The Certificate in Office Studies (C) (DES2320)

Course adviser: Miss I. Parsonage

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 Tuesdays. The second year course will meet on Mondays.

Qualification: U.L.C.I. Certificate in Office Studies at the end of the second year of the course.

Ordinary National Certificate in Business Studies (B) (DES1052)

Course adviser: Mr R. J. Hudson

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 homework 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 *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 Tuesday evenings and all day 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
Qualification: the Ordinary National Certificate in Business Studies

Ordinary National Certificate in Public Administration (B) (DES3798)
Course adviser: Mr D. Jones

This is a two-year part-time day course for junior personnel engaged in local and central government departments. The Certificate is a qualification in its own right and holders of it may proceed subsequently to the Diploma in Municipal Administration, the Diploma in Government Administration or the professional qualification of the Institute of Municipal Treasurers and Accountants.

The award is based upon satisfactory attendance and homework records and the passing of appropriate examinations at the end of each year of the course.

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, or (2) have passed some other examination of equivalent standard.

The first year course will be held on Fridays. *Curriculum:* government 1, English, social structure or statistics, introduction to economics or accounting 1.

Examinations: internal

The second year course will be held on Tuesday evenings and all day Thursdays. *Curriculum:* government 2, economics (with special reference to public finance), general principles of law, social services or accounting 2, extended essay.

Examinations: internal with external assessment

Qualification: the Ordinary National Certificate in Public Administration

Teachers' Certificates in Shorthand and Typewriting (A2 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 (C)

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 Monday evenings.

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

Shorthand Typists' Proficiency Certificate (C)

Course adviser: Mrs B. D. Cave

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 (B)

Course adviser: Mrs B. D. Cave

This diploma is offered by the U.L.C.I. to candidates who pass the examination at one sitting in (1) private secretarial work and office organisation, and (2) 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 1969–70 session:

Legal Aspects of Business: all day Thursday for the three weeks from 23rd October to 6th November, 1969 inclusive. The course will offer guidance to businessmen about a number of day to day problems which arise in connection with contract law, sale of goods, industrial law and company law.

Economics for Businessmen: all day Friday for the six weeks from 14th November to 19th December, 1969 inclusive. The course will be concerned with the analysis and understanding of current economic problems as they affect the individual firm, the region, and the national economy.

Managing People (Personnel Management): all day Tuesday for the five weeks from 18th November to 16th December, 1969 inclusive. This course will draw attention to the responsibility of business management in attempting to achieve effective employee performance and co-operation.

Careers in Business: a course for Advisory Officers on three full days from 3rd to 5th December, 1969 inclusive. This is a special course for employment officers and careers advisers in the public service.

Practical Work Study: all day Monday for the six weeks from 19th January to 23rd February, 1970 inclusive. The course is essentially practical, dealing with the analytical approach to motion study, method study and some work measurement.

Control in a Small Business: all day Tuesday for the six weeks from 27th January to 3rd March, 1970 inclusive. The course is intended for directors

and general managers of small businesses employing about 20/25 people, and it will deal with recurrent problems in finance, production, labour relations, sales, etc.

Shop Stewards: each Thursday morning for the ten weeks from 12th February to 30th April, 1970 (excluding the Easter vacation). The course will introduce the members to the industrial aspects of law, economics, accounts, work study and human relations.

Work Measurement: all day Monday for the ten weeks from 2nd March to 18th May, 1970 inclusive (excluding the Easter vacation). The course is designed to provide an understanding of time study, synthesis, activity sampling, analytical estimating, P.M.T.S. and other techniques.

The Accounts of Small Businesses: all day Friday for the six weeks from 17th April to 22nd May, 1970 inclusive. The course is intended to explain financial and cost accounting to the non-accountant, the extraction of management information from accounts and the use and interpretation of such information.

Management Techniques: all day Wednesday for the six weeks from 6th May to 17th June, 1970 inclusive (excluding Spring Bank holiday week). This is a short course in practical management intended to help principals and senior managers of small and medium sized manufacturing firms in dealing with the problems of change.

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.
Assistant Registrar	E. D. Hardman
Senior Clerks	Miss E. Stobbart (Examinations and Records)
	R. G. Walton (Finance and Accounts)
Secretary to the Principal	Miss F. M. Jones
Section Clerks	Mrs R. McNamara
	Mrs P. Tinsley
Clerks	Mrs A. Allen
	Miss N. B. Chapman
	Miss E. I. A. Buggy
	Mrs M. Caunce
	Mrs S. Cooper
	Mrs E. V. Crook
	Mrs E. Gower
	Mrs J. Halstead
	Mrs M. J. Livesey
	Mrs C. Matthewson
	Miss J. H. Slee
	Mrs M. Taylor
	Miss J. K. Watt
	Mrs J. C. Horsley (Secretary to the Industrial Liaison Officer)
	Mrs. K. Howarth (Clerk to the Child Care Tutors)
Telephonists	Mrs P. B. Bamford
	Miss M. Eccles
Cashiers	Mrs R. Doherty
	Mrs M. Marland
College Lodgings Officer	Mrs P. M. Cross
Equipment Maintenance	E. Goodson (Chief Engineer)
	E. Davies
	P. Young
Refectory	Mrs M. Hamlyn White (Catering Manageress)
	Miss E. Grunshaw (Assistant Manageress)

Custodian of Premises	W. H. Hatton, M.B.I.C.SC.
Caretakers	L. Whalley (Avenham premises)
	L. Posner (Owen Street premises)
Assistant Caretakers	V. S. Baron
	J. C. Christian
	C. T. Day
	R. A. McConochie
	H. Mee
	H. Nicholls
	E. Parker
	W. Pullan
	T. C. Ritchie
	W. Sanders
	R. Seed
	J. Spencer
Groundsman	G. Cowell
Watchmen	C. Ashton
	S. Dixon
	T. W. Gregson
	A. E. Manley
	F. Miller
	F. E. Oldham
	J. Smith

Calendar

1969	Thursday, 11th September	General Staff Meeting
	ENROLMENT PERIOD	
	Thursday, 11th September	Enrolment, first day
	Friday, 12th September	Enrolment, second day
	Monday, 15th September	Enrolment, third day
	Tuesday, 16th September	Enrolment, last day
	Autumn Term (13 weeks)	
	Monday, 22nd September	All day and evening classes commence for the Autumn term
	Friday, 19th December	All departments close for Christmas after evening classes
	Spring Term (11 weeks)	
1970	Monday, 5th January	All classes re-open for the Spring term
	Tuesday, 10th February	Foundation Celebration and Address: all evening classes closed
	Friday, 20th March	All departments close for Easter after evening classes
	Summer Term (12 weeks)	
	Monday, 6th April	All classes re-open for the Summer term
	Friday, 22nd May	All departments close for Spring Holiday after evening classes
	Monday, 1st June	All classes re-open
	Friday, 3rd July	All classes close: end of term
	Friday, 10th July	Submission of reports: end of session

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

The acceptance of a student into a course must have the approval of the Head of Department. Generally, students under age 16 on the 1st September cannot be admitted.

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

Courses will be provided subject to adequate enrolment and within the limits of available teaching accommodation and staff. They may be discontinued at the discretion of the Principal at any time during the session should the number of students attending fall below a reasonable level.

Full-time and Sandwich Course Students

Application to join a course should be made before the commencement of session on the form obtainable from the Registrar. Students accepted into full-time or sandwich courses must undertake the formal enrolment procedure (described on page 46) either on one of the four advertised enrolment days or during the first two days of the course at a time arranged by the Head of Department.

Each full-time and sandwich course student will be placed under the supervision of a Course Tutor who will supervise the student's progress throughout the session and to whom the student may refer for advice about his or her course of study.

GRANTS: most students will qualify for a grant from a Local Education Authority, and it is the student's responsibility to make application for this to the Local Education Authority of the County or County Borough Council within whose area he permanently resides. Grants are assessed according to the financial position of the student, taking account of parental income and other circumstances. Generally, grants cover tuition fees (this payment is normally made direct to the College), an allowance for books, materials, examination fees, and in the case of students in advanced courses a maintenance grant (see also page 45).

Part-time Students

Intending students wishing for advice should write to the Head of Department. Application to join a course should be made in person during the enrolment period (see page 46).

Overseas Students

An overseas student wishing to join a full-time or sandwich course must complete the special application form obtainable from the Registrar. This form, when completed, should be sent by the student to the student authority in his own country; this authority will forward the form to the College through its London office.

A Certificate of Competence in the English language will be required, stating that the applicant has sufficient proficiency in written and spoken English to be able to follow a course of study conducted in English.

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 course of advanced 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 67% 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 set work, 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 set 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 noted with the name(s) of the subject(s) in which he has thus distinguished himself.

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. The only students excused paying the tuition fee at the time of enrolment are:

(*a*) full-time and sandwich course students who are to be grant-aided by a Local Education Authority; documentary evidence will be required of the offer of a grant, and

(*b*) those whose employers undertake to pay the tuition fees on their behalf; they must produce at enrolment a letter from the employer to that effect.

Fees are graded into three categories corresponding to the academic level of the course, namely:

Grade C: work of an introductory character, for example leading to G.C.E. Ordinary level.

Grade B: work of an intermediate character, above the level of Grade C and leading for example to Ordinary National Diplomas or Certificates and G.C.E. Advanced level.

Grades A2 and A1: work of an advanced character, above the level of Grade B and leading for example to Higher National Diplomas or Certificates, final professional qualifications, degrees.

The grade of each course is shown in brackets after the course title, or after the year of the course where a full course covers more than one grade of work.

Part-time students from the administrative counties of Lancashire and Westmorland and all students from Wigan County Borough who are age 16 and under age 18 on the 1st September will be enrolled without payment of the tuition fee.

NOTE TO LOCAL AUTHORITIES

The course grade designation (A2 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.

Full-time and Sandwich Courses	Students under age 18 on 1st September			Students age 18 and over on 1st September		
	£	s.	d.	£	s.	d.
Higher National Diploma in Business Studies	50	2	6	51	10	0
Ordinary National Diploma in Business Studies	42	2	6	43	10	0
Journalists	75	2	6	76	10	0

Block Release Courses		All age groups		
		£	s.	d.
Journalists:	1st year	9	10	0
	2nd year	16	17	6
Chartered Accountants		4	17	6
Institute of Municipal Treasurers and Accountants:	Intermediate, 2nd year	12	7	6
	Final, 1st year	25	2	6
(other years—part-time course fees)				

Part-time Courses	Students under age 18 on 1st September			Students age 18 and over on 1st September		
	£	s.	d.	£	s.	d.
Grade C	1	17	6	3	12	6
Grade B	3	0	0	4	12	6
Grades A2 and A1	5	2	6	6	2	6

RESIDENTIAL GENERAL 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 period of a course, or where only partial financial support is offered by the employer.

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.

Students will be enrolled on the following days and during the times shown:

	morning	*afternoon*	*evening*
Thursday, 11th September	none	2.00 to 4.00	6.00 to 8.30
Friday, 12th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Monday, 15th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Tuesday, 16th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30

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 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.

Permission Vouchers

All students must obtain permission vouchers each year and present them at enrolment except (*a*) those normally resident in the County Borough of Preston or in the administrative area of Lancashire County and (*b*) part-time students normally resident in the County Borough of Wigan.

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

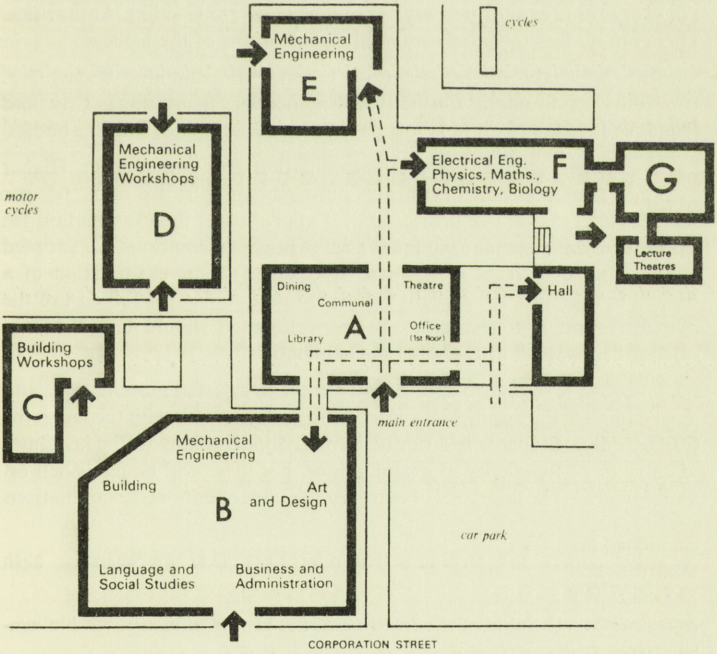
School of Art and Design (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52)

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

F BLOCK
Chemistry and Biology Department (F37)
Electrical and Electronic Engineering Department (F1, F8, F9 and F10)
Physics Department, Mathematics and Computer Studies 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.



Students will not be permitted to attend classes until they have completed the enrolment procedure. 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.

Examinations

ENTRY TO 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.* University of London, Council of Engineering Institutions, City and Guilds of London Institute) 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 and 15s. od. per project and, if appropriate, 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 Ordinary National Certificate in Sciences: 24th October, 1969

Associate Membership of the Institute of the Motor Industry: 7th November, 1969

Assessed papers for National Diplomas and Certificates, including endorsements: 19th December, 1969

London University B.Sc. (Sociology): 16th January, 1970

Assessed papers for Ordinary National Certificate in Business Studies: 30th January, 1970

Union of Lancashire and Cheshire Institutes, series B and C: 30th January 1970

City and Guilds of London Institute: 6th February, 1970

General Certificate of Education papers (N.U.J.M.B.): 6th February, 1970

Pitmans: 20th March, 1970

Training Council for Teachers of the Mentally Handicapped: 20th March, 1970

Royal Society of Arts, Summer Series: 1st May, 1970

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.

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. Roadway and delivery areas 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.

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.

The Recreation 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 11-45 a.m. 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.

In the interests of hygiene staff and students are requested to observe any restrictions on smoking in the dining room.

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.

STUDENT LODGINGS

The College Authorities prepare each year a register of householders and hotel keepers who are willing to offer lodging accommodation. This register is kept by the College Lodgings Officer, who initially approves and thereafter regularly inspects all registered accommodation.

Some accommodation is available in Preston and surrounding districts, but many students will have to be accommodated some distance from the College, possibly in Blackpool and Lytham. Students who are grant-aided will generally be assisted by their supporting Local Authorities if their necessary travelling expenses exceed the amount included in the grant.

Intending students should write to the College Lodgings Officer as soon as they receive confirmation of their acceptance into a course. Priority will be given to those students whose homes are 20 miles or more from the College.

CHANGES 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 home or lodgings 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 Department. 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 outside the main College premises. These classes are indicated by room number prefixes as follows in the several College documents dealing with teaching accommodation:

Av	School of Art Annexe, Avenham Lane, Preston
BTU	Blood Transfusion Unit, Lancaster
NWGB	North Western Gas Board Training Centre, Moor Lane, Preston
On	Owen Street Annexe, off Crook Street, Ribbleton Lane, Preston
PRI	Preston Royal Infirmary, Deepdale Road, Preston
TH	G.P.O. Telephone House, Moor Lane, Preston
Ty	Trinity County Secondary School, Great Shaw Street, Preston

SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of socieities 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.

The Library

Telephone: Preston 51831, ext 15

Librarian	A. Lawrence, A.L.A.
Assistant Librarians	Miss S. M. Brindle
	Miss E. Jenkins
Library Assistants	Miss J. E. Bamford
	Mrs I. M. Fuller

The College library is available to all students for reference purposes. 400 journals are now received in addition to the continuing expansion of the book stock. A set of British Standard Specifications is maintained, as also is a comprehensive set of bibliographic research works and a considerable number of indexing and abstracting publications.

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.

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.

Computing Facilities

Telephone: Preston 51831, ext 43

Computer Manager	F. Fowler
Operator/Programmer	Vacancy
Punch Operator	Mrs C. M. Hoyle

The College's computer configuration consists of an ICL1901 Acentral processing unit of 16K words of core storage, two twin exchangeable disc stores, paper tape reader/punch, card reader, line printer and console typewriter which are housed, together with adequate data preparation equipment, in a specially designed suite of rooms in the Department of Mathematics and Computer Studies.

Computer appreciation and programming is taught in advanced courses which require these modern techniques. Short courses in various computer languages, and more extensive courses in data processing and systems analysis, are arranged throughout the session. Increasing demands are being made on the computer for research and consultancy work undertaken by the teaching staff of the College.

It is proposed to collaborate with local schools in introducing modern computing methods to Sixth Form pupils.

The computer will eventually be used as the focal point of specialist degree and diploma courses in computer studies.

The Computer Manager will be pleased to give advice to representatives of industrial or commercial undertakings who may be considering the use of a computer for their own needs.

Industrial Liaison Centre

Telephone: Preston 51831, ext 41

Industrial Liaison Officer G. A. Redhead, B.SC.
Secretary Mrs J. C. Horsley

Technological knowledge and innovation are progressing so rapidly that it is difficult for any one individual to keep himself up to date. Particular difficulties are felt by small and medium sized manufacturing firms, many of which would welcome information about the results of industrial research or would appreciate access to local and national sources of information relevant to their own particular problems.

To help firms of this kind the Ministry of Technology, in conjunction with selected Technical Colleges, has established a network of Industrial Liaison Centres with the specific intention of offering assistance with technical and management problems and of encouraging the use of modern techniques.

Industrial Liaison Centres are financed from public funds and no charge is made for advice offered. However, some individuals or organisations brought in to help (only at the firm's invitation) might expect to negotiate fees. Consultations will take place in the strictest confidence, and if solutions to particular problems are found these would not be revealed outside without the firm's consent.

Close co-operation between College and Industry is intended, and the Industrial Liaison Officer is a member of the College staff; he will be pleased to visit any firm regardless of whether problems exist or not.

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.
	J. Montgomery, DIP.P.E.
Visiting Lecturers	J. H. Dickens
	R. Hindle
	A. Lewis
	R. Poole
	B. Strettle, B.J.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.

SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's nine 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 17s. 6d. if under age 18 on the 1st September or £3 12s. 6d. if age 18 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

P. F. Sanger, *President*
J. D. Callon, *Vice-President (Internal Affairs)*
K. N. Tolladay, *Vice-President (External Affairs)*
Miss J. A. Davies, *Vice-President (Female Students) and Secretary*
P. C. Johnson, *Student Treasurer*
A. G. Cottam, *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.

The Harris Students' Union Fund

The Students' Union in December 1966 established by deed a trust fund called the 'Harris Students' Union Fund.' They appointed four Trustees and invested in the fund a small sum of accumulated moneys. The fund has been registered as a charitable trust.

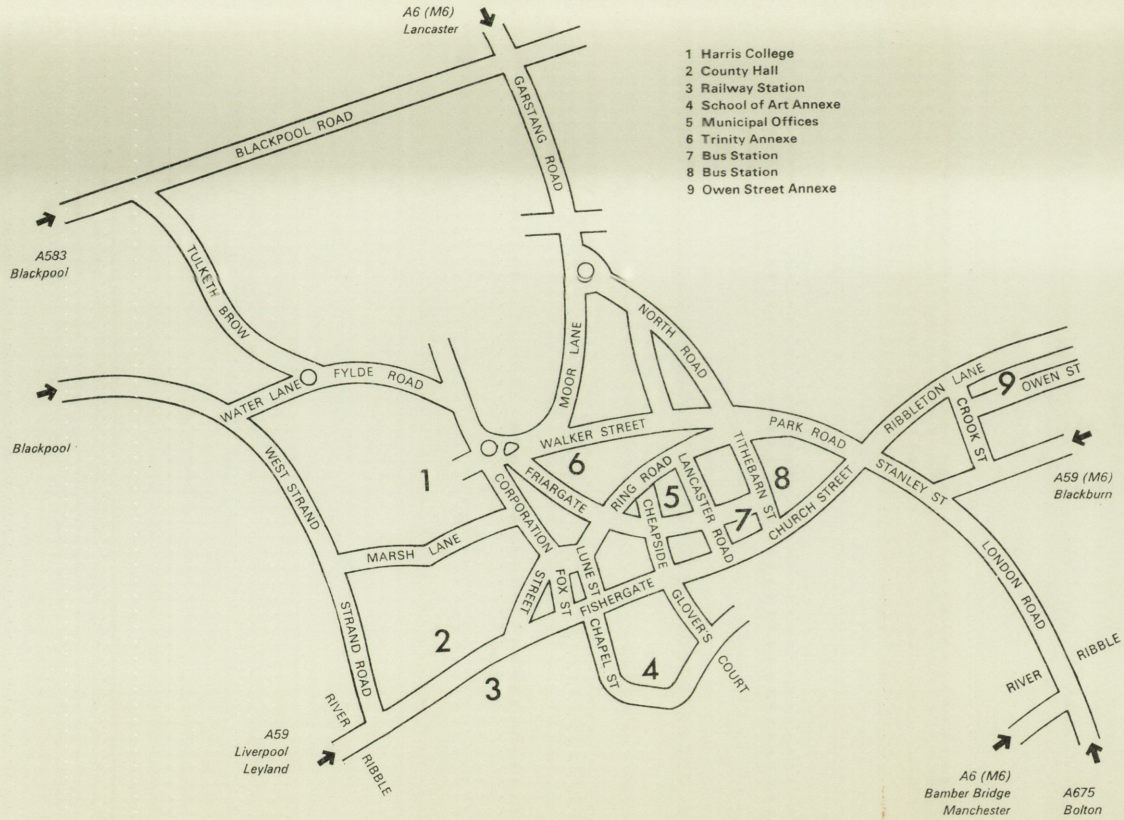
The fund is in two parts: capital moneys and revenue moneys. Both are invested by the Trustees and the annual interest from the total fund is paid to the Union as income to be expended on those of the Union's activities which 'are of an educational or otherwise charitable nature.' The capital moneys remain permanently in the fund, and as they are increased by donations they provide an increasing income to the Union.

It is intended to accumulate money in the 'revenue' section of the fund to be withdrawn at some future time for a major charitable project (such as the acquisition of property for the Union), and the trust deed prescribes that the Union may request the Trustees to sell investments and realise securities in this section of the fund to provide the outlay for such a project as is proper.

The total fund at present stands at approximately £1,000. It is in the interest of all students, present and future, to assist in augmenting it.

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. 6d., 32s. 6d. and 8s. 11d. each respectively.


A6 (M6)
Lancaster
1 Harris College
2 County Hall
3 Railway Station
4 School of Art Annexe
5 Municipal Offices
6 Trinity Annexe
7 Bus Station
8 Bus Station
9 Owen Street Annexe
BLACKPOOL ROAD
GARSTANG ROAD
A583
Blackpool
TULKETH BROW
FYLDE ROAD
WATER LANE
Blackpool
MOOR LANE
NORTH ROAD
WALKER STREET
PARK ROAD
RIBBLETON LANE
OWEN ST
CROOK ST
A59 (M6)
Blackburn
WEST STRAND
FRIARGATE
RING ROAD
LANCASTER ROAD
TITHEBARN ST
CHURCH STREET
STANLEY ST
CORPORATION
CHEAPSIDE
MARSH LANE
LUNE ST
FISHERGATE
GLOVERS
COURT
FOX ST
CHAPEL ST
STRAND ROAD
LONDON ROAD
RIVER
RIBBLE
A59
Liverpool
Leyland
A6 (M6)
Bamber Bridge
Manchester
A675
Bolton

Harris College

Department of Chemistry and Biology

Session 1969–70

Harris College, Corporation Street, Preston, Lancashire
Telephone: Preston 51831–7

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, M.M., O.B.E., J.P.

Vice-President: County Councillor T. V. Brown

Members:

Alderman J. Atkinson
Alderman H. Beaumont
Alderman Mrs D. M. Dewhurst, J.P.
Alderman Mrs R. Lytton
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker
Councillor Mrs K. E. Crozier
Councillor Mrs D. Smith

County Alderman J. Bradley, M.B.E., J.P.
County Alderman J. P. Ennis, J.P.
County Alderman Sir Fred Longworth (Deputy Lieutenant of Lancashire; Vice-Chairman of Lancashire County Council)
County Councillor C. W. Eastwood
County Councillor M. J. Fitzherbert-Brockholes, J.P.
County Councillor A. J. Whittall
County Councillor Mrs W. Winn
County Councillor G. Woods

F. D. Crowe, B.SC., C.ENG., F.R.AE.S.
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., 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.

Professor E. Roland Dobbs

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, M.M., O.B.E., J.P., *President of the Harris Council*

Members:
County Councillor T. V. Brown, *Vice-President of the Harris Council*
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

The Harris College is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are nine teaching departments in the College: the School of Art and Design, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical and Electronic Engineering, Language and Social Studies, Mathematics and Computer Studies, Mechanical Civil and Production Engineering, and Physics. 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 increasing use by industrialists of the Industrial Liaison Centre is expected to widen the range of these activities.

The Academic Board

Subject to the ultimate responsibility of the Harris Council the responsibility for the planning, co-ordination, development and oversight of the academic work of the College is delegated to an Academic Board of 30 members which includes representatives from all departmental Boards of Studies, representatives of the teaching staff generally, and students' representatives. The Board has power to co-opt specialist advisers from Universities, Colleges and other bodies when appropriate.

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 n.m.r., i.r. and u.v. spectrometers, 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, co-ordination chemistry, radiation chemistry, heterocyclic syntheses. The accommodation of the department includes eight 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.

The Departmental Board of Studies

The Board of Studies is directly responsible to the Academic Board, offering advice on the planning, co-ordination and development of the academic work of the Department. Members include senior teaching staff, representatives of the teaching staff of the department generally, and students' representatives.

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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 Technologist, Northern Weaving Division, Courtaulds Ltd.*
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.
Principal Lecturers	J. Donnelly, B.SC.
	C. A. Russell, M.SC., PH.D., F.R.I.C.
Senior Lecturers	D. Brattan, B.SC., PH.D., A.R.I.C.
	H. E. G. Emmett, B.SC., A.R.C.S., M.I.BIOL.
	D. J. Marks, B.SC., PH.D.
	A. Ottewell, B.SC., A.I.M.
	F. Ramsden, F.I.M.L.T., F.R.S.H.
Lecturers	N. G. Allen, B.SC.
	S. Blake, B.A., PH.D., A.R.I.C.
	S. Britland, B.SC.
	K. Edgar, M.SC., PH.D., A.R.I.C.
	D. Mason, B.SC., PH.D., A.R.I.C.
	L. H. G. Morton, B.SC., L.I.BIOL.
	G. Newton, B.SC., PH.D.
	A. Sherrington, A.R.I.C.
	J. H. Taylor, B.SC., PH.D.
	J. J. Waring, B.SC., PH.D.
Research Assistants	C. E. Crawforth, GRAD.R.I.C.
	R. Kellie, GRAD.R.I.C.
	J. T. Nicholson, B.SC.
	S. D. Steel, M.A.
Technicians	T. Nicol (Senior)
	G. R. Cunliffe, I.M.TECH.
	Miss A. B. Fazackerley (Research)
	Mrs J. M. Garner
	Miss S. L. Nixon
	H. Smith, F.R.S.H.
	J. L. Stoker
	Miss T. C. Tracey
College Glassblower	D. R. Evans
Visiting Lecturers	D. Allen, F.I.M.L.T.
	G. Armstrong, M.P.S.
	P. Burton, B.SC.
	B. Clucas, M.P.S.
	G. Cowburn, F.I.M.L.T.

Visiting Lecturers (contd.)

H. Dawkins, F.I.M.L.T.
A. N. Edmondson, F.R.I.C., F.T.I.
D. R. Evans
R. Field, F.P.S., PH.C., D.B.A.
J. A. Gatt, B.SC.
H. H. Gunson, M.D., M.C.PATH.
C. K. Heffernan, M.R.C.P., M.C.PATH.
D. N. Hutchinson, M.B., CH.B., DIP. BACT.
J. Laycock, F.I.M.L.T.
D. H. Locke, B.SC., PH.D.
J. Lord, F.I.M.L.T.
G. Mullard, F.I.M.L.T.
C. Rigby, B.SC.
L. Robertson, M.A., B.M., DIP.BACT., M.C.PATH.
D. W. White, B.SC., F.R.I.C.

List of Courses

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19 Higher National Certificate in Chemistry
20 Ancillary subjects for Royal Institute of Chemistry Qualifications
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25 Pharmaceutical Technicians
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EVENING

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SPECIAL COURSES

page 30 Implications of S.I. Units in the Practice and Teaching of Science
30 Microbiology of Manufactured Products
30 Instrumental Analytical Techniques
30 Recent Advances in Analysis
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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 sub-

ject, 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: four-year course (DES2104)

Course adviser: Dr D. J. Marks

A 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 provide the additional qualifications for entry to Part I and Part II of the Graduate Membership examinations.

1st Year (A2). *Tutor:* Mr 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, chemical kinetics, kinetic molecular theory of gases, electrochemistry: general physics: mathematics: general studies.

College course: 22nd September to 20th March (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 (A2). *Tutor:* Dr J. Taylor. *Curriculum:* inorganic chemistry; transition elements, co-ordination compounds, carbonyls, nitrosyls: organic chemistry; aromatic chemistry, stereo-chemistry II; physical

chemistry; second and third laws of thermodynamics, electrochemistry (galvanic cells) phase equilibria, colloid and surface chemistry: metallurgy or microbiology: advanced analytical chemistry: general and related studies.

College course: 22nd September to 20th March (24 weeks)

Examinations: internal

3rd Year (A2). *Tutor:* Mr J. Donnelly. *Curriculum:* inorganic chemistry; comparative chemistry of the groups, review and extension of theoretical chemistry, solution chemistry: organic chemistry; alicyclic chemistry, aliphatic and heteroaromatic chemistry, stereo-chemistry III: physical chemistry: review and extension of thermodynamics, thermodynamics of solutions, structural chemistry, chemical kinetics: metallurgy or microbiology: advanced analytical chemistry: related studies.

College course: 22nd September to 3rd July (36 weeks)

Examinations: H.N.D. in Chemistry, endorsement in advanced analytical chemistry; Grad. R.I.C. Part I

4th Year (A1). *Tutor:* Dr D. J. Marks. *Curriculum:* review and extension of chemical subjects studied: recent advances in inorganic, organic and physical chemistry.

College course: 22nd September to 3rd July (36 weeks)

Examinations: Grad. R.I.C. Part II

Qualification: Graduate Membership of the Royal Institute of Chemistry

Graduate Membership of the Royal Institute of Chemistry: two-year course (DES2104)

Course adviser: Dr D. J. Marks

A 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 (A2). *Tutor:* Mr J. Donnelly. *Curriculum:* inorganic chemistry, organic chemistry, physical chemistry, mathematics, physics, metallurgy or microbiology, advanced analytical chemistry.

College course: 22nd September to 3rd July (36 weeks)

Examinations: ancillary subjects; Grad.R.I.C. Part I

4th Year (A1). *Tutor:* Dr D. J. Marks. *Curriculum:* review and extension of chemical subjects studied: recent advances in inorganic, organic and physical chemistry.

College course: 22nd September to 3rd July (36 weeks)

Examinations: Grad.R.I.C. Part II

Qualification: Graduate Membership of the Royal Institute of Chemistry

General Certificate of Education, Advanced level (B) (DES 1194)

Tutors: Dr S. Blake and Mr 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, chemistry, physics, mathematics, computations.

Examinations: G.C.E. 'A' level

Qualification: General Certificate of Education, Advanced level

Graduate Membership of the Royal Institute of Chemistry (DES2104)

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 (A2). *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: all day Tuesday and Thursday evening

Examinations: Grad.R.I.C. Part I

2nd and 3rd Years (A1). *Tutor:* Dr C. A. Russell. *Curriculum:* review and extension of chemical subjects studied: recent advances in inorganic, organic and physical chemistry.

Attendance: all day Monday, Monday and Tuesday evenings

Examinations: Grad.R.I.C. Part II

Qualification: Graduate Membership of the Royal Institute of Chemistry

Licentiateship of the Royal Institute of Chemistry (A2) (DES2105)

Course adviser: Dr D. Brattan

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: general studies.

Attendance: all day Monday and Monday evening

Examinations: internal

2nd Year. *Tutor:* Dr D. Brattan. *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; general studies.

Attendance: all day Thursday and Thursday evening

Examinations: internal, externally assessed

Qualification: Higher National Certificate in Chemistry

3rd Year. *Tutor:* Dr D. Mason. *Curriculum:* radiochemistry, complexiometry, non-aqueous titrimetry, ion exchange resins, potentiometry, pH, electro-analysis, coulometry, polarography, amperometry, spectrometry, chromatography.

Attendance: all day Wednesday and Wednesday evening

Examinations: H.N.C. endorsement subject, advanced analytical chemistry

Qualification: Advanced Analytical Chemistry endorsement subject for Licentiateship of the Royal Institute of Chemistry

Ancillary Subjects for Royal Institute of Chemistry Qualifications (B) (DES3914)

Tutors: Dr D. Mason and Mr F. R. Dean

A collection of classes 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 for either subject

Qualification: Royal Institute of Chemistry Assessed Ancillary Subject passes

Ordinary National Certificate in Sciences (B) (DES2969)

Course advisers: Mr J. Donnelly and Dr E. Webster

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:* Mr S. Britland. *Curriculum:* basic chemistry, basic physics, mathematics, general studies.

Attendance: all day Wednesday and Wednesday evening

Examinations: internal

2nd Year. *Tutor:* Mr A. Sherrington. *Curriculum:* basic chemistry (1 term), basic physics (1 term), mathematics (1 term), elective chemistry or physics (2 terms), general studies; supplementary mathematics and physics for R.I.C. qualifications.

Attendance: all day Friday, and Monday or Tuesday evening

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

Qualification: 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 in 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 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 candidates will take examinations in a specific medical technology subject *e.g.* Haematology and Blood Transfusion together with the main subject, medical laboratory science. Exemption from the I.M.L.T. Final examination will be granted to holders of the Higher National Certificate who have approved experience.

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.

Higher National Certificate in Medical Laboratory Subjects (A2) (DES3706)

Course adviser: Mr F. Ramsden

A two-year course leading to the Higher National Certificate in Medical Laboratory Subjects, a qualification acceptable for State Registration.

The examination scheme is based on a background of sciences appropriate to medical laboratory work together with one specialist subject from the range of clinical chemistry, haematology and serology, medical microbiology, histopathology and cytology. The material covered in the specialist subject is similar to that dealt with in the I.M.L.T. final examination courses.

To qualify for a Higher National Certificate the student must be successful in all the examinations scheduled. An integrated hospital training is an essential part of the course and students should hold a full-time post in a hospital or other approved laboratory.

Qualifications for entry: an Ordinary National Certificate in Sciences with a pass in medical laboratory science or basic elective biology; *or* G.C.E. passes in four appropriate subjects, two science subjects having been passed at 'A' level; *or* the I.M.L.T. Intermediate Certificate.

1st Year. *Tutor:* Dr J. Waring. *Curriculum:* analytical chemistry techniques, organic chemistry, biochemistry, cell physiology, molecular biology, specialist subject, general and related studies.

Attendance: one day (Tuesday) and one evening per week

Examinations: internal

2nd Year. *Tutor:* Mr F. Ramsden. *Curriculum:* organic and physical chemistry, biochemistry, cell physiology, molecular biology, specialist subject, general and related studies.

Attendance: one day (Wednesday or Thursday) and one evening per week

Examinations: internal, externally assessed

Qualification: Higher National Certificate in Medical Labroatory Science with appropriate specialist subject

Ordinary National Certificate in Medical Laboratory Sciences (B) (DES2969)

Course adviser: Mr H. E. G. Emmett

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 of 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:* Mr H. E. G. Emmett. *Curriculum:* chemistry, physics, mathematics, biology, general studies.

Attendance: all day Friday and Friday evening

Examinations: chemistry and biology—internal: mathematics and physics —internal, externally assessed.

2nd Year. *Tutor:* Mr L. G. Morton. *Curriculum:* chemistry, biology, medical laboratory science, general studies.

Attendance: Monday, including evening

Examinations: chemistry, biology, medical laboratory science: internal, externally assessed

Qualification: Ordinary National Certificate in Medical Laboratory Sciences

Chemical Technicians (DES 383)

Course adviser: Mr A. Sherrington

A three-year part-time course of study designed to meet the needs of technicians in industry, employed in chemical laboratories and factories, whose duties will be mainly of a practical nature. It is intended as a supplement to student's training and experience in industry to enable him to make a critical appraisal of the processes in which he is employed. To achieve this aim the course emphasises the development of skill and confidence in carrying out a wide range of basic techniques including elements of plant work.

Qualifications for entry: students should not normally be less than 16 years of age at entry to the course and should have completed either a five-year secondary school course or a four-year secondary school course supplemented with part-time day studies.

1st Year (C). *Tutor:* Mr A. Sherrington. *Curriculum:* laboratory procedures and industrial practice, basic science and calculations, safety aspects.

Attendance: all day Wednesday and Monday evening

Examinations: internal

2nd Year (B). *Tutor:* Mr A. Sherrington. *Curriculum:* laboratory procedures and industrial practice, basic science and calculations, safety aspects.

Attendance: all day Wednesday and Monday evening

Examinations: internal

3rd Year (B) to be established in 1970.

Qualification: Chemical Technicians' Certificate of the City and Guilds of London Institute

Pharmaceutical Technicians (B) (DES1272)

Tutor: Mr T. Nicholson

A two-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

1st Year. *Tutor:* Mr T. Nicholson. *Curriculum:* materia medica I, pharmacology I, general science, pharmacy I.

Attendance: all day Thursday

Examinations: internal

2nd Year. *Tutor:* Mr T. Nicholson. *Curriculum:* materia medica II, pharacology II, pharmacy II.

Attendance: all day Wednesday

Examinations: external

Qualification: Certificate of the Society of Apothecaries

General Certificate of Education, Ordinary level (C) (DES1193)

Tutor: Mr 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 choose with their tutor's advice a suitable combination of the subjects: chemistry, biology, mathematics, physics, English.

Attendance: all day Thursday and Monday evening

Examinations: N.U.J.M.B.

Qualification: General Certificate of Education, Ordinary level subjects

Institute of Medical Laboratory Technology, Final (A2) (DES1221)

Course adviser: Mr F. Ramsden

The subjects offered for advanced study in this two-year course are bacteriological techniques (Public Health Laboratory, Preston Royal Infirmary), haematology and blood transfusion (Blood Transfusion Unit, Lancaster, and Harris College), histopathology (Preston Royal Infirmary and Harris College).

Qualifications for entry: I.M.L.T. Intermediate or O.N.C. in Medical Laboratory Sciences

1st Year. *Tutors:* Mr H. Dawkins, Dr H. H. Gunson, Mr J. Lord, Mr D. Allen and Mr J. A. Gatt. *Curriculum:* choice from bacteriological techniques, haematology and blood transfusion, histopathplogical techniques, and chemical pathology.

Attendance: one evening per week for each subject, Wednesday or Thursday

Examinations: internal

2nd Year. *Tutors:* Mr H. Dawkins, Dr H. H. Gunson, Mr J. Lord, Mr D. Allen and Mr J. A. Gatt

Curriculum: choice from bacteriological techniques, haematology and blood transfusion, histopathological techniques, and chemical pathology.

Attendance: one evening per week for each subject, Tuesday or Thursday

Examinations: Institute of Medical Laboratory Technology (Final) in bacteriological techniques, haematology and blood transfusion, histopathological techniques or chemical pathology

Qualification: Associateship or Fellowship of the Institute of Medical Laboratory Technology (see page 22)

Ancillary Subjects for Royal Institute of Chemistry Qualifications (B) (DES3914)

Tutors: Dr D. Mason and Mr 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

Qualification: Royal Institute of Chemistry Assessed Ancillary Subject passes

Scientific Glassblowing (B)

Tutor: Mr D Evans

Two 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: Monday evening, the first course commencing on the 29th September, 1969, and the second course on the 5th January, 1970

General Certificate of Education, Advanced level (B) (DES1194)

Course adviser: Mr 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: N.U.J.M.B.

Qualification: General Certificate of Education, Advanced level subjects

General Certificate of Education, Ordinary level (C) (DES1193)

Tutor: Mr 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: chemistry, biology, human biology, mathematics, physics

Attendance: one evening per subject per week for one year

Examinations: N.U.J.M.B.

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.

Implications of S. I. Units in the Practice and Teaching of Science

Course organisers: Mr J. Donnelly and Mr G. Marr

A week-end course on Friday evening and Saturday morning 7th and 8th November, 1969.

Microbiology of Manufactured Products

Course organisers: Mr H. E. G. Emmett and Mr L. G. Morton

A week-end course on Friday evening and Saturday morning the 5th and 6th December, 1969.

Instrumental Analytical Techniques

Course organisers: Dr D. J. Marks and Dr J. Taylor

A series of ten weekly demonstration/laboratory periods arranged for Wednesday evenings commencing 14th January, 1970. Experiments using the following techniques will be offered to all the members of the course and the scope of each technique will be examined in tutorial/duscussion periods: polarography, potentiometry, i. r., and u v., spectrophotometry, n.m.r. spectroscopy, thermogravimetry and differential thermal analysis, gamma spectrometry, neutron activation.

Recent Advances in Analysis

Course organisers: Dr D. Brattan and Dr D. Mason

A week-end symposium arranged on Friday evening and Saturday morning 13th and 14th February, 1970.

Recent Findings in Blood Coagulation Studies

Course organisers: Mr F. Ramsden and Dr J. Waring

A week-end symposium arranged on Friday evening and Saturday morning 13th and 14th March 1970

Administrative Staff

Registrar	J. Barnacle, D.M.A., F.C.C.S.
Assistant Registrar	E. D. Hardman
Senior Clerks	Miss E. Stobbart (Examinations and Records)
	R. G. Walton (Finance and Accounts)
Secretary to the Principal	Miss F. M. Jones
Section Clerks	Mrs R. McNamara
	Mrs P. Tinsley
Clerks	Mrs A. Allen
	Miss N. B. Chapman
	Miss E. I. A. Buggy
	Mrs M. Caunce
	Mrs S. Cooper
	Mrs E. V. Crook
	Mrs E. Gower
	Mrs J. Halstead
	Mrs M. J. Livesey
	Mrs C. Matthewson
	Miss J. H. Slee
	Mrs M. Taylor
	Miss J. K. Watt
	Mrs J. C. Horsley (Secretary to the Industrial Liaison Officer)
	Mrs. K. Howarth (Clerk to the Child Care Tutors)
Telephonists	Mrs P. B. Bamford
	Miss M. Eccles
Cashiers	Mrs R. Doherty
	Mrs M. Marland
College Lodgings Officer	Mrs P. M. Cross
Equipment Maintenance	E. Goodson (Chief Engineer)
	E. Davies
	P. Young
Refectory	Mrs M. Hamlyn White (Catering Manageress)
	Miss E. Grunshaw (Assistant Manageress)

Custodian of Premises	W. H. Hatton, M.B.I.C.SC.
Caretakers	L. Whalley (Avenham premises)
	L. Posner (Owen Street premises)
Assistant Caretakers	V. S. Baron
	J. C. Christian
	C. T. Day
	R. A. McConochie
	H. Mee
	H. Nicholls
	E. Parker
	W. Pullan
	T. C. Ritchie
	W. Sanders
	R. Seed
	J. Spencer
Groundsman	G. Cowell
Watchmen	C. Ashton
	S. Dixon
	T. W. Gregson
	A. E. Manley
	F. Miller
	F. E. Oldham
	J. Smith

Calendar

1969	Thursday, 11th September	General Staff Meeting
	ENROLMENT PERIOD	
	Thursday, 11th September	Enrolment, first day
	Friday, 12th September	Enrolment, second day
	Monday, 15th September	Enrolment, third day
	Tuesday, 16th September	Enrolment, last day
	Autumn Term (13 weeks)	
	Monday, 22nd September	All day and evening classes commence for the Autumn term
	Friday, 19th December	All departments close for Christmas after evening classes
	Spring Term (11 weeks)	
1970	Monday, 5th January	All classes re-open for the Spring term
	Tuesday, 10th February	Foundation Celebration and Address: all evening classes closed
	Friday, 20th March	All departments close for Easter after evening classes
	Summer Term (12 weeks)	
	Monday, 6th April	All classes re-open for the Summer term
	Friday, 22nd May	All departments close for Spring Holiday after evening classes
	Monday, 1st June	All classes re-open
	Friday, 3rd July	All classes close: end of term
	Friday, 10th July	Submission of reports: end of session

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

The acceptance of a student into a course must have the approval of the Head of Department. Generally, students under age 16 on the 1st September cannot be admitted.

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

Courses will be provided subject to adequate enrolment and within the limits of available teaching accommodation and staff. They may be discontinued at the discretion of the Principal at any time during the session should the number of students attending fall below a reasonable level.

Full-time and Sandwich Course Students

Application to join a course should be made before the commencement of session on the form obtainable from the Registrar. Students accepted into full-time or sandwich courses must undertake the formal enrolment procedure (described on page 38) either on one of the four advertised enrolment days or during the first two days of the course at a time arranged by the Head of Department.

Each full-time and sandwich course student will be placed under the supervision of a Course Tutor who will supervise the student's progress throughout the session and to whom the student may refer for advice about his or her course of study.

GRANTS: most students will qualify for a grant from a Local Education Authority, and it is the student's responsibility to make application for this to the Local Education Authority of the County or County Borough Council within whose area he permanently resides. Grants are assessed according to the financial position of the student, taking account of parental income and other circumstances. Generally, grants cover tuition fees (this payment is normally made direct to the College), an allowance for books, materials, examination fees, and in the case of students in advanced courses a maintenance grant (see also page 37).

Part-time Students

Intending students wishing for advice should write to the Head of Department. Application to join a course should be made in person during the enrolment period (see page 38).

Overseas Students

An overseas student wishing to join a full-time or sandwich course must complete the special application form obtainable from the Registrar. This form, when completed, should be sent by the student to the student authority in his own country; this authority will forward the form to the College through its London office.

A Certificate of Competence in the English language will be required, stating that the applicant has sufficient proficiency in written and spoken English to be able to follow a course of study conducted in English.

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 course of advanced 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 67% 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 set work, 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 set 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 noted with the name(s) of the subject(s) in which he has thus distinguished himself.

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. The only students excused paying the tuition fee at the time of enrolment are:

(*a*) full-time and sandwich course students who are to be grant-aided by a Local Education Authority; documentary evidence will be required of the offer of a grant, and

(*b*) those whose employers undertake to pay the tuition fees on their behalf; they must produce at enrolment a letter from the employer to that effect.

Fees are graded into three categories corresponding to the academic level of the course, namely:

Grade C: work of an introductory character, for example leading to G.C.E. Ordinary level.

Grade B: work of an intermediate character, above the level of Grade C and leading for example to Ordinary National Diplomas or Certificates and G.C.E. Advanced level.

Grades A2 and A1: work of an advanced character, above the level of Grade B and leading for example to Higher National Diplomas or Certificates, final professional qualifications, degrees.

The grade of each course is shown in brackets after the course title, or after the year of the course where a full course covers more than one grade of work.

Part-time students from the administrative counties of Lancashire and Westmorland and all students from Wigan County Borough who are age 16 and under age 18 on the 1st September will be enrolled without payment of the tuition fee.

NOTE TO LOCAL AUTHORITIES

The course grade designation (A2 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.

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	50 2 6	51 10 0
	2nd year		51 10 0
	3rd year		76 10 0
	4th year		76 10 0
General Certificate of Education 'A' level		42 2 6	43 10 0

Part-time Courses	Students under age 18 on 1st September £ s. d.	Students age 18 and over on 1st September £ s. d.
Grade C	1 17 6	3 12 6
Grade B	3 0 0	4 12 6
Grades A2 and A1	5 2 6	6 2 6

RESIDENTIAL GENERAL 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 period of a course, or where only partial financial support is offered by the employer.

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.

Enrolment

Students will be enrolled on the following days and during the times shown:

	morning	*afternoon*	*evening*
Thursday, 11th September	none	2.00 to 4.00	6.00 to 8.30
Friday, 12th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Monday, 15th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Tuesday, 16th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30

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 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.

Permission Vouchers

All students must obtain permission vouchers each year and present them at enrolment except (*a*) those normally resident in the County Borough of Preston or in the administrative area of Lancashire County and (*b*) part-time students normally resident in the County Borough of Wigan.

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

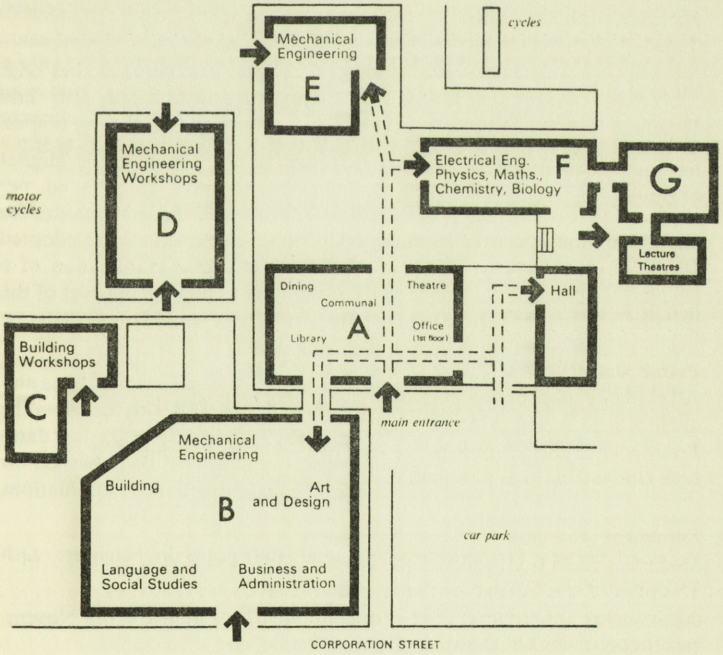
School of Art and Design (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52)

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

F BLOCK
Chemistry and Biology Department (F37)
Electrical and Electronic Engineering Department (F1, F8, F9 and F10)
Physics Department, Mathematics and Computer Studies 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.



Students will not be permitted to attend classes until they have completed the enrolment procedure. 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.

Examinations

ENTRY TO 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.* University of London, Council of Engineering Institutions, City and Guilds of London Institute) 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 and 15s. 0d. per project and, if appropriate, 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 Ordinary National Certificate in Sciences: 24th October, 1969

Associate Membership of the Institute of the Motor Industry: 7th November, 1969

Assessed papers for National Diplomas and Certificates, including endorsements: 19th December, 1969

London University B.Sc. (Sociology): 16th January, 1970

Assessed papers for Ordinary National Certificate in Business Studies: 30th January, 1970

Union of Lancashire and Cheshire Institutes, series B and C: 30th January 1970

City and Guilds of London Institute: 6th February, 1970

General Certificate of Education papers (N.U.J.M.B.): 6th February, 1970

Pitmans: 20th March, 1970

Training Council for Teachers of the Mentally Handicapped: 20th March, 1970

Royal Society of Arts, Summer Series: 1st May, 1970

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.

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. Roadway and delivery areas 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.

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.

The Recreation 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 11-45 a.m. 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.

In the interests of hygiene staff and students are requested to observe any restrictions on smoking in the dining room.

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.

STUDENT LODGINGS

The College Authorities prepare each year a register of householders and hotel keepers who are willing to offer lodging accommodation. This register is kept by the College Lodgings Officer, who initially approves and thereafter regularly inspects all registered accommodation.

Some accommodation is available in Preston and surrounding districts, but many students will have to be accommodated some distance from the College, possibly in Blackpool and Lytham. Students who are grant-aided will generally be assisted by their supporting Local Authorities if their necessary travelling expenses exceed the amount included in the grant.

Intending students should write to the College Lodgings Officer as soon as they receive confirmation of their acceptance into a course. Priority will be given to those students whose homes are 20 miles or more from the College.

CHANGES 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 home or lodgings 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 Department. 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 outside the main College premises. These classes are indicated by room number prefixes as follows in the several College documents dealing with teaching accommodation:

Av	School of Art Annexe, Avenham Lane, Preston
BTU	Blood Transfusion Unit, Lancaster
NWGB	North Western Gas Board Training Centre, Moor Lane, Preston
On	Owen Street Annexe, off Crook Street, Ribbleton Lane, Preston
PRI	Preston Royal Infirmary, Deepdale Road, Preston
TH	G.P.O. Telephone House, Moor Lane, Preston
Ty	Trinity County Secondary School, Great Shaw Street, Preston

SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of socieities 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.

The Library

Telephone: Preston 51831, ext 15

Librarian	A. Lawrence, A.L.A.
Assistant Librarians	Miss S. M. Brindle
	Miss E. Jenkins
Library Assistants	Miss J. E. Bamford
	Mrs I. M. Fuller

The College library is available to all students for reference purposes. 400 journals are now received in addition to the continuing expansion of the book stock. A set of British Standard Specifications is maintained, as also is a comprehensive set of bibliographic research works and a considerable number of indexing and abstracting publications.

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.

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.

Computing Facilities

Telephone: Preston 51831, ext 43

Computer Manager	F. Fowler
Operator/Programmer	Vacancy
Punch Operator	Mrs C. M. Hoyle

The College's computer configuration consists of an ICL1901 Acentral processing unit of 16K words of core storage, two twin exchangeable disc stores, paper tape reader/punch, card reader, line printer and console typewriter which are housed, together with adequate data preparation equipment, in a specially designed suite of rooms in the Department of Mathematics and Computer Studies.

Computer appreciation and programming is taught in advanced courses which require these modern techniques. Short courses in various computer languages, and more extensive courses in data processing and systems analysis, are arranged throughout the session. Increasing demands are being made on the computer for research and consultancy work undertaken by the teaching staff of the College.

It is proposed to collaborate with local schools in introducing modern computing methods to Sixth Form pupils.

The computer will eventually be used as the focal point of specialist degree and diploma courses in computer studies.

The Computer Manager will be pleased to give advice to representatives of industrial or commercial undertakings who may be considering the use of a computer for their own needs.

Industrial Liaison Centre

Telephone: Preston 51831, ext 41

Industrial Liaison Officer G. A. Redhead, B.SC.
Secretary Mrs J. C. Horsley

Technological knowledge and innovation are progressing so rapidly that it is difficult for any one individual to keep himself up to date. Particular difficulties are felt by small and medium sized manufacturing firms, many of which would welcome information about the results of industrial research or would appreciate access to local and national sources of information relevant to their own particular problems.

To help firms of this kind the Ministry of Technology, in conjunction with selected Technical Colleges, has established a network of Industrial Liaison Centres with the specific intention of offering assistance with technical and management problems and of encouraging the use of modern techniques.

Industrial Liaison Centres are financed from public funds and no charge is made for advice offered. However, some individuals or organisations brought in to help (only at the firm's invitation) might expect to negotiate fees. Consultations will take place in the strictest confidence, and if solutions to particular problems are found these would not be revealed outside without the firm's consent.

Close co-operation between College and Industry is intended, and the Industrial Liaison Officer is a member of the College staff; he will be pleased to visit any firm regardless of whether problems exist or not.

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.
	J. Montgomery, DIP.P.E.
Visiting Lecturers	J. H. Dickens
	R. Hindle
	A. Lewis
	R. Poole
	B. Strettle, B.J.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.

SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's nine 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 17s. 6d. if under age 18 on the 1st September or £3 12s. 6d. if age 18 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

P. F. Sanger, *President*
J. D. Callon, *Vice-President (Internal Affairs)*
K. N. Tolladay, *Vice-President (External Affairs)*
Miss J. A. Davies, *Vice-President (Female Students) and Secretary*
P. C. Johnson, *Student Treasurer*
A. G. Cottam, *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.

The Harris Students' Union Fund

The Students' Union in December 1966 established by deed a trust fund called the 'Harris Students' Union Fund.' They appointed four Trustees and invested in the fund a small sum of accumulated moneys. The fund has been registered as a charitable trust.

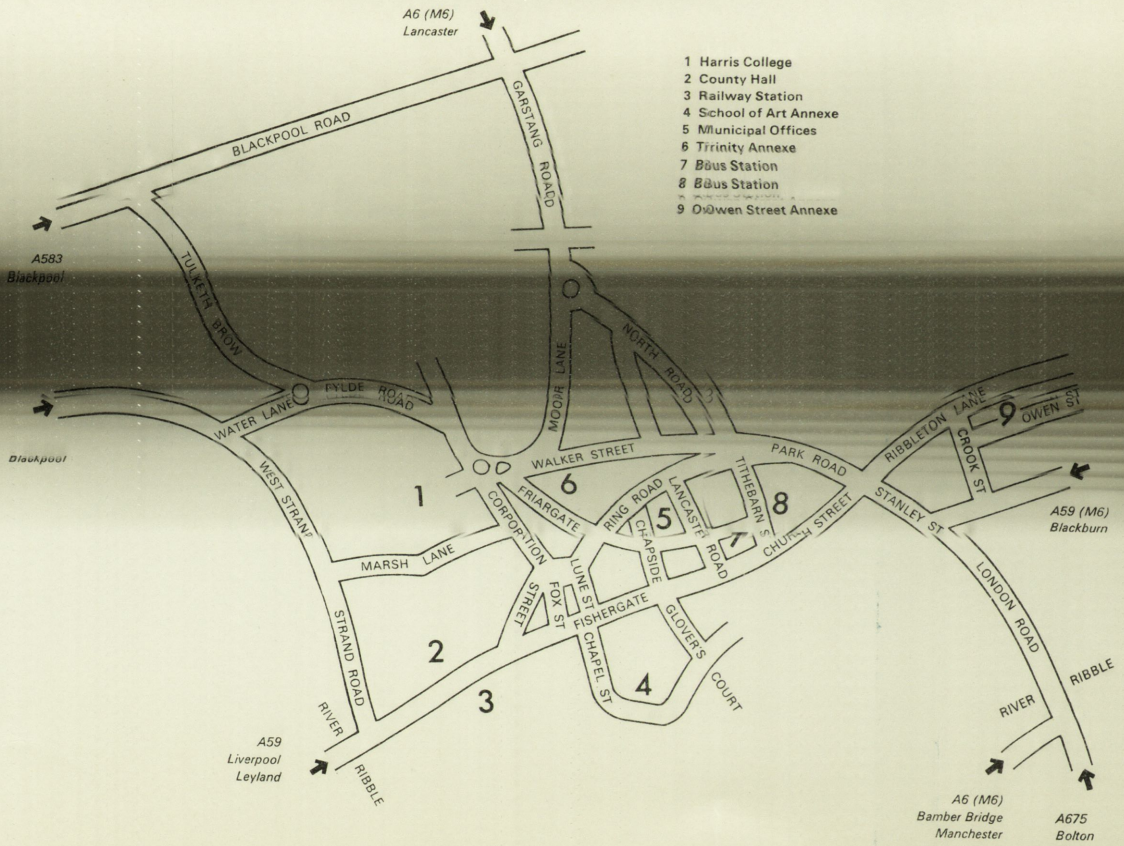
The fund is in two parts: capital moneys and revenue moneys. Both are invested by the Trustees and the annual interest from the total fund is paid to the Union as income to be expended on those of the Union's activities which 'are of an educational or otherwise charitable nature.' The capital moneys remain permanently in the fund, and as they are increased by donations they provide an increasing income to the Union.

It is intended to accumulate money in the 'revenue' section of the fund to be withdrawn at some future time for a major charitable project (such as the acquisition of property for the Union), and the trust deed prescribes that the Union may request the Trustees to sell investments and realise securities in this section of the fund to provide the outlay for such a project as is proper.

The total fund at present stands at approximately £1,000. It is in the interest of all students, present and future, to assist in augmenting it.

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. 6d., 32s. 6d. and 8s. 11d. each respectively.


A6 (M6)
Lancaster
BLACKPOOL ROAD
GARSTANG ROAD
A583
Blackpool
TULKETH BROW
FYLDE ROAD
WATER LANE
Blackpool
WEST STRAND
MOOR LANE
NORTH ROAD
WALKER STREET
PARK ROAD
RIBBLETON LANE
OWEN ST
CROOK ST
A59 (M6)
Blackburn
1 Harris College
2 County Hall
3 Railway Station
4 School of Art Annexe
5 Municipal Offices
6 Trrinity Annexe
7 Baus Station
8 Baus Station
9 Owen Street Annexe
RING ROAD
LANCASTER ROAD
TITHEBARN ST
CHURCH STREET
STANLEY ST
LONDON ROAD
RIBBLE
RIVER
CORPORATION
FRIARGATE
CHAPSIDE
MARSH LANE
LUNE ST
FOX ST
FISHERGATE
GLOVERS COURT
CHAPEL ST
STRAND ROAD
A59
Liverpool
Leyland
A6 (M6)
Bamber Bridge
Manchester
A675
Bolton

Harris College

Department of Electrical and Electronic Engineering

Session 1969–70

Harris College, Corporation Street, Preston, Lancashire
Telephone: Preston 51831–7

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, M.M., O.B.E., J.P.

Vice-President: County Councillor T. V. Brown

Members:

Alderman J. Atkinson
Alderman H. Beaumont
Alderman Mrs D. M. Dewhurst, J.P.
Alderman Mrs R. Lytton
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker
Councillor Mrs K. E. Crozier
Councillor Mrs D. Smith

County Alderman J. Bradley, M.B.E., J.P.
County Alderman J. P. Ennis, J.P.
County Alderman Sir Fred Longworth (Deputy Lieutenant of Lancashire; Vice-Chairman of Lancashire County Council)
County Councillor C. W. Eastwood
County Councillor M. J. Fitzherbert-Brockholes, J.P.
County Councillor A. J. Whittall
County Councillor Mrs W. Winn
County Councillor G. Woods

F. D. Crowe, B.SC., C.ENG., F.R.AE.S.
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., 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.

Professor E. Roland Dobbs

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, M.M., O.B.E., J.P., *President of the Harris Council*

Members:
County Councillor T. V. Brown, *Vice-President of the Harris Council*
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

The Harris College is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are nine teaching departments in the College: the School of Art and Design, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical and Electronic Engineering, Language and Social Studies, Mathematics and Computer Studies, Mechanical Civil and Production Engineering, and Physics. 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 increasing use by industrialists of the Industrial Liaison Centre is expected to widen the range of these activities.

The Academic Board

Subject to the ultimate responsibility of the Harris Council the responsibility for the planning, co-ordination, development and oversight of the academic work of the College is delegated to an Academic Board of 30 members which includes representatives from all departmental Boards of Studies, representatives of the teaching staff generally, and students' representatives. The Board has power to co-opt specialist advisers from Universities, Colleges and other bodies when appropriate.

The Department of Electrical and Electronic Engineering

The Department of Electrical and Electronic Engineering provides full-time, sandwich and part-time courses leading to corporate membership of the Institution of Electrical Engineers, the Institution of Electronic and Radio Engineers and Chartered Engineer status. 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.

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 a high voltage laboratory, various items of high accuracy electrical and electronic measuring equipment and measurement standards certified by the National Physical Laboratory.

Post Graduate Research. Full-time research facilities for Graduates are available in the fields of electronics, control, machines and high voltage engineering. The Governing Body of the College offers each year a number of Research Assistantships. Suitable candidates may work for higher degrees subject to approval by their own University.

The Departmental Board of Studies

The Board of Studies is directly responsible to the Academic Board, offering advice on the planning, co-ordination and development of the academic work of the Department. Members include senior teaching staff, representatives of the teaching staff of the department generally, and students' representatives.

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Department of Electrical and Electronic 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.
Senior Lecturers	R. N. Abbott, B.SC., C.ENG., M.I.E.E.
	J. A. Askew, M.SC., C.ENG., M.I.E.E.
	R. O. Hall, B.SC.TECH., A.M.C.T., C.ENG., M.I.E.E.
	J. K. Moss, B.SC., C.ENG., M.I.E.E.
	H. C. Parker, B.SC.(ENG.), C.ENG., M.I.E.E., M.I.MECH.E.
	N. T. Slater, B.SC., C.ENG., M.I.E.E.
Lecturers and Assistant Lecturers	D. Baxter, A.I.E.R.E., M.I.S.M., A.M.INST.E.
	J. M. Berry
	K. Bowker
	T. H. Cowperthwaite
	F. H. Downham
	H. Duckworth, C.ENG., M.I.E.E.
	R. Duddle, GRAD.I.E.R.E.
	S. E. Egerton, GRAD.I.E.R.E.
	J. Gargan, M.SC.
	T. G. Izatt, M.A.
	W. S. Kirkpatrick, C.ENG., M.I.E.E.
	B. Moore, B.SC.
	R. J. Simpson, B.SC.
	F. Walmsley, A.M.A.S.E.E., A.M.I.T.E.
	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
	R. W. Baxter
	N. Faulkner
	J. J. Wilson
Visiting Lecturers	D. Anderson
	L. A. Bedworth
	J. Blackie, F.I.E.E.
	L. Bradley
	E. Byron
	B. Carr
	D. Conway

Visiting Lecturers (contd.)

R. C. Cross
W. B. Crook
G. V. Davy
W. N. F. Evans
W. Fowler
G. Gibson, A.M.A.S.E.E., A.M.I.T.E.
F. Hackett, A.M.A.S.E.E., A.M.I.T.E.
E. Hatton
D. Hutchinson
A. Jackson, A.M.I.C.E.
A. Kent
R. E. Kenwright, M.I.E.E.
B. Lewis
B. Marshall, M.I.E.E.
K. Rickard
J. D. Rowley
M. S. Salthouse
Mrs B. Standing
C. W. Sturley
F. J. Sweetman
D. Taylor
M. A. Wilson
D. E. Woolsey

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Corporate Membership of the Professional Institutions: the Council of Engineering Institutions representing fourteen 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 (DES3690)

Course adviser: Mr H. C. Parker

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. 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. The final year of the course leads to the Council of Engineering Institutions' Part 2 Examinations, and Associate Membership of the professional electrical and electronic engineering institutions.

In each of the first two years of the course the students will spend alternate approximately six monthly periods in full-time study at the College and in industry. The final two years 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.

Qualifications for entry to the first year of the course: an Ordinary National Certificate or Diploma in Engineering, *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, *or* any equivalent qualification.

1st Year (A2). *Tutor:* Mr J. A. Askew. *Curriculum:* mathematics, engineering drawing, physics, applied mechanics, electrical technology, general studies.

College course: 22nd September to 17th April (26 weeks)

Examinations: internal

2nd Year (A2). *Tutor:* Mr R. N. Abbott. *Curriculum:* mathematics, engineering physics, materials and machines, electrotechnology, applied electricity, general studies.

College course: 22nd September to 17th April (26 weeks)

Examinations: internal

3rd Year (A2). *Tutor:* Mr H. C. Parker. *Curriculum:* mathematics, circuits, fields and measurements, electronics, electricity supply, unified theory of electrical machines, control and computation, management studies.

College course: 22nd September to 17th April (26 weeks)

Examinations: internal, externally assessed

Qualification: Higher National Diploma in Electrical and Electronic Engineering.

4th Year (A1). *Tutor:* Mr R. O. Hall. *Curriculum:* advanced studies in the fields of electronics, communication engineering, computer engineering, electrical power engineering, electrical machines, mathematics.

College course: 20th April to 3rd July and September to May (36 weeks approximately)

Examinations: C.E.I. Part 2

Qualification: Associate Membership of the Institution of Electrical Engineers and/or Graduate Membership of the Institution of Electronic and Radio Engineers

Council of Engineering Institutions, Part 2 Examination (A1) (DES3708)

Course adviser: Mr R. O. Hall

The Institution of Electrical Engineers and the Institution of Electronic and Radio Engineers are the professional organisations for electrical and electronic engineers. These form part of the Council of Engineering Institutions (C.E.I.). The I.E.E. and the I.E.R.E. both require graduate level academic qualifications for entry to corporate membership, and these are provided by the C.E.I. Part 2 Examinations. The title of Chartered Engineer (C.Eng.) may be conferred on corporate members after a period of suitable industrial experience.

The examination is accepted by most Universities as an entry qualification to their higher degree courses (M.Sc. or Ph.D.).

Qualifications for entry: a Higher National Diploma, or a good Higher National Certificate with three endorsement subjects, or any equivalent qualification.

Curriculum: subjects selected from electrical energy, electrical power engineering, electromagnetic fields and circuits, communication engineering, electronic engineering, computer engineering, systems and control engineering, mathematics.

College course: 20th April to 3rd July and September to May (36 weeks approx.). Suitable external candidates will be considered for admission in September.

Examinations: C.E.I. Part 2

Qualification: Associate Membership of the Institution of Electrical Engineers, or Graduate Membership of the Institution of Electronic and Radio Engineers

Part-time Day Courses

Institution of Electrical Engineers Part III Examinations (A1) (DES1417)

Course adviser: Mr J. A. Askew

The regulations governing Associate Membership of the Institution have now been changed and the Part III examinations will not be held after November 1969. The November examinations will be available only for those students wishing to resit in one or more subjects. The purpose of this course is to prepare such students for the November examinations and will terminate when they are completed.

Qualifications for entry: only students wishing to resit are eligible to enter

Curriculum: studies in the specialist subjects or advanced electrical engineering

Attendance: all day Monday

Examinations: I.E.E. Part III

Qualification: Associate Membership of the Institution of Electrical Engineers

Graduate Membership of the Institution of Electronic and Radio Engineers (A1) (DES1423)

Course adviser: Mr J. K. Moss

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, or a Higher National Diploma, 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 Examinations. This route to graduate membership will terminate in 1970.

Qualifications for entry: A Higher National Certificate or Diploma in Electrical and Electronic Engineering, a Higher National Certificate in Electrical Engineering, or any other equivalent qualification

Curriculum: selected from electronics, telecommunications, and control systems

Attendance: all day Thursday and one evening as required

Examinations: internal, externally assessed

Qualification: Graduate Membership of the Institution of Electronic and Radio Engineers

Higher National Certificate in Electrical and Electronic Engineering (A2) (DES1079)

Course adviser: Mr R. J. Simpson

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. *Curriculum:* electrical technology, electrical power or electronics, mathematics.

Attendance: all day Wednesday and Wednesday evening

Examinations: internal

2nd Year. *Curriculum:* electrical measurements, electrical power *or* electronics, mathematics.

Attendance: all day Wednesday and Wednesday evening

Examinations: internal, externally assessed

Qualification: Higher National Certificate in Electrical and Electronic Engineering

Endorsements to the Higher National Certificate in Electrical and Electronic Engineering (A2) (DES3298)

Course adviser: Mr J. K. Moss

Students who hold the Higher National Certificate can take endorsement subjects in specialised topics.

The subjects available are: electronics, control systems, telecommunications, mathematics.

Attendance: all day Thursday and one evening as required

Examinations: H.N.C. endorsement subject, externally assessed

Qualification: endorsement certificate to the Higher National Certificate in Electrical and Electronic Engineering

Ordinary National Certificate in Engineering (B) (DES1053)

Course adviser: Mr B. Moore

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 workshop processes and materials, *or* G.C.E. 'O' level passes in at least four subjects including mathematics and an approved science subject.

1st Year. *Curriculum:* mechanical engineering science, physics, electrical science, mathematics, English and general studies.

Attendance: all day Monday and Monday evening; a further evening attendance may also be required depending on qualifications already obtained

Examinations: internal

2nd Year. *Curriculum:* applied mechanics, physics, electrical engineering, mathematics, English and general studies.

Attendance: all day Thursday and Thursday evening; a further evening attendance may also be required depending on qualifications already obtained.

Examinations: O.N.C. in Engineering

Qualification: Ordinary National Certificate in Engineering

General Course in Engineering (C) (DES1547)

Course adviser: Mr R. Duddle

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 or a Technicians' Course in either Electrical or Mechanical Engineering.

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. *Curriculum:* electrical and mechanical science, engineering drawing, mathematics, workshop processes and materials, general studies.

Attendance: all day Friday and one evening

Examinations: internal

2nd Year. *Curriculum:* electrical and mechanical science, engineering drawing, mathematics, workshop processes and materials, general studies.

Attendance: all day Tuesday and one evening, *or* all day Wednesday and one evening

Examinations: U.L.C.I. 105–2

Electrical Technicians' Certificate

Course adviser: Mr W. S. Kirkpatrick

A five-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, an Electrical Technicians' Certificate is awarded on successful completion of a further two years of the course and a Full Technological Certificate is awarded after successful completion of the fifth year of the course.

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.

Part I (DES1402)

1st Year (C). *Tutor:* Mr T. H. Cowperthwaite. *Curriculum:* mathematics, electrical principles, related studies.

Attendance: all day Friday and one evening

Examinations: internal

2nd Year (B). *Tutor:* Mr T. H. Cowperthwaite. *Curriculum:* mathematics, electrical principles, related studies

Attendance: all day Tuesday and one evening

Examinations: U.L.C.I. 125–2

Qualification: U.L.C.I. Intermediate Certificate in Electrical Technicians' Work

Part II (DES91)

1st Year (B). *Tutor:* Mr W. S. Kirkpatrick. *Curriculum:* electrical engineering principles, mathematics, industrial electronics or electrical power equipment.

Attendance: all day Wednesday

Examinations: internal

2nd Year (A2 NP). *Tutor:* Mr W. S. Kirkpatrick. *Curriculum:* mathematical applications, testing methods and reliability, instrument and measurement technology, electrical power equipment or industrial electronics.

Attendance: all day Thursday

Examinations: C.G.L.I. 57

Qualification: City and Guilds of London Institute's Electrical Technicians' Certificate, Part II

Part III (A2 NP) (DES92)

Tutor: Mr W. S. Kirkpatrick

Students who satisfy the examiners in two endorsement subjects and who possess the Electrical Technicians' Certificate, Part II, will be awarded a Full Technological Certificate.

The following endorsement subjects are offered during the Session 1969–70: industrial control systems, industrial electronics, transmission and distribution of electrical energy. Students normally study the subject of industrial control systems and one other subject.

Attendance: all day Monday

Examinations: C.G.L.I. 57

Qualification: Full Technological Certificate of the City and Guilds of London Institute

Telecommunication Technicians' Certificate

Course adviser: Mr N. T. Slater

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 a further two years provided that in the final year the 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.

Intermediate (Part I) (DES79)

1st Year (C). *Tutor:* Mr J. Gargan. *Curriculum:* science, mathematics, elementary tececommunications practice or reports, drawing and processes.

Attendance: all day Friday

Examinations: C.G.L.I. 49

2nd Year (B). *Tutor:* Mr J. Gargan. *Curriculum:* electrical principles, mathematics, either telephony or telegraphy or radio and line transmission.

Attendance: all day Tuesday

Examinations: C.G.L.I. 49

Qualification: City and Guilds of London Institute's Intermediate (Part I) Telecommunication Technicians' Certificate

Final (Part II) (DES81)

1st Year (B). *Tutor:* Mr S. E. Egerton. *Curriculum:* electrical principles, mathematics, telephony or radio and line transmission

Attendance: all day Friday

Examinations: C.G.L.I. 49

2nd Year (A2 NP). *Tutor:* Mr S. E. Egerton. *Curriculum:* electrical principles, mathematics, telephony or radio.

Attendance: all day Thursday

Examinations: C.G.L.I. 49

Qualification: City and Guilds of London Institute's Final (Part II) Telecommunication Technicians' Certificate

Colour Television Certificate (A2 NP) (DES459)

Course adviser: Mr 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 Final Servicing Certificate

Curriculum: techniques of colour television servicing together with associated practical work.

Attendance: one half-day and one evening per week (Wednesday)

Examinations: C.G.L.I. 48

Qualification: City and Guilds of London Institute's Colour Television Certificate

Radio and Television Servicing Certificate

Course adviser: Mr D. Baxter

This course is being progressively replaced by the Radio, Television and Electronics Technicians' Course (C.G.L.I. No. 434) and the Radio, Television and Electronics Mechanics Course (C.G.L.I. No. 515). New enrolments are being accepted for the first year in 1969. The remaining years of this five-year course provide qualifications for those 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 Final Certificate in Radio and Television Servicing is awarded on successful completion of a further two years 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. Students entering the first year of the course should normally be 16 years of age.

Intermediate (DES77)

2nd Year (C). *Tutor:* Mr J. M. Berry. *Curriculum:* radio theory, calculations and drawing, practical work, English.

Attendance: all day Tuesday

Examinations: internal

3rd Year (B). *Tutor:* Mr J. M. Berry. *Curriculum:* radio theory, techniques and calculations, practical work.

Attendance: all day Monday and one evening

Examinations: C.G.L.I. 48 (Intermediate)

Qualification: City and Guilds of London Institute's Intermediate Certificate in Radio and Television Servicing

Final (DES78)

1st Year (B). *Tutor:* Mr J. M. Berry. *Curriculum:* television theory, television techniques, practical work.

Attendance: all day Wednesday

Examinations: internal

2nd Year (A2 NP). *Tutor:* Mr J. M. Berry. *Curriculum:* television theory, television techniques, practical work.

Attendance: all day Thursday

Examinations: C.G.L.I. 48 (Final)

Qualification: City and Guilds of London Institute's Final Certificate in Radio and Television Servicing

Radio, Television and Electronics Technicians' Certificate

Course adviser: Mr D. Baxter

This course provides the further educational requirements of technicians employed in the maintenance of electronic equipment, both domestic and professional. It is intended for students who are employed in radio, television or electronic servicing so that their education can be related to practical experience. Assessment of practical work is an eligibility requirement for the examinations.

There is a Part I examination after two years of study and Part II after a further two years.

Qualifications for entry: full-time education up to the age of 16 or more and a standard in mathematics and science satisfactory to the Principal of the College, or successful completion of a suitable preliminary technical part-time course. Students entering the first year of the course should be 16 years of age before December 31st, 1969.

Part I

1st Year (C). *Tutor:* Mr D. Baxter. *Curriculum:* mathematics, engineering science, reports, drawing and processes.

Attendance: all day Friday and Friday evening

Examinations: C.G.L.I. 434

2nd Year (B). *Tutor:* Mr D. Baxter. *Curriculum:* mathematics, principles, radio and electronics.

Attendance: all day Tuesday and Tuesday evening

Examinations: C.G.L.I. 434

Qualification: City and Guilds of London Institute's Radio, Television and Electronic Technicians' Certificate, Part I

Radio, Television and Electronics Mechanics' Certificate

Course adviser: Mr F. H. Downham

This three-year course effectively replaces the intermediate radio and television servicing course but extends the breadth of coverage. It includes the minimum amount of circuit analysis necessary for the correct use of basic instruments in fault finding on a block diagram basis. The course is intended for students who are employed in the radio, television or electronics servicing industries so that their education can be related to practical training.

The practical examination in the third year is optional but College assessment of practical work is an eligibility requirement for the examinations. There is a Part I examination after one year of study and a Part II examination after a further two years of study.

Qualifications for entry: school leavers who intend to enter the radio, television or electronics servicing industries

Part 1

1st Year (C). *Tutor:* Mr F. H. Downham. *Curriculum:* electronic systems and techniques, practical work, principles, calculations, English and general studies.

Attendance: all day Friday and Friday evening

Examinations: C.G.L.I. 515

Qualification: City and Guilds of London Institute's Radio, Television and Electronic Studies Certificate, Part 1

Electrical Installation—Course A (DES83)

Course adviser: Mr C. Yates

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.

Qualifications for entry: school leavers of 15 years of age who intend to undertake a craft apprenticeship.

1st Year (C). *Curriculum:* craft practice, craft theory, related studies, English.

Attendance: all day Thursday

Examinations: internal

Electrical Installation—Course B (DES84)

Course adviser: Mr C. Yates

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 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 (C). *Curriculum:* installation technology and practical work, science, calculations and drawing, English.

Attendance: all day Monday and one evening

Examinations: internal

2nd Year (C). *Curriculum:* installation technology and practical work, science, calculations and drawing, English.

Attendance: all day Tuesday and one evening

Examinations: internal

3rd Year (B). *Curriculum:* installation technology and practical work, science, drawing and tutorial, mathematics.

Attendance: all day Friday and one evening

Examinations: C.G.L.I. 51

Qualification: City and Guilds of London Institute's Course B Certificate in Electrical Installation

Electrical Installation—Course C (DES85)

Course adviser: Mr F. Walmsley

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 (B). *Curriculum:* installation technology and practical work,, electrical science, calculations.

Attendance: all day Wednesday and one evening

Examinations: internal

2nd Year (A2 NP). *Curriculum:* installation technology and practical work,, electrical science, calculations.

Attendance: all day Wednesday and one evening

Examinations: C.G.L.I. 51

Qualification: City and Guilds of London Institute's Course C Certi-- ficate in Electrical Installation

Graduate Membership of the Institution of Electronic and Radio Engineers (A1) (DES1423)

Course adviser: Mr J. K. Moss

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 Examinations. This route to graduate membership will terminate in 1970.

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

Qualification: Graduate Membership of the Institution of Electronic and Radio Engineers

Higher National Certificate in Electrical and Electronic Engineering (A2) (DES1079)

Course adviser: Mr R. J. Simpson

A two-year course leading to the award of the Higher National Certificate in Electrical and Electronic Engineering. From September 1969 only the second year will be offered.

2nd Year. *Curriculum:* electrical measurements, electrical power or electronics, mathematics.

Attendance: Monday, Wednesday and Friday evenings

Examinations: internal, externally assessed

Qualification: Higher National Certificate in Electrical and Electronic Engineering

Endorsements to the Higher National Certificate in Electrical and Electronic Engineering (A2)

Course adviser: Mr J. K. Moss

Students who hold the Higher National Certificate can study endorsement subjects in specialised topics.

Attendance: from one to three evenings per week

The subjects available are: electronics (DES1129), control systems (DES 1124), telecommunications (DES1174), mathematics (DES1146)

The courses offered each consist of one subject.

Examinations: internal, externally assessed

Qualification: Endorsement to the Higher National Certificate in Electrical and Electronic Engineering

Endorsements to the Ordinary National Certificate in Engineering (B) (DES1053)

The following subjects are available as endorsements to the Ordinary National Certificate in Engineering :English, engineering drawing, applied mechanics, physics. For further details consult the Head of Department.

Telecommunication Technicians' Certificate

Course adviser: Mr N. T. Slater

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 a further two years provided that in the final year the 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.

Intermediate (Part I) (DES79)

1st Year (C). *Tutor:* Mr J. Gargan. *Curriculum:* science, mathematics, or elementary telecommunications practice.

Attendance: three evenings per week

Examinations: C.G.L.I. 49

2nd Year (B). *Tutor:* Mr J. Gargan. *Curriculum:* electrical principles, mathematics, either telephony and telegraphy or radio and line transmission or computers.

Attendance: three evenings per week

Examinations: C.G.L.I. 49 (Intermediate)

Qualification: City and Guilds of London Institutes Intermediate (Part I) Telecommunication Technicians' Certificate

Final (Part II) (DES81)

1st Year (B). *Tutor:* Mr S. E. Egerton. *Curriculum:* electrical principles, mathematics, either telephony or line plant practice or computers.

Attendance: three evenings per week

Examinations: C.G.L.I. 49

2nd Year (A2 NP). *Tutor:* Mr S. E. Egerton. *Curriculum:* electrical principles, mathematics, telephony.

Attendance: three evenings per week

Examinations: C.G.L.I. 49 (Final)

Qualification: City and Guilds of London Institute's Final (Part II) Certificate in Telecommunication Technicians' Work

Electrical Installation—Course B (DES84)

Course adviser: Mr K. Bowker

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. From September 1969 only the second and third years of the course will be offered.

2nd Year (C). *Curriculum:* installation technology and practical work, science, calculations and drawing.

Attendance: three evenings per week

Examinations: internal

3rd Year (B). *Curriculum:* installation technology and practical, electrical science, mathematics.

Attendance: three evenings per week

Examinations: C.G.L.I. 51

Qualification: City and Guilds of London Institute's Course B Certificate in Electrical Installation

Radio Amateurs Examination (B) (DES88)

Course adviser: Mr 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.

Stereo Multiplex Decoding

Organiser: D. Baxter, A.I.E.R.E., M.I.S.M., A.M.INST.E.

A course of six evening lectures commencing on Friday 3rd October, 1969. The syllabus will cover the theory and setting up of the multiplex decoder unit.

Colour Television Servicing Techniques

Organisers: D. Baxter, A.I.E.R.E., M.I.S.M., A.M.INST.E. and J. M. Berry

A course of twelve evening lectures commencing Friday, 9th January 1970. The course will cover the theory, techniques and practical work required for colour television servicing, together with the use of test equipment necessary for fault diagnosis in colour receivers. Students already holding a Colour Television Certificate should find this course particularly useful.

An Introduction to Logical and Digital Techniques

Organiser: J. K. Moss, B.SC., C.ENG., M.I.E.E.

A course of four evening lectures commencing in February 1970. The first two lectures will be of an introductory nature concerned with the basic logical theory and electronic circuitry; the two following lectures will be concerned with industrial applications.

Administrative Staff

Registrar	J. Barnacle, D.M.A., F.C.C.S.
Assistant Registrar	E. D. Hardman
Senior Clerks	Miss E. Stobbart (Examinations and Records)
	R. G. Walton (Finance and Accounts)
Secretary to the Principal	Miss F. M. Jones
Section Clerks	Mrs R. McNamara
	Mrs P. Tinsley
Clerks	Mrs A. Allen
	Miss N. B. Chapman
	Miss E. I. A. Buggy
	Mrs M. Caunce
	Mrs S. Cooper
	Mrs E. V. Crook
	Mrs E. Gower
	Mrs J. Halstead
	Mrs M. J. Livesey
	Mrs C. Matthewson
	Miss J. H. Slee
	Mrs M. Taylor
	Miss J. K. Watt
	Mrs J. C. Horsley (Secretary to the Industrial Liaison Officer)
	Mrs. K. Howarth (Clerk to the Child Care Tutors)
Telephonists	Mrs P. B. Bamford
	Miss M. Eccles
Cashiers	Mrs R. Doherty
	Mrs M. Marland
College Lodgings Officer	Mrs P. M. Cross
Equipment Maintenance	E. Goodson (Chief Engineer)
	E. Davies
	P. Young
Refectory	Mrs M. Hamlyn White (Catering Manageress)
	Miss E. Grunshaw (Assistant Manageress)

Custodian of Premises	W. H. Hatton, M.B.I.C.SC.
Caretakers	L. Whalley (Avenham premises)
	L. Posner (Owen Street premises)
Assistant Caretakers	V. S. Baron
	J. C. Christian
	C. T. Day
	R. A. McConochie
	H. Mee
	H. Nicholls
	E. Parker
	W. Pullan
	T. C. Ritchie
	W. Sanders
	R. Seed
	J. Spencer
Groundsman	G. Cowell
Watchmen	C. Ashton
	S. Dixon
	T. W. Gregson
	A. E. Manley
	F. Miller
	F. E. Oldham
	J. Smith

Calendar

1969	Thursday, 11th September	General Staff Meeting
	ENROLMENT PERIOD	
	Thursday, 11th September	Enrolment, first day
	Friday, 12th September	Enrolment, second day
	Monday, 15th September	Enrolment, third day
	Tuesday, 16th September	Enrolment, last day
	Autumn Term (13 weeks)	
	Monday, 22nd September	All day and evening classes commence for the Autumn term
	Friday, 19th December	All departments close for Christmas after evening classes
	Spring Term (11 weeks)	
1970	Monday, 5th January	All classes re-open for the Spring term
	Tuesday, 10th February	Foundation Celebration and Address: all evening classes closed
	Friday, 20th March	All departments close for Easter after evening classes
	Summer Term (12 weeks)	
	Monday, 6th April	All classes re-open for the Summer term
	Friday, 22nd May	All departments close for Spring Holiday after evening classes
	Monday, 1st June	All classes re-open
	Friday, 3rd July	All classes close: end of term
	Friday, 10th July	Submission of reports: end of session

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

The acceptance of a student into a course must have the approval of the Head of Department. Generally, students under age 16 on the 1st September cannot be admitted.

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

Courses will be provided subject to adequate enrolment and within the limits of available teaching accommodation and staff. They may be discontinued at the discretion of the Principal at any time during the session should the number of students attending fall below a reasonable level.

Full-time and Sandwich Course Students

Application to join a course should be made before the commencement of session on the form obtainable from the Registrar. Students accepted into full-time or sandwich courses must undertake the formal enrolment procedure (described on page 42) either on one of the four advertised enrolment days or during the first two days of the course at a time arranged by the Head of Department.

Each full-time and sandwich course student will be placed under the supervision of a Course Tutor who will supervise the student's progress throughout the session and to whom the student may refer for advice about his or her course of study.

GRANTS: most students will qualify for a grant from a Local Education Authority, and it is the student's responsibility to make application for this to the Local Education Authority of the County or County Borough Council within whose area he permanently resides. Grants are assessed according to the financial position of the student, taking account of parental income and other circumstances. Generally, grants cover tuition fees (this payment is normally made direct to the College), an allowance for books, materials, examination fees, and in the case of students in advanced courses a maintenance grant (see also page 43).

Part-time Students

Intending students wishing for advice should write to the Head of Department. Application to join a course should be made in person during the enrolment period (see page 42).

Overseas Students

An overseas student wishing to join a full-time or sandwich course must complete the special application form obtainable from the Registrar. This form, when completed, should be sent by the student to the student authority in his own country; this authority will forward the form to the College through its London office.

A Certificate of Competence in the English language will be required, stating that the applicant has sufficient proficiency in written and spoken English to be able to follow a course of study conducted in English.

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 course of advanced 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 67% 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 set work, 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 set 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 noted with the name(s) of the subject(s) in which he has thus distinguished himself.

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. The only students excused paying the tuition fee at the time of enrolment are:

(*a*) full-time and sandwich course students who are to be grant-aided by a Local Education Authority; documentary evidence will be required of the offer of a grant, and

(*b*) those whose employers undertake to pay the tuition fees on their behalf; they must produce at enrolment a letter from the employer to that effect.

Fees are graded into three categories corresponding to the academic level of the course, namely:

Grade C: work of an introductory character, for example leading to G.C.E. Ordinary level.

Grade B: work of an intermediate character, above the level of Grade C and leading for example to Ordinary National Diplomas or Certificates and G.C.E. Advanced level.

Grades A2 and A1: work of an advanced character, above the level of Grade B and leading for example to Higher National Diplomas or Certificates, final professional qualifications, degrees.

The grade of each course is shown in brackets after the course title, or after the year of the course where a full course covers more than one grade of work.

Part-time students from the administrative counties of Lancashire and Westmorland and all students from Wigan County Borough who are age 16 and under age 18 on the 1st September will be enrolled without payment of the tuition fee.

NOTE TO LOCAL AUTHORITIES

The course grade designation (A2 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.

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	50 2 6	51 10 0
	2nd year		51 10 0
	3rd year		51 10 0
	4th year	(see C.E.I. fees below)	
Council of Engineering Institutions, Part 2 Examinations	April to July		25 0 0
	September to May		51 10 0

Part-time Courses	Students under age 18 on 1st September £ s. d.	Students age 18 and over on 1st September £ s. d.
Grade C	1 17 6	3 12 6
Grade B	3 0 0	4 12 6
Grades A2 and A1	5 2 6	6 2 6

RESIDENTIAL GENERAL 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 period of a course, or where only partial financial support is offered by the employer.

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.

Enrolment

Students will be enrolled on the following days and during the times shown:

	morning	*afternoon*	*evening*
Thursday, 11th September	none	2.00 to 4.00	6.00 to 8.30
Friday, 12th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Monday, 15th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Tuesday, 16th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30

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 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.

Permission Vouchers
All students must obtain permission vouchers each year and present them at enrolment except (*a*) those normally resident in the County Borough of Preston or in the administrative area of Lancashire County and (*b*) part-time students normally resident in the County Borough of Wigan.

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:*

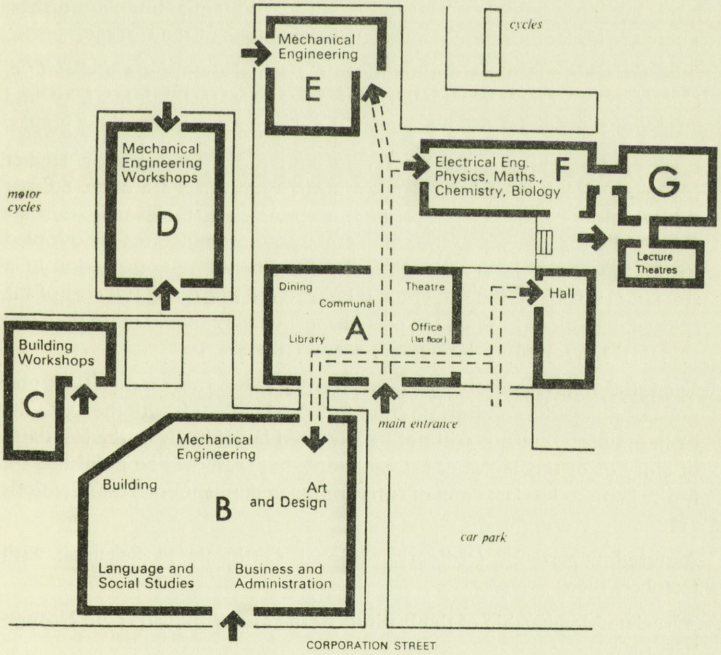
B BLOCK
School of Art and Design (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52)

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

F BLOCK
Chemistry and Biology Department (F37)
Electrical and Electronic Engineering Department (F1, F8, F9 and F10)
Physics Department, Mathematics and Computer Studies 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.



Students will not be permitted to attend classes until they have completed the enrolment procedure. 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.

Examinations

ENTRY TO 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.* University of London, Council of Engineering Institutions, City and Guilds of London Institute) 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 and 15s. od. per project and, if appropriate, 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 Ordinary National Certificate in Sciences: 24th October, 1969

Associate Membership of the Institute of the Motor Industry: 7th November, 1969

Assessed papers for National Diplomas and Certificates, including endorsements: 19th December, 1969

London University B.Sc. (Sociology): 16th January, 1970

Assessed papers for Ordinary National Certificate in Business Studies: 30th January, 1970

Union of Lancashire and Cheshire Institutes, series B and C: 30th January 1970

City and Guilds of London Institute: 6th February, 1970

General Certificate of Education papers (N.U.J.M.B.): 6th February, 1970

Pitmans: 20th March, 1970

Training Council for Teachers of the Mentally Handicapped: 20th March, 1970

Royal Society of Arts, Summer Series: 1st May, 1970

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.

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. Roadway and delivery areas 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.

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.

The Recreation 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 11-45 a.m. 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.

In the interests of hygiene staff and students are requested to observe any restrictions on smoking in the dining room.

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.

STUDENT LODGINGS

The College Authorities prepare each year a register of householders and hotel keepers who are willing to offer lodging accommodation. This register is kept by the College Lodgings Officer, who initially approves and thereafter regularly inspects all registered accommodation.

Some accommodation is available in Preston and surrounding districts, but many students will have to be accommodated some distance from the College, possibly in Blackpool and Lytham. Students who are grant-aided will generally be assisted by their supporting Local Authorities if their necessary travelling expenses exceed the amount included in the grant.

Intending students should write to the College Lodgings Officer as soon as they receive confirmation of their acceptance into a course. Priority will be given to those students whose homes are 20 miles or more from the College.

CHANGES 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 home or lodgings 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 Department. 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 outside the main College premises. These classes are indicated by room number prefixes as follows in the several College documents dealing with teaching accommodation:

Av	School of Art Annexe, Avenham Lane, Preston
BTU	Blood Transfusion Unit, Lancaster
NWGB	North Western Gas Board Training Centre, Moor Lane, Preston
On	Owen Street Annexe, off Crook Street, Ribbleton Lane, Preston
PRI	Preston Royal Infirmary, Deepdale Road, Preston
TH	G.P.O. Telephone House, Moor Lane, Preston
Ty	Trinity County Secondary School, Great Shaw Street, Preston

SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of socieities 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.

The Library

Telephone: Preston 51831, ext 15

Librarian	A. Lawrence, A.L.A.
Assistant Librarians	Miss S. M. Brindle
	Miss E. Jenkins
Library Assistants	Miss J. E. Bamford
	Mrs I. M. Fuller

The College library is available to all students for reference purposes. 400 journals are now received in addition to the continuing expansion of the book stock. A set of British Standard Specifications is maintained, as also is a comprehensive set of bibliographic research works and a considerable number of indexing and abstracting publications.

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.

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.

Computing Facilities

Telephone: Preston 51831, ext 43

Computer Manager	F. Fowler
Operator/Programmer	Vacancy
Punch Operator	Mrs C. M. Hoyle

The College's computer configuration consists of an ICL1901A central processing unit of 16K words of core storage, two twin exchangeable disc stores, paper tape reader/punch, card reader, line printer and console typewriter which are housed, together with adequate data preparation equipment, in a specially designed suite of rooms in the Department of Mathematics and Computer Studies.

Computer appreciation and programming is taught in advanced courses which require these modern techniques. Short courses in various computer languages, and more extensive courses in data processing and systems analysis, are arranged throughout the session. Increasing demands are being made on the computer for research and consultancy work undertaken by the teaching staff of the College.

It is proposed to collaborate with local schools in introducing modern computing methods to Sixth Form pupils.

The computer will eventually be used as the focal point of specialist degree and diploma courses in computer studies.

The Computer Manager will be pleased to give advice to representatives of industrial or commercial undertakings who may be considering the use of a computer for their own needs.

Industrial Liaison Centre

Telephone: Preston 51831, ext 41

Industrial Liaison Officer G. A. Redhead, B.SC.
Secretary Mrs J. C. Horsley

Technological knowledge and innovation are progressing so rapidly that it is difficult for any one individual to keep himself up to date. Particular difficulties are felt by small and medium sized manufacturing firms, many of which would welcome information about the results of industrial research or would appreciate access to local and national sources of information relevant to their own particular problems.

To help firms of this kind the Ministry of Technology, in conjunction with selected Technical Colleges, has established a network of Industrial Liaison Centres with the specific intention of offering assistance with technical and management problems and of encouraging the use of modern techniques.

Industrial Liaison Centres are financed from public funds and no charge is made for advice offered. However, some individuals or organisations brought in to help (only at the firm's invitation) might expect to negotiate fees. Consultations will take place in the strictest confidence, and if solutions to particular problems are found these would not be revealed outside without the firm's consent.

Close co-operation between College and Industry is intended, and the Industrial Liaison Officer is a member of the College staff; he will be pleased to visit any firm regardless of whether problems exist or not.

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.
	J. Montgomery, DIP.P.E.
Visiting Lecturers	J. H. Dickens
	R. Hindle
	A. Lewis
	R. Poole
	B. Strettle, B.J.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.

SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's nine 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 17s. 6d. if under age 18 on the 1st September or £3 12s. 6d. if age 18 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

P. F. Sanger, *President*
J. D. Callon, *Vice-President* (*Internal Affairs*)
K. N. Tolladay, *Vice-President* (*External Affairs*)
Miss J. A. Davies, *Vice-President* (*Female Students*) *and Secretary*
P. C. Johnson, *Student Treasurer*
A. G. Cottam, *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.

The Harris Students' Union Fund

The Students' Union in December 1966 established by deed a trust fund called the 'Harris Students' Union Fund.' They appointed four Trustees and invested in the fund a small sum of accumulated moneys. The fund has been registered as a charitable trust.

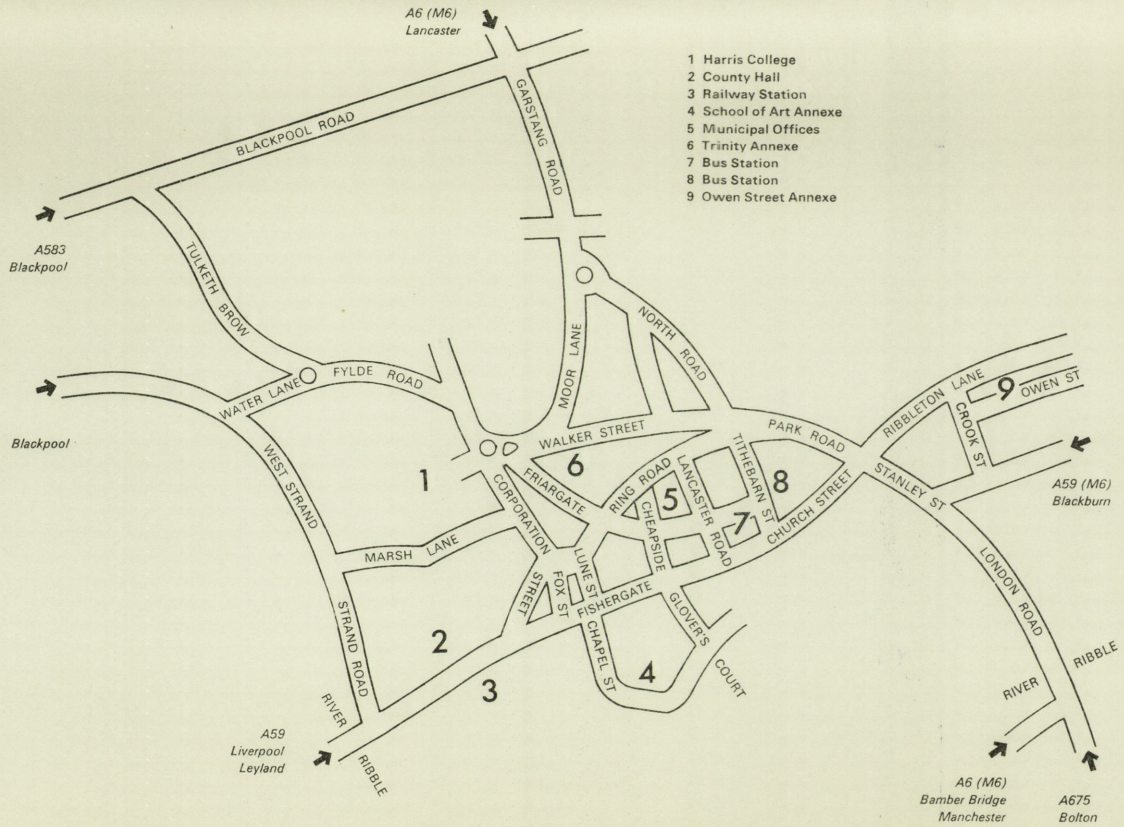
The fund is in two parts: capital moneys and revenue moneys. Both are invested by the Trustees and the annual interest from the total fund is paid to the Union as income to be expended on those of the Union's activities which 'are of an educational or otherwise charitable nature.' The capital moneys remain permanently in the fund, and as they are increased by donations they provide an increasing income to the Union.

It is intended to accumulate money in the 'revenue' section of the fund to be withdrawn at some future time for a major charitable project (such as the acquisition of property for the Union), and the trust deed prescribes that the Union may request the Trustees to sell investments and realise securities in this section of the fund to provide the outlay for such a project as is proper.

The total fund at present stands at approximately £1,000. It is in the interest of all students, present and future, to assist in augmenting it.

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. 6d., 32s. 6d. and 8s. 11d. each respectively.


A6 (M6)
Lancaster
1 Harris College
2 County Hall
3 Railway Station
4 School of Art Annexe
5 Municipal Offices
6 Trinity Annexe
7 Bus Station
8 Bus Station
9 Owen Street Annexe
BLACKPOOL ROAD
GARSTANG ROAD
A583
Blackpool
TULKETH BROW
FYLDE ROAD
WATER LANE
Blackpool
MOOR LANE
NORTH ROAD
WALKER STREET
PARK ROAD
RIBBLETON LANE
OWEN ST
CROOK ST
A59 (M6)
Blackburn
WEST STRAND
FRIARGATE
CORPORATION STREET
RING ROAD
CHEAPSIDE
LANCASTER ROAD
TITHEBARN ST
CHURCH STREET
STANLEY ST
MARSH LANE
STRAND ROAD
FOX ST
LUNE ST
FISHERGATE
GLOVERS COURT
CHAPEL ST
LONDON ROAD
RIVER
RIBBLE
A59
Liverpool
Leyland
A6 (M6)
Bamber Bridge
Manchester
A675
Bolton

Harris College

Department of Language and Social Studies

Session 1969–70

Harris College, Corporation Street, Preston, Lancashire
Telephone: Preston 51831–7

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, M.M., O.B.E., J.P.

Vice-President: County Councillor T. V. Brown

Members:

Alderman J. Atkinson
Alderman H. Beaumont
Alderman Mrs D. M. Dewhurst, J.P.
Alderman Mrs R. Lytton
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker
Councillor Mrs K. E. Crozier
Councillor Mrs D. Smith

County Alderman J. Bradley, M.B.E., J.P.
County Alderman J. P. Ennis, J.P.
County Alderman Sir Fred Longworth (Deputy Lieutenant of Lancashire; Vice-Chairman of Lancashire County Council)
County Councillor C. W. Eastwood
County Councillor M. J. Fitzherbert-Brockholes, J.P.
County Councillor A. J. Whittall
County Councillor Mrs W. Winn
County Councillor G. Woods

F. D. Crowe, B.SC., C.ENG., F.R.AE.S.
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., 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.

Professor E. Roland Dobbs

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, M.M., O.B.E., J.P., *President of the Harris Council*

Members:
County Councillor T. V. Brown, *Vice-President of the Harris Council*
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

The Harris College is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are nine teaching departments in the College: the School of Art and Design, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical and Electronic Engineering, Language and Social Studies, Mathematics and Computer Studies, Mechanical Civil and Production Engineering, and Physics. 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 increasing use by industrialists of the Industrial Liaison Centre is expected to widen the range of these activities.

The Academic Board

Subject to the ultimate responsibility of the Harris Council the responsibility for the planning, co-ordination, development and oversight of the academic work of the College is delegated to an Academic Board of 30 members which includes representatives from all departmental Boards of Studies, representatives of the teaching staff generally, and students' representatives. The Board has power to co-opt specialist advisers from Universities, Colleges and other bodies when appropriate.

The Department of Language and Social Studies

The Department of Language and Social Studies offers courses in sociology, social work and social administration. It also provides a range of courses leading to the Diploma of the Training Council for Teachers of the Mentally Handicapped. Full-time one-year intensive courses leading to G.C.E. 'A' level are provided in general arts and music, social studies, and modern languages. Similar courses are offered on part-time basis.

The department also provides courses in general education throughout the College, including short residential courses.

The department maintains close links with Local Authorities, Regional Hospital Boards and the appropriate national training councils. Its students are either seconded by authorities for further education and training or receive Local Education Authority grants for this purpose. Students in social work courses and student teachers spend a considerable proportion of their courses in supervised fieldwork.

The Departmental Board of Studies

The Board of Studies is directly responsible to the Academic Board, offering advice on the planning, co-ordination and development of the academic work of the Department. Members include senior teaching staff, representatives of the teaching staff of the department generally, and students' representatives.

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Department of Language and Social Studies

Telephone: Preston 51831, ext 37

Head of Department	H. E. Probyn, B.A.
Principal Lecturer	H. Bowden, B.A., DIP. IN PUBLIC AND SOCIAL ADMINISTRATION, DIP. IN APPLIED SOCIAL WORK
Senior Lecturers	Miss M. A. Coulson, B.A.
	Miss R. H. Gibbins, B.SC., CERT. IN CHILD CARE
	R. Gordon, B.SC.(ECON.)
	J. M. McMaster, DIP.ED., DIP.P.E., DIP.REM.ED., M.ED.
	R. Quinn, B.A., DIP. ECON. AND POL.
	D. Swift, B.A.
Lecturers and Assistant Lecturers	R. Anderson, B.A.
	Miss J. B. Barker, CERT. IN PSYCHIATRIC SOCIAL WORK
	K. C. Bodfish, B.A.
	G. T. Eddy, B.A.
	A. D. Feachnie, DIP.ED., DIP.E.S.N.
	Mrs D. M. Gibson
	Mrs L. M. Godsell, CERT. IN PSYCHIATRIC SOCIAL WORK
	W. J. N. Hackl, F.I.L.
	Mrs A. M. Hallam, B.A.
	A. Hardman, DIP.ED., DIP.E.S.N.
	D. Hargreaves, B.A.
	R. H. Hodson, S.T.A.C., F.I.A.L.
	R. G. Hornby, DIP.TEACHERS OF E.S.N., DIP.ED.
	Mrs J. Hughes, B.A.
	J. A. Kettle, DIP. TEACHERS OF E.S.N.
	Mrs S. A. C. McMaster, DIP.ED.
	D. Maddox
	Miss M. W. Nesbitt, B.A., DIP.ED.
	R. Pope, B.A.
	R. Sandbach, A.R.C.M.
	Mrs J. Wragg, DIP. TEACHERS OF E.S.N.
Visiting Lecturers	Mrs S. Alston, B.A.
	G. Armstrong
	B. E. Barker, B.A., B.SC.(ECON.)
	F. Curtis, B.A.
	D. C. Doel, M.A.
	Mrs E. J. Dunn, B.A.

Visiting Lecturers (Contd.)

D. J. Emery, B.A.
R. L. Foreman, B.A.
J. Exley, DIP IN PUBLIC AND SOCIAL ADMINISTRATTION
Mrs E. Heaton, L.L.C.M., A.L.A.M.
Mrs M. C. Holden, L.R.A.M., A.R.C.M.
Mrs M. Hunt, B.A.
Dr A. Hutton, M.B., B.CH., B.A.O.
Mrs E. Jones, B.SC.
Rev. P. F. M. Kelly, M.A.
R. Kelly, B.SC.
H. L. Knowles
B. E. Latham, M.A.
A. T. Moon, L.C.P.
W. F. Pickup, B.A.
Mrs E. Pryar
Dr I. N. R. Purdom, M.B., CH.B., D.P.H.
P. D. Quick
A. E. Roper
Mrs M. Sharman, B.A.
Miss E. Sowerby
G. Storr
F. Walsh
J. Warburton, M.A.
D. Westby, B.COM.
W. Wyszomirski

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B.Sc. (Honours) in Sociology (Branch III) of the University of London (A1) (DES2302)

Course adviser: Mr. H. Bowden

A three-year full-time honours degree course for those who contemplate careers in social work, or in industry or commerce in management or personnel management.

Candidates must be registered as External Students with the University of London.

Enquiries about admission to the course should be addressed to the Registrar, Harris College, Corporation Street, Preston, PR1 2TQ, (and not to the Universities' Central Council for Admissions).

Qualifications for entry: (*a*) five G.C.E. subjects including two at Advanced level, or (*b*) four G.C.E. subjects including three at Advanced level, or (*c*) matriculation in the University of London.

1st Year. *Tutor:* Mr R. Quinn. *Curriculum:* British social history; British political, administrative and legal institutions; general studies.

College course: 22nd September to 3rd July (36 weeks)

Examinations: external

2nd Year. *Tutor:* Mr H. Bowden. *Curriculum:* British social history; British political, administrative and legal institutions; economics; British social policy and administration; social investigation; social theory; general studies; one of the following optional subjects: central and local government administration, social structure and social policy in countries undergoing industrialisation, the structure of social security, the family in law and society, industrial sociology.

College course: 22nd September to 3rd July (36 weeks)

Examinations: internal

3rd Year. *Tutor:* Mr H. Bowden. *Curriculum:* British social history; British political, administrative and legal institutions; economics; British social policy and administration; social investigation; social theory;

general studies; one of the following optional subjects: central and local government administration, social structure and social policy in countries undergoing industrialisation, the structure of social security, the family in law and society, industrial sociology.

College course: September to July (36 weeks)

Examinations: external, together with a thesis

Qualification: B.Sc. (Honours) in Sociology of the University of London

London University Diploma in Social Studies (A2) (DES2305)

Course adviser: Mr H. Bowden

This two-year full-time course leading to the Diploma in Social Studies of the University of London provides 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 those engaged in administration within the social services and in voluntary organisations.

Qualifications for entry: applicants must attain 20 years of age during the first term of the course, and should normally possess five G.C.E. subjects including two at Advanced level, *or* four G.C.E. subjects including three at Advanced level, *or* Matriculation in the University of London.

Students over 23 years of age who possess other qualifications or who have experience in the field of social work may be admitted in certain circumstances and should consult the Head of Department for further information.

1st Year. *Tutor:* Miss J. Barker. *Curriculum:* social structure, social administration, social agencies, sociology, psychology, philosophy, history, visits of observation, general studies.

College course: 22nd September to 3rd July (36 weeks) followed by 12 weeks supervised practical work

Examinations: internal

2nd Year. *Tutor:* Mr D. Maddox. *Curriculum:* social structure, history, psychology, sociology, social agencies, social casework, social administration, visits of observation, general studies.

College course: 22nd September to 3rd July (36 weeks) followed by 12 weeks supervised practical work

Examinations: London University Social Studies Diploma, Parts I and II

Qualification: London University Diploma in Social Studies

Home Office Letter of Recognition in Child Care (A2) (DES1214)

Course adviser: Miss R. H. Gibbins

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. Their work includes assisting families who have problems in order to try to prevent family breakdown, and planning for children who have to live apart from their families. The course involves theoretical study and practical work arranged concurrently.

Qualifications for entry: applicants must be 23 years of age or over at the start of the session. No specific academic qualifications are required, and selection is by competitive interview.

1st Year. *Tutor:* Mr R. Anderson. *Curriculum:* the child care services, the law relating to children, social administration, child health, human growth and behaviour, theory and practice of casework, social history, English.

College course: January to December (36 weeks concurrent theory and practical work, plus 4 weeks residential training).

Examinations: internal

2nd Year. *Tutor:* Mrs L. M. Godsell. *Curriculum:* law relating to children, social administration, social influences on human behaviour, social history, human growth and behaviour, theory and practice of casework.

College course: January to April (14 weeks concurrent theory and practice); April to June (12 weeks theory plus 4 weeks residential training and 12 weeks fieldwork placement); November to December (3 weeks).

Examinations: internal, externally assessed

Qualification: Home Office Letter of Recognition in Child Care

Home Office Letter of Recognition in Child Care: In-Service Course (A2) (DES1214)

Course adviser: Miss R. H. Gibbins

A two-year course, part-time during the first year and full-time during the second. On the completion of the second year the officer will return to his own department where his work will be supervised for three months. The Letter of Recognition will be awarded at the end of these three months.

Qualifications for entry: applicants should be serving Child Care Officers with at least two years' experience

1st Year. *Tutor:* Miss R. H. Gibbins. *Curriculum:* social history, social administration, the child care services, child health, human growth and behaviour, the theory and practice of casework.

College course: September to June (33 weeks of 2½ days per week)

Examinations: internal

2nd Year. *Tutor:* Miss R. H. Gibbins. *Curriculum:* social administration, human growth and behaviour, social and group influences on human behaviour, theory and practice of casework.

College course: January to April (16 weeks concurrent theory and practice); April to June (11 weeks theory, 4 weeks residential placement and 12 weeks fieldwork placement).

Examinations: internal, externally assessed

Qualification: Home Office Letter of Recognition in Child Care

Training of Teachers of Mentally Handicapped Children: two-year course (A2) (DES1189)

Course adviser: Mr J. M. McMaster

A full-time course leading to the Diploma of the Training Council for the Training of Teachers of the Mentally Handicapped. Holders of the Diploma will be qualified to teach in Junior Training Centres and Hospital Schools.

Qualifications for entry: candidates should be 18 years of age at the time of entry to the course and have gained at least five subjects at G.C.E. 'O' level, one subject being English language. Selection for the course is by interview.

1st Year. *Tutors:* Mr J. Kettle and Miss M. Nesbitt. *Curriculum:* medical causes of subnormality, philosophy of education, physical education, music, art and craft, drama, teaching method, sociology of education, visits and practical work, occasional lecture course, general studies.

College course: 22nd September to 3rd July (36 weeks including 10 weeks supervised teaching practice)

Examinations: internal

2nd Year. *Tutors:* Mr R. Hornby and Mrs S. McMaster. *Curriculum:* teaching method, medical causes of subnormality, physical education, speech and drama, music and movement, art and craft, sociology of education, visits and practical work, philosophy of education, psychology, general studies.

College course: 22nd September to 3rd July (36 weeks including 10 weeks supervised teaching practice)

Examinations: internal, externally assessed

Qualification: Diploma of the Training Council for the Training of Teachers of the Mentally Handicapped

Training of Teachers of Mentally Handicapped Children: one-year course (A2) (DES1189)

Tutors: Mr A. Hardman and Mrs J. Wragg

A full-time course leading to the Diploma of the Training Council for the Training of Teachers of the Mentally Handicapped. Holders of the Diploma will be qualified to teach in Junior Training Centres and Hospital Schools. The course is intended for older applicants, for those in service as well as intending teachers.

Qualifications for entry: candidates should be at least 30 years of age (there is no upper age limit) and have gained at least five subjects at G.C.E. 'O' level. Candidates with suitable experience without G.C.E. qualifications will be considered. Selection for the course is by interview.

Curriculum: philosophy of education, sociology of education, medical causes of mental subnormality, art and craft, teaching method, physical education, English, speech and drama, educational psychology, music, occasional lecture course, visits and practical work, general studies.

College course: 22nd September to 3rd July (36 weeks including 8 weeks supervised teaching practice)

Examinations: internal, externally assessed

Qualification: Diploma of the Training Council for the Training of Teachers of the Mentally Handicapped

Training of Teachers of Mentally Handicapped Adults (A2) (DES1189)

Tutor: Mr A. D. Feachnie

A one-year full-time course leading to the Diploma of the Training Council for the Training of Teachers of the Mentally Handicapped. The course is intended mainly for mature students who have had some practical experience with subnormal adults. Holders of the Diploma will be qualified to teach in Adult Training Centres and Hospital Departments for the education of subnormal and severely subnormal adults.

Qualifications for entry: candidates should have at least five subjects at G.C.E. 'O' level. This condition may be relaxed where there is evidence of suitable experience or other qualifications which satisfy the selection panel. Selection for the course is by interview.

Curriculum: sociology of education, teaching method, medical causes of mental subnormality, philosophy of education, business and administration, art and craft, educational psychology, physical education, occasional lecture course, music, speech and drama, visits and practical work, general studies.

College course: 22nd September to 3rd July (36 weeks including 10 weeks supervised teaching practice)

Examinations: internal, externally assessed

Qualification: Diploma of the Training Council for the Training of Teachers of the Mentally Handicapped

General Certificate of Education, Advanced level (B) (DES1195)

Course adviser: Mr D. Swift

This is a one-year full-time course designed for students who have normally completed at least one year's study at Advanced level, whether on a full-time or part-time basis. In exceptional cases students may be admitted directly if they show evidence of ability to reach 'A' level standard after one year. Intending students should obtain the booklet 'G.C.E. Regulations 1969,' available at 2s. 6d. post free from John Sherratt, Publishers, Park Road, Timperley, Cheshire.

Option A (General Arts and Music). *Tutors:* Mrs J. Hughes and Mr R. Sandbach. Students offering English as a main subject would study one or two other subjects chosen from history, geography, general studies, French, German and music. Music students would normally study English as a second subject.

Option B (Social Studies). *Tutor:* Mr H. Bowden. All students would follow a prescribed syllabus in each of the three subjects: sociology, history and British constitution.

Option C (Modern Languages). *Tutor:* Mr D. Swift. Students would normally study French and either German or Spanish.

College course: 22nd September to 3rd July (36 weeks)

Examinations: G.C.E. 'A' level

Qualification: General Certificate of Education, Advanced level, of the Northern Universities Joint Matriculation Board

Part-time Day Courses

London University Diploma in Social Studies (A2) (DES2305)

Course adviser: Mr H. Bowden

This two-year course leading to the Diploma in Social Studies of the University of London provides 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 those engaged in administration within the social services and in voluntary organisations.

Q ualifications for entry: applicants must attain 20 years of age during the first term of the course, and should normally possess five G.C.E. subjects including two at 'A' level, *or* four G.C.E. subjects including three at 'A' level, *or* Matriculation in the University of London.

Students over 23 years of age who possess other qualifications or who have experience in the field of social work may be admitted in certain circumstances and should consult the Head of Department for further information

1st Year. *Tutor:* Miss J. Barker. *Curriculum:* social structure, social administration, social agencies, sociology, psychology, philosophy, history, visits of observation, general studies.

Attendance: two days per week

Examinations: internal

2nd Year. *Tutor:* Miss J. Barker. *Curriculum:* social structure, history, psychology, sociology, social agencies, social casework, social administration, visits of observation, general studies.

Attendance: two days per week

Examinations: London University Social Studies Diploma, Parts 1 and 2

Qualification: London University Diploma in Social Studies

Preparatory Course for the London University Diploma in Social Studies (B)

Tutor: Miss J. Barker

A one-year course run in conjunction with Childrens' Departments to enable trainees to take an introductory year before applying to the University for registration as Diploma students.

Qualifications for entry: applicants must attain 20 years of age during the first term of the course, and should normally possess five G.C.E. subjects including two at 'A' level, *or* four G.C.E. subjects including three at 'A' level, *or* Matriculation in the University of London.

Students over 23 years of age who possess other qualifications or who have experience in the field of social work may be admitted in certain circumstances and should consult the Head of Department for further information.

Curriculum: social history, social psychology, social administration, social studies

Attendance: one day per week

Examinations: internal

Preliminary Course for Child Care Officers (B) (DES3134)

Tutor: Mrs L. M. Atkinson

A course of two terms for experienced serving officers, intended to extend their theoretical knowledge and relate it to practice. Local authorities are invited to submit students.

Qualifications for entry: experienced, serving Child Care Officers

Curriculum: social services, human growth and development

Attendance: one day per week, September to April

Examinations: internal

Teachers of the Mentally Handicapped: Study Course for Adult Centre Staff (A2 NP)

Tutor: Mrs E. J. Dunn

A course of two terms for serving staff who have not attended full-time courses for Teachers of the Mentally Handicapped. Local authorities are invited to submit students.

Qualifications for entry: serving staff in Adult Training Centres

Curriculum: causes of mental subnormality, psychology, social provisions

Attendance: one day per week, September to April

Social Workers' Casework Seminar (A2 NP)

Tutor: Miss J. Barker

A weekly casework discussion group during the course of one year. The course is intended for qualified social workers. Each meeting will occupy 2 hours.

Evening Courses

General Certificate of Education, Advanced level (B) (DES1195)

Course advisers: Mrs J. Hughes, Mr H. Bowden and Mr D. Swift

Classes will be arranged to meet adequate demand, following a similar pattern to the full-time courses in respect of subject combinations, though students will be accepted to follow a course in a single subject, class size permitting. Intending students should obtain the booklet 'G.C.E. Regulations, 1969', available at 2s. 6d. post free from John Sherratt, Publishers, Park Road, Timperley, Cheshire.

Attendance: two evenings per week

Examinations: G.C.E. 'A' level

Qualification: General Certificate of Education, Advanced level of the Northern Universities Joint Matriculation Board

Option A (General Arts and Music). As detailed for the full-time course.

Option B (Social Studies). As detailed for the full-time course. Students wishing to study a single subject should consult the course adviser.

Option C (Modern Languages). Courses in French, German, Spanish, Italian and Russian will be provided. If class sizes permit, students wishing to study a single language will be admitted.

Choral Music (C)

Course adviser: Mr R. Sandbach

A one-year part-time course, one evening per week, in choral music theory and practice. Students should have had choir or choral society experience, or appropriate music training. It is expected that students will prepare programmes of music to be performed during the year.

Special Course

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.

Social Aspects of Nursing

Course organiser: Miss J. Grime

A series of fifteen lectures, commencing on October 9th, at 7-00 p.m., for those professionally interested in the community aspects of nursing and medicine. Each lecture will be followed by a discussion period.

Administrative Staff

Registrar	J. Barnacle, D.M.A., F.C.C.S.
Assistant Registrar	E. D. Hardman
Senior Clerks	Miss E. Stobbart (Examinations and Records)
	R. G. Walton (Finance and Accounts)
Secretary to the Principal	Miss F. M. Jones
Section Clerks	Mrs R. McNamara
	Mrs P. Tinsley
Clerks	Mrs A. Allen
	Miss N. B. Chapman
	Miss E. I. A. Buggy
	Mrs M. Caunce
	Mrs S. Cooper
	Mrs E. V. Crook
	Mrs E. Gower
	Mrs J. Halstead
	Mrs M. J. Livesey
	Mrs C. Matthewson
	Miss J. H. Slee
	Mrs M. Taylor
	Miss J. K. Watt
	Mrs J. C. Horsley (Secretary to the Industrial Liaison Officer)
	Mrs. K. Howarth (Clerk to the Child Care Tutors)
Telephonists	Mrs P. B. Bamford
	Miss M. Eccles
Cashiers	Mrs R. Doherty
	Mrs M. Marland
College Lodgings Officer	Mrs P. M. Cross
Equipment Maintenance	E. Goodson (Chief Engineer)
	E. Davies
	P. Young
Refectory	Mrs M. Hamlyn White (Catering Manageress)
	Miss E. Grunshaw (Assistant Manageress)

Custodian of Premises	W. H. Hatton, M.B.I.C.SC.
Caretakers	L. Whalley (Avenham premises)
	L. Posner (Owen Street premises)
Assistant Caretakers	V. S. Baron
	J. C. Christian
	C. T. Day
	R. A. McConochie
	H. Mee
	H. Nicholls
	E. Parker
	W. Pullan
	T. C. Ritchie
	W. Sanders
	R. Seed
	J. Spencer
Groundsman	G. Cowell
Watchmen	C. Ashton
	S. Dixon
	T. W. Gregson
	A. E. Manley
	F. Miller
	F. E. Oldham
	J. Smith

Calendar

1969	Thursday, 11th September	General Staff Meeting
	ENROLMENT PERIOD	
	Thursday, 11th September	Enrolment, first day
	Friday, 12th September	Enrolment, second day
	Monday, 15th September	Enrolment, third day
	Tuesday, 16th September	Enrolment, last day
	Autumn Term (13 weeks)	
	Monday, 22nd September	All day and evening classes commence for the Autumn term
	Friday, 19th December	All departments close for Christmas after evening classes
	Spring Term (11 weeks)	
1970	Monday, 5th January	All classes re-open for the Spring term
	Tuesday, 10th February	Foundation Celebration and Address: all evening classes closed
	Friday, 20th March	All departments close for Easter after evening classes
	Summer Term (12 weeks)	
	Monday, 6th April	All classes re-open for the Summer term
	Friday, 22nd May	All departments close for Spring Holiday after evening classes
	Monday, 1st June	All classes re-open
	Friday, 3rd July	All classes close: end of term
	Friday, 10th July	Submission of reports: end of session

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

The acceptance of a student into a course must have the approval of the Head of Department. Generally, students under age 16 on the 1st September cannot be admitted.

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

Courses will be provided subject to adequate enrolment and within the limits of available teaching accommodation and staff. They may be discontinued at the discretion of the Principal at any time during the session should the number of students attending fall below a reasonable level.

Full-time and Sandwich Course Students

Application to join a course should be made before the commencement of session on the form obtainable from the Registrar. Students accepted into full-time or sandwich courses must undertake the formal enrolment procedure (described on page 34) either on one of the four advertised enrolment days or during the first two days of the course at a time arranged by the Head of Department.

Each full-time and sandwich course student will be placed under the supervision of a Course Tutor who will supervise the student's progress throughout the session and to whom the student may refer for advice about his or her course of study.

GRANTS: most students will qualify for a grant from a Local Education Authority, and it is the student's responsibility to make application for this to the Local Education Authority of the County or County Borough Council within whose area he permanently resides. Grants are assessed according to the financial position of the student, taking account of parental income and other circumstances. Generally, grants cover tuition fees (this payment is normally made direct to the College), an allowance for books, materials, examination fees, and in the case of students in advanced courses a maintenance grant (see also page 33).

Part-time Students

Intending students wishing for advice should write to the Head of Department. Application to join a course should be made in person during the enrolment period (see page 34).

Overseas Students

An overseas student wishing to join a full-time or sandwich course must complete the special application form obtainable from the Registrar. This form, when completed, should be sent by the student to the student authority in his own country; this authority will forward the form to the College through its London office.

A Certificate of Competence in the English language will be required, stating that the applicant has sufficient proficiency in written and spoken English to be able to follow a course of study conducted in English.

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 course of advanced 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 67% 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 set work, 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 set 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 noted with the name(s) of the subject(s) in which he has thus distinguished himself.

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. The only students excused paying the tuition fee at the time of enrolment are:

(*a*) full-time and sandwich course students who are to be grant-aided by a Local Education Authority; documentary evidence will be required of the offer of a grant, and

(*b*) those whose employers undertake to pay the tuition fees on their behalf; they must produce at enrolment a letter from the employer to that effect.

Fees are graded into three categories corresponding to the academic level of the course, namely:

Grade C: work of an introductory character, for example leading to G.C.E. Ordinary level.

Grade B: work of an intermediate character, above the level of Grade C and leading for example to Ordinary National Diplomas or Certificates and G.C.E. Advanced level.

Grades A2 and A1: work of an advanced character, above the level of Grade B and leading for example to Higher National Diplomas or Certificates, final professional qualifications, degrees.

The grade of each course is shown in brackets after the course title, or after the year of the course where a full course covers more than one grade of work.

Part-time students from the administrative counties of Lancashire and Westmorland and all students from Wigan County Borough who are age 16 and under age 18 on the 1st September will be enrolled without payment of the tuition fee.

NOTE TO LOCAL AUTHORITIES

The course grade designation (A2 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.

Full-time Courses	Students under age 18 on 1st September £ s. d.	Students age 18 and over on 1st September £ s. d.
B.Sc. (Honours) in Sociology (Branch III) of the University of London	75 2 6	76 10 0
London University Diploma in Social Studies		76 10 0
Training of Teachers of Mentally Handicapped Children	75 2 6	76 10 0
Training of Teachers of Mentally Handicapped Adults		76 10 0
General Certificate of Education, 'A' level	42 2 6	43 10 0

Part-time Courses	Students under age 18 on 1st September £ s. d.	Students age 18 and over on 1st September £ s. d.
Grade C	1 17 6	3 12 6
Grade B	3 0 0	4 12 6
Grades A2 and A1	5 2 6	6 2 6

RESIDENTIAL GENERAL 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 period of a course, or where only partial financial support is offered by the employer.

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.

Enrolment

Students will be enrolled on the following days and during the times shown:

	morning	*afternoon*	*evening*
Thursday, 11th September	none	2.00 to 4.00	6.00 to 8.30
Friday, 12th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Monday, 15th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Tuesday, 16th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30

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 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.

Permission Vouchers

All students must obtain permission vouchers each year and present them at enrolment except (*a*) those normally resident in the County Borough of Preston or in the administrative area of Lancashire County and (*b*) part-time students normally resident in the County Borough of Wigan.

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 and Design (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52)

E BLOCK

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

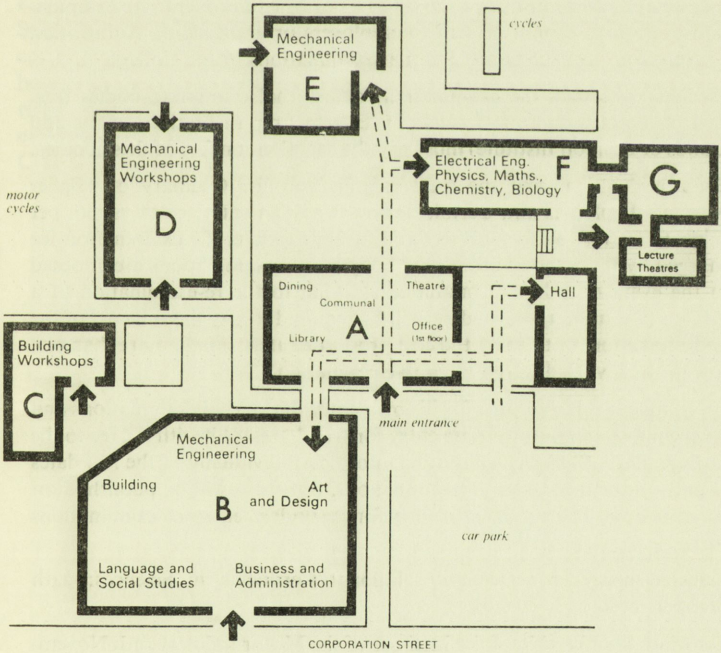
F BLOCK

Chemistry and Biology Department (F37)
Electrical and Electronic Engineering Department (F1, F8, F9 and F10)
Physics Department, Mathematics and Computer Studies 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.



Students will not be permitted to attend classes until they have completed the enrolment procedure. 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.

Examinations

ENTRY TO 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.* University of London, Council of Engineering Institutions, City and Guilds of London Institute) 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 and 15s. od. per project and, if appropriate, 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 Ordinary National Certificate in Sciences: 24th October, 1969

Associate Membership of the Institute of the Motor Industry: 7th November, 1969

Assessed papers for National Diplomas and Certificates, including endorsements: 19th December, 1969

London University B.Sc. (Sociology): 16th January, 1970

Assessed papers for Ordinary National Certificate in Business Studies: 30th January, 1970

Union of Lancashire and Cheshire Institutes, series B and C: 30th January 1970

City and Guilds of London Institute: 6th February, 1970

General Certificate of Education papers (N.U.J.M.B.): 6th February, 1970

Pitmans: 20th March, 1970

Training Council for Teachers of the Mentally Handicapped: 20th March, 1970

Royal Society of Arts, Summer Series: 1st May, 1970

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.

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. Roadway and delivery areas 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.

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.

The Recreation 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 11-45 a.m. 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.

In the interests of hygiene staff and students are requested to observe any restrictions on smoking in the dining room.

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.

STUDENT LODGINGS

The College Authorities prepare each year a register of householders and hotel keepers who are willing to offer lodging accommodation. This register is kept by the College Lodgings Officer, who initially approves and thereafter regularly inspects all registered accommodation.

Some accommodation is available in Preston and surrounding districts, but many students will have to be accommodated some distance from the College, possibly in Blackpool and Lytham. Students who are grant-aided will generally be assisted by their supporting Local Authorities if their necessary travelling expenses exceed the amount included in the grant.

Intending students should write to the College Lodgings Officer as soon as they receive confirmation of their acceptance into a course. Priority will be given to those students whose homes are 20 miles or more from the College.

CHANGES 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 home or lodgings 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 Department. 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 outside the main College premises. These classes are indicated by room number prefixes as follows in the several College documents dealing with teaching accommodation:

Av	School of Art Annexe, Avenham Lane, Preston
BTU	Blood Transfusion Unit, Lancaster
NWGB	North Western Gas Board Training Centre, Moor Lane, Preston
On	Owen Street Annexe, off Crook Street, Ribbleton Lane, Preston
PRI	Preston Royal Infirmary, Deepdale Road, Preston
TH	G.P.O. Telephone House, Moor Lane, Preston
Ty	Trinity County Secondary School, Great Shaw Street, Preston

SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of socieities 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.

The Library

Telephone: Preston 51831, ext 15

Librarian	A. Lawrence, A.L.A.
Assistant Librarians	Miss S. M. Brindle
	Miss E. Jenkins
Library Assistants	Miss J. E. Bamford
	Mrs I. M. Fuller

The College library is available to all students for reference purposes. 400 journals are now received in addition to the continuing expansion of the book stock. A set of British Standard Specifications is maintained, as also is a comprehensive set of bibliographic research works and a considerable number of indexing and abstracting publications.

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.

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.

Computing Facilities

Telephone: Preston 51831, ext 43

Computer Manager	F. Fowler
Operator/Programmer	Vacancy
Punch Operator	Mrs C. M. Hoyle

The College's computer configuration consists of an ICL1901A central processing unit of 16K words of core storage, two twin exchangeable disc stores, paper tape reader/punch, card reader, line printer and console typewriter which are housed, together with adequate data preparation equipment, in a specially designed suite of rooms in the Department of Mathematics and Computer Studies.

Computer appreciation and programming is taught in advanced courses which require these modern techniques. Short courses in various computer languages, and more extensive courses in data processing and systems analysis, are arranged throughout the session. Increasing demands are being made on the computer for research and consultancy work undertaken by the teaching staff of the College.

It is proposed to collaborate with local schools in introducing modern computing methods to Sixth Form pupils.

The computer will eventually be used as the focal point of specialist degree and diploma courses in computer studies.

The Computer Manager will be pleased to give advice to representatives of industrial or commercial undertakings who may be considering the use of a computer for their own needs.

Industrial Liaison Centre

Telephone: Preston 51831, ext 41

Industrial Liaison Officer G. A. Redhead, B.SC.
Secretary Mrs J. C. Horsley

Technological knowledge and innovation are progressing so rapidly that it is difficult for any one individual to keep himself up to date. Particular difficulties are felt by small and medium sized manufacturing firms, many of which would welcome information about the results of industrial research or would appreciate access to local and national sources of information relevant to their own particular problems.

To help firms of this kind the Ministry of Technology, in conjunction with selected Technical Colleges, has established a network of Industrial Liaison Centres with the specific intention of offering assistance with technical and management problems and of encouraging the use of modern techniques.

Industrial Liaison Centres are financed from public funds and no charge is made for advice offered. However, some individuals or organisations brought in to help (only at the firm's invitation) might expect to negotiate fees. Consultations will take place in the strictest confidence, and if solutions to particular problems are found these would not be revealed outside without the firm's consent.

Close co-operation between College and Industry is intended, and the Industrial Liaison Officer is a member of the College staff; he will be pleased to visit any firm regardless of whether problems exist or not.

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.
	J. Montgomery, DIP.P.E.
Visiting Lecturers	J. H. Dickens
	R. Hindle
	A. Lewis
	R. Poole
	B. Strettle, B.J.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.

SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's nine 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 17s. 6d. if under age 18 on the 1st September or £3 12s. 6d. if age 18 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

P. F. Sanger, *President*
J. D. Callon, *Vice-President* (*Internal Affairs*)
K. N. Tolladay, *Vice-President* (*External Affairs*)
Miss J. A. Davies, *Vice-President* (*Female Students*) *and Secretary*
P. C. Johnson, *Student Treasurer*
A. G. Cottam, *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.

The Harris Students' Union Fund

The Students' Union in December 1966 established by deed a trust fund called the 'Harris Students' Union Fund.' They appointed four Trustees and invested in the fund a small sum of accumulated moneys. The fund has been registered as a charitable trust.

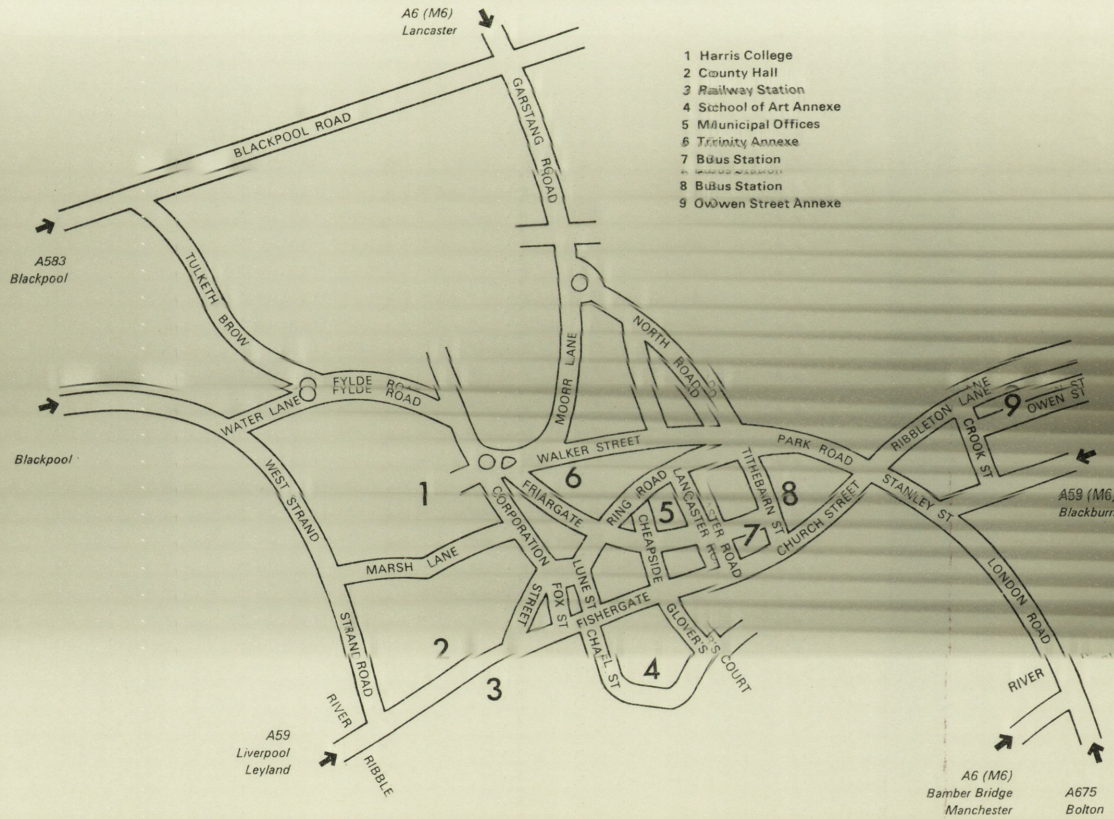
The fund is in two parts: capital moneys and revenue moneys. Both are invested by the Trustees and the annual interest from the total fund is paid to the Union as income to be expended on those of the Union's activities which 'are of an educational or otherwise charitable nature.' The capital moneys remain permanently in the fund, and as they are increased by donations they provide an increasing income to the Union.

It is intended to accumulate money in the 'revenue' section of the fund to be withdrawn at some future time for a major charitable project (such as the acquisition of property for the Union), and the trust deed prescribes that the Union may request the Trustees to sell investments and realise securities in this section of the fund to provide the outlay for such a project as is proper.

The total fund at present stands at approximately £1,000. It is in the interest of all students, present and future, to assist in augmenting it.

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. 6d., 32s. 6d. and 8s. 11d. each respectively.


A6 (M6)
Lancaster
1 Harris College
2 County Hall
3 Railway Station
4 School of Art Annexe
5 Municipal Offices
6 Trinity Annexe
7 Bus Station
8 Bus Station
9 Owen Street Annexe
BLACKPOOL ROAD
GARSTANG ROAD
A583
Blackpool
TULKETH BROW
FYLDE ROAD
WATER LANE
Blackpool
MOORR LANE
NORTH ROAD
WALKER STREET
PARK ROAD
RIBBLETON LANE
OWEN ST
CROOK ST
A59 (M6)
Blackburn
WEST STRAND
FRIARGATE
RING ROAD
LANCASTER ROAD
TITHEBARN ST
CHURCH STREET
STANLEY ST
CORPORATION STREET
MARSH LANE
CHEAPSIDE
LUNE ST
FOX ST
FISHERGATE
GLOVER'S COURT
CHAPEL ST
LONDON ROAD
STRAND ROAD
RIVER
RIBBLE
A59
Liverpool
Leyland
A6 (M6)
Bamber Bridge
Manchester
A675
Bolton

Harris College

Department of Mechanical, Civil and Production Engineering

Session 1969–70

Harris College, Corporation Street, Preston, Lancashire
Telephone: Preston 51831–7

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, M.M., O.B.E., J.P.

Vice-President: County Councillor T. V. Brown

Members:

Alderman J. Atkinson
Alderman H. Beaumont
Alderman Mrs D. M. Dewhurst, J.P.
Alderman Mrs R. Lytton
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker
Councillor Mrs K. E. Crozier
Councillor Mrs D. Smith

County Alderman J. Bradley, M.B.E., J.P.
County Alderman J. P. Ennis, J.P.
County Alderman Sir Fred Longworth (Deputy Lieutenant of Lancashire; Vice-Chairman of Lancashire County Council)
County Councillor C. W. Eastwood
County Councillor M. J. Fitzherbert-Brockholes, J.P.
County Councillor A. J. Whittall
County Councillor Mrs W. Winn
County Councillor G. Woods

F. D. Crowe, B.SC., C.ENG., F.R.AE.S.
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., 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.

Professor E. Roland Dobbs

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, M.M., O.B.E., J.P., *President of the Harris Council*

Members:
County Councillor T. V. Brown, *Vice-President of the Harris Council*
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

The Harris College is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are nine teaching departments in the College: the School of Art and Design, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical and Electronic Engineering, Language and Social Studies, Mathematics and Computer Studies, Mechanical Civil and Production Engineering, and Physics. 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 increasing use by industrialists of the Industrial Liaison Centre is expected to widen the range of these activities.

The Academic Board

Subject to the ultimate responsibility of the Harris Council the responsibility for the planning, co-ordination, development and oversight of the academic work of the College is delegated to an Academic Board of 30 members which includes representatives from all departmental Boards of Studies, representatives of the teaching staff generally, and students' representatives. The Board has power to co-opt specialist advisers from Universities, Colleges and other bodies when appropriate.

The Department of Mechanical, Civil and Production Engineering

The Department of Mechanical, Civil and Production Engineering offers courses leading to both Professional and Technician qualifications in Mechanical, Production and Aeronautical Engineering, together with a professional course in Industrial Design. There is also a wide range of

specialist craft courses. The department is provided with extensive and well equipped laboratories and supporting workshops as well as specialist design and drawing offices.

The Departmental Board of Studies

The Board of Studies is directly responsible to the Academic Board, offering advice on the planning, co-ordination and development of the academic work of the Department. Members include senior teaching staff, representatives of the teaching staff of the department generally, and students' representatives.

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Advisory Board for Mechanical, Civil and Production Engineering

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:

F. D. Crowe, B.SC., C.ENG., F.R.AE.S., *Director and Chief Engineer, British Aircraft Corporation Ltd.*

Members:

Dr N. G. Calvert, *Department of Fluid Mechanics, University of Liverpool*

I. T. Clowes, M.I.PROD.E., I.M.C.T., *Chief Works Engineer, British Aircraft Corporation Ltd.*

P. E. F. Crewdson, *Director, Gilbert Gilkes and Gordon, Kendal*

R. Crook, *Preston District Secretary, A.E.U.*

J. Drake, C.B.E., B.SC., C.ENG., M.I.C.E., M.I.MUN.E., P.P.INST.H.E., *Lancashire County Surveyor and Bridgemaster*

Professor J. Loxham, *College of Aeronautics, Cranfield*

T. E. Tindall, B.A., *Group Training Manager, Leyland Motor Corporation Ltd.*

H. Yates, *Director, Dunderdale & Yates Ltd., Preston*

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., M.I.C.E.
Principal Lecturers	N. A. Butterworth, C.G.I.A., C.ENG., F.I.MECH.E., F.I.PROD.E.
	D. M. Clapp, B.SC., PH.D., C.ENG., M.I.C.E., M.I.MECH.E.
	A. G. Parker, B.SC.(ENG.), M.SC.
Senior Lecturers	J. Briscoe, B.SC., C.ENG., M.I.MECH.E.
	M. J. Manning, B.SC., C.ENG., A.F.R.AE.S.
	H. Ogden, C.ENG., F.I.PROD.E., M.I.MECH.E., A.M.I.E.I.
	H. Roberts, DIPL.ING., C.ENG., M.I.MECH.E.
	P. J. Thompson, B.SC., M.SC., C.ENG., M.I.PROD.E.
	J. Tirrell, B.SC., A.C.T.(BIRM.)
	P. Tucker, B.SC.TECH., C.ENG., M.I.MECH.E.
Lecturers and Assistant Lecturers	K. Bennett, C.ENG., M.I.MECH.E., A.M.I.E.D.
	E. L. Bibby, C.ENG., M.I.MECH.E., M.I.PROD.E., M.I.W.M.
	J. Braddock, A.M.INST.W.
	J. Brennand, C.ENG., M.I.PROD.E.
	R. H. Bryan, D.C.AE., C.ENG., A.F.R.AE.S.
	J. A. Burton, C.ENG., M.I.MECH.E., M.I.PROD.E.
	J. Caunce
	A. Dickson, A.S.E.
	A. Diggles
	L. J. Eccles
	B. T. Fitton, B.SC.
	R. Greenhalgh
	F. Griffiths, C.ENG., M.I.PROD.E.
	F. W. Grimshaw, C.ENG., M.I.MECH.E., M.I.E.D.
	R. Hatton, C.ENG., M.I.MECH.E., M.I.PROD.E.
	T. A. Hulton, A.M.I.M.I.
	G. E. S. Jepson, A.M.I.M.I.
	I. J. Lund, A.M.I.E.I.
	J. McRory
	B. P. Mann, M.I.M.I.
	R. H. Mason
	J. E. Meadows, C.ENG., M.I.MECH.E.
	A. B. Morrison, B.SC., C.ENG., M.I.MECH.E.
	A. Murray, C.ENG., M.I.PROD.E., M.I.MECH.E.

Lecturers and Assistant Lecturers (contd.)	J. R. Nuttall, M.SC.
	W. E. Pannell, A.M.INST.W.
	F. K. Pearson, A.I.R.T.E., A.M.I.M.I.
	G. Podmore, C.ENG., M.I.MECH.E., A.M.I.E.D.
	G. T. Ramsden
	W. H. Sharples, M.J.INST.E.
	F. Tattersall, C.ENG., M.I.MECH.E., M.I.PROD.E.
	M. A. Wahhab, B.A., B.SC., D.I.C., C.ENG., M.I.PROD.E., A.M.INST.FUEL.
	K. Walker
	F. Whelan, M.J.INST.E.
	R. Wood, C.ENG., M.I.MECH.E., M.I.PROD.E.
Technicians	J. H. Dickens (*Chief*)
	C. E. Dickens (*Senior*)
	W. E. Duxbury (*Senior*)
	R. C. Cookson
	K. Day
	B. Duckworth (*Technician-in-Charge, Owen Street Annex*)
	D. B. Jones
	R. C. Leach
	J. St. Romaine
	J. E. Shires
	J. T. Slater
	M. J. Wade
	T. E. Dean (*Research*)
Storekeepers	A. H. Ormerod (*Storekeeper-in-Charge*)
	T. F. Guest
	L. Shiers

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EVENING

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The Professional Engineer: considerable changes have taken place in the academic qualifications needed to achieve professional status. Engineering Institutions will shortly discontinue their individual examinations, which are being replaced by those of the Council of Engineering Institutions (C.E.I.) operating under Royal Charter and representing all the major Institutions*. This body alone will be able to confer the title 'Chartered Engineer' (C.ENG.) which is now the accepted qualification of the professional engineer. To achieve this title, it is necessary both to meet the academic requirements of the Council of Engineering Institutions and to be elected into corporate membership of one of the constituent Institutions of the Council.

The C.E.I. examination is in two parts. Part 1 is common to all branches of engineering. Part 2 comprises one subject which is compulsory for all candidates, together with five others chosen from a wide variety of alternatives. Each Engineering Institution is free to lay down which of these academic tests must be passed to qualify for membership but most have specified two only, leaving the candidate to choose the others to suit his personal interests or the course in which he is studying. The standard of the Part 2 examination is that of a University Degree in Engineering. The other requirements of corporate membership (general education, industrial training, and responsible experience) are still required and remain unchanged, as are the conditions governing election into membership of the various Institutions.

Membership of professional institutions: all students accepted into a professional course are advised to apply for student membership of the appropriate Engineering Institution or of the Royal Aeronautical Society. Such membership has many advantages, especially if it becomes necessary

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*The constituent members of the Council of Engineering Institutions are:

The Royal Aeronautical Society
The Institution of Chemical Engineers
The Institution of Civil Engineers
The Institution of Electrical Engineers
The Institution of Gas Engineers
The Institution of Marine Engineers
The Institution of Electronic and Radio Engineers
The Institution of Mechanical Engineers
The Institution of Mining Engineers
The Institution of Mining and Metallurgy
The Institution of Municipal Engineers
Royal Institution of Naval Architects
The Institution of Production Engineers
The Institution of Structural Engineers

later to take advantage of any of the transitionary concessions of the C.E.I. The Head of Department or the Course Adviser can supply all necessary information and application forms.

Courses leading to professional qualifications: the HIGHER NATIONAL CERTIFICATE, which formerly gave exemption from the corporate membership examinations of the Engineering Institutions, has been completely revised. (See page 23). It will no longer give exemptions, and students seeking a professional qualification must in future undertake a full-time or sandwich course. The position of students already engaged on a Higher National Certificate course is safeguarded under transitional arrangements, and such students are advised to consult the Head of Department or Course Adviser.

THE HIGHER NATIONAL DIPLOMA gives complete exemption from the Part 1 C.E.I. Examinations. The fourth (endorsement) year covers the present requirements of management studies for the Institutions of Mechanical and Production Engineers, and prepares students wishing to sit the "academic test" comprising *two* of the C.E.I. Part 2 Examinations necessary under the Council's transitional arrangements. By 1970, the fourth year will have been so revised as to cover completely the requirements of the Council of Engineering Institutions—*i.e., six* Part 2 examinations. Students proceeding to a University to study for the degree of M.Sc. after having obtained their Diploma are advised to consult the Dean of their Faculty to ascertain their position with regard to Institution requirements.

Three Higher National Diploma courses are available in: *Mechanical Engineering* with options in mechanical, aeronautical and structural engineering subjects; *Mechanical Engineering with special reference to Industrial Design*; and *Production Engineering*. The first year of study is common to all courses, thus giving students more time for consideration of their final specialisation.

Higher National Diploma in Mechanical Engineering (DES1088)

Course adviser: Mr A. G. Parker

A three-year sandwich course, accepting both College-based and Industry-based students. A variety of options is available. Brief details are given below; for full particulars please request a copy of the H.N.D. brochure from the College Register. Award of the Diploma accords exemption from the C.E.I. Part I examination. A Diploma obtained with credits in appropriate subjects accords exemption from the present Graduate Membership Examinations of a number of Engineering Institutions and the Royal Aeronautical Society.

Qualifications for entry: students must normally be 18 years of age on 1st September of the year of entry and hold either (*a*) an Ordinary National Certificate in Engineering of good standard, including applied mechanics, *or* (*b*) an Ordinary National Diploma in Engineering, *or* (*c*) passes in five subjects in the G.C.E. of which mathematics and physics must have been studied to 'A' level with a pass in one of them, *or* (*d*) other qualifications equivalent to the above, previously approved by the Joint Committee for the award of Diplomas. Students who have no pass in English language at G.C.E. 'O' level must sit for and pass this subject before entering the second year of the course. Students who have not passed engineering drawing at either G.C.E. 'O' level or O.N.C. must take additional classes in the subject in the first year.

1st Year (A2). *Course tutors:* Mr A. G. Parker and Mr J. Tirrell. *The curriculum* of the first year is common to that for the Diplomas in Mechanical Engineering (Industrial Design) and Production Engineering: mathematics, properties of materials, applied mechanics, mechanics of fluids, electro-technology, principles of manufacture, exploration of form, principles of design, general studies. The curriculum includes a 3-day residential course at Alston Hall.

College course: 3rd November to 22nd May (25 weeks)

Examinations: internal

2nd Year (A2). *Course tutor:* Dr D. M. Clapp. *Curriculum:* mathematics, properties of materials, applied mechanics, electro-technology, general studies, together with thermodynamics, engineering design, mechanics of fluids and either production technology *or* aeronautics.

College course: 3rd November to 22nd May (25 weeks)

Examinations: internal

3rd Year (A2). *Course tutors:* Mr A. B. Morrison and Mr R. H. Bryan. *Curriculum:* for option details see the course brochure. Subjects are selected from: mathematics, engineering dynamics, properties of materials, stress analysis, methods of manufacture, engineering design, theory of structures, surveying, mechanics of fluids, power plants, aero-structures, aerodynamics, production technology, electro-technology, general studies, together with a design office project. A 3-day residential course at Alston Hall is included in the curriculum.

College course: 22nd September to 17th April (26 weeks)

Examinations: H.N.D. assessed in 6 subjects together with assessed design project

Qualification: Higher National Diploma in Mechanical Engineering on passing five assessed subjects. Exemption from C.E.I. Part 1 Examinations.

C.E.I. Part 2 Examinations (DES3708)

Course adviser: Mr A. G. Parker

4th Year (A1). *Course tutors:* Mr A. G. Parker and Mr J. Tirrell

Curriculum: an approved selection from: engineering management, production technology, engineering thermodynamics, advanced theory and design of structures, applied hydraulics, properties of materials, mechanics of machines, systems and control engineering, operational research, advanced surveying, aerodynamics, and general studies to a maximum of six assessed subjects, together with a design or engineering project.

College course: 22nd September to 15th May (30 weeks)

Examinations: C.E.I. Part 2 (subjects as required) together with assessed endorsements to Higher National Diploma covering Part 3 requirements of Professional Institutions

Higher National Diploma in Mechanical Engineering (Industrial Design) (DES1088)

Course adviser: Mr H. Roberts

A three-year sandwich course, accepting both College-based and Industry-based students. A variety of options is available. Brief details are given below; for full particulars please request a copy of the H.N.D. brochure from the College Registrar. Award of the Diploma accords exemption from the C.E.I. Part I examination. A Diploma obtained with credits in appropriate subjects accords exemption from the present Graduate Membership Examinations of a number of Engineering Institutions and the Royal Aeronautical Society.

Qualifications for entry: students must normally be 18 years of age on 1st September of the year of entry and hold either (*a*) an Ordinary National Certificate in Engineering of good standard, including applied mechanics, *or* (*b*) an Ordinary National Diploma in Engineering, *or* (*c*) passes in five subjects in the G.C.E. of which mathematics and physics must have been studied to 'A' level with a pass in one of them, *or* (*d*) other qualifications equivalent to the above, previously approved by the Joint Committee for the award of Diplomas. Students who have no pass in English language at G.C.E. 'O' level must sit for and pass this subject before entering the second year of the course. Students who have not passed engineering drawing at either G.C.E. 'O' level or O.N.C. must take additional classes in the subject in the first year.

1st Year (A2). *Course tutors:* Mr A. G. Parker and Mr J. Tirrell. *The curriculum* of the first year is common to that for the Diploma in Mechanical Engineering (page 16): mathematics, properties of materials, applied

mechanics, mechanics of fluids, electro-technology, principles of manufacture, exploration of form, principles of design, general studies. The curriculum includes a 3-day residential course at Alston Hall.

College course: 3rd November to 22nd May (25 weeks)

Examinations: internal

2nd Year (A2). *Course tutor:* Mr H. Roberts. *Curriculum:* mathematics, applied mechanics, properties of materials, electro-technology, heat engines and hydraulics, engineering design, exploration of design and studio work, ergonomics, production technology and general studies.

College course: 3rd November to 22nd May (25 weeks)

Examinations: internal

3rd Year (A2). *Course tutor:* Mr H. Roberts. *Curriculum:* mathematics, engineering dynamics, strength of materials, methods of manufacture, product design, electro-technology, design studio, project and general studies.

College course: 22nd September to 17th April (26 weeks)

Examinations: Higher National Diploma assessed in 6 subjects and design project

Qualifications: Higher National Diploma in Mechanical Engineering on passing five assessed subjects. Exemption from C.E.I. Part 1 Examinations

C.E.I. Part 2 Examinations (DES3708)

4th Year (A1). A fourth year of study for endorsement subjects and for exemption from or preparation for examinations of Professional Institutions.

Examinations: C.E.I. Part 2 subjects as required, together with assessed endorsements to Higher National Diploma, covering Part 3 requirements of Professional Institutions.

Higher National Diploma in Production Engineering (DES1089)

Course adviser: Mr N. A. Butterworth

A three-year sandwich course, accepting both College-based and Industry-based students. A variety of options is available. Brief details are given below; for full particulars please request a copy of the H.N.D. brochure from the College Registrar. Award of the Diploma accords exemption from the C.E.I. Part I examination. A Diploma obtained with credits in appropriate subjects accords exemption from the present Graduate Membership Examination of the Institution of Production Engineers.

Qualifications for entry: students must normally be 18 years of age on 1st September of the year of entry and hold either (*a*) an Ordinary National Certificate in Engineering of good standard, including applied mechanics, *or* (*b*) an Ordinary National Diploma in Engineering, *or* (*c*) passes in five subjects in the G.C.E. of which mathematics and physics must have been studied to 'A' level with a pass in one of them, *or* (*d*) other qualifications equivalent to the above, previously approved by the Joint Committee for the award of Diplomas. Students who have no pass in English language at G.C.E. 'O' level must sit for and pass this subject before entering the second year of the course. Students who have not passed engineering drawing at either G.C.E. 'O' level or O.N.C. must take additional classes in the subject in the first year.

1st Year (A2). *Course tutors:* Mr A. G. Parker and Mr J. Tirrell. *The curriculum* of the first year is common to that for the Diploma in Mechanical Engineering (page 16): mathematics, properties of materials, applied mechanics, mechanics of fluids, electro-technology, principles of manufacture, exploration of form, principles of design, general studies. The curriculum includes a 3-day residential course at Alston Hall.

College course: 3rd November to 22nd May (25 weeks)

Examinations: internal

2nd Year (A2). *Course tutor:* Mr H. Ogden. *Curriculum:* metal machining and forming technology, metrology and machine tools, production engineering design, industrial engineering, process metallurgy, mechanical technology, electrical technology, mathematics, statistics and general studies.

College course: 3rd November to 22nd May (25 weeks)

Examinations: internal

3rd Year (A2). *Course tutors:* Mr N. A. Butterworth and Mr P. J. Thompson. *Curriculum:* machining and forming technology, manufacturing plant, manufacturing control, industrial engineering, mechanics of machines, mechanics and properties of materials, mathematics and statistics, process metallurgy, and general studies.

College course: 22nd September to 17th April (26 weeks)

Examinations: H.N.D. assessed in 7 subjects

Qualification: Higher National Diploma in Production Engineering on passing 5 assessed subjects. Exemption from C.E.I. Part 1 Examinations

C.E.I. Part 2 Examinations (DES3708)

4th Year (A1). A fourth year will be offered in 1970–71, covering the requirements of Part 2 of the Council of Engineering Institutions' examinations.

Part-time Courses

The Engineering Technician: an engineering technician is one who can apply in a responsible manner proven techniques which are commonly understood by those who are expert in a branch of engineering. He may be required to supervise the work of skilled craftsmen, and must be competent to take responsibility for the operation and maintenance of expensive engineering plant or services. He may be engaged in the design, development, erection, commissioning and service of equipment, on the testing of materials, or on costing and estimating. His work demands both knowledge and acquired experience, and his education must be such that he understands both the reasons for and the purpose of the operation for which he is responsible.

Although his qualifications and experience are not sufficient to enable him to achieve election as a Chartered Engineer, the courses of study normally pursued will enable him to seek membership of (for example) the Society of Engineers or the Junior Institution of Engineers. In certain cases he may be elected into a non-corporate grade (*e.g.* Associateship) of one of the professional institutions. Advice on this should be sought from the Head of Department or Course Advisers.

Courses leading to Technicians' qualifications: the courses detailed on the following pages lead to Technicians' Certificates of the City and Guilds of London Institute, or to Ordinary or Higher National Certificates awarded jointly by the Professional Institutions and the Department of Education and Science. There is opportunity for transfer from course to course at appropriate stages and some courses, *e.g.* the Ordinary National Certificate, provide an entry qualification to Diploma or Degree courses.

General Engineering (C) (DES1547)

Course adviser: Mr R. Hatton

A one-year course. Depending on the performance in the examination students may enter either the first year of the O.N.C. course, the second year of the Mechanical Technicians' course, or an appropriate specialist craft course.

Qualifications for entry: attendance at school to the age of 16 following a course of study appropriate to engineering, or the successful completion of an approved preliminary course.

Curriculum: English, mathematics, engineering science, engineering drawing, materials and processes.

Attendance: one day and one evening per week

Examinations: U.L.C.I. 105/2

Ordinary National Certificate in Engineering (B) (DES1053)

Course adviser: Mr M. A. Wahhab

A two-year part-time day course leading to the Ordinary National Certificate awarded jointly by the Department of Education and Science and the Institutions of Mechanical, Civil, Production, and Electrical Engineering. Success in the appropriate subjects enables the student to go forward to full-time or sandwich professional courses (page 15) or to the Higher National Certificate (page 23). The certificate is also the accepted qualification for Civil Engineering Technicians under the scheme arranged by the joint committee of the Institution of Civil Engineers, the Institution of Municipal Engineers, the Association of Consulting Engineers, and the Federation of Civil Engineering Contractors.

The course is arranged for a part-time day and evening attendance.

Qualifications for entry: either (*a*) G.C.E. 'O' level passes in four subjects, two of which must be mathematics and physics (or mechanics): English is a preferable third subject: C.S.E. Grade I passes will be accepted in place of G.C.E. in suitable subjects, *or* (*b*) credit passes in mathematics and science together with a pass in either engineering drawing or workshop processes and materials of the General Engineering Course awarded by C.G.L.I. or a Regional Examining Union (See page 21).

1st Year. *Course tutor:* Mr G. T. Ramsden. *Curriculum:* mathematics, mechanical engineering science, electrical science, workshop processes and communications, general studies.

Examinations: internal

2nd Year. *Course turor:* Mr B. T. Fitton. *Curriculum:* mathematics, applied mechanics, general studies, workshop technology or engineering design, applied heat or elementary surveying.

Examinations: internal, externally assessed

Qualification: Ordinary National Certificate in Engineering

Ordinary National Certificate in Engineering, Endorsement Subjects (B) (DES1053)

Course tutor: Mr B. T. Fitton. *Curriculum:* any second year subject not taken as part of the course. This can include electrical subjects forming part of the scheme shown in the Electrical and Electronic Engineering prospectus. Students will be accepted subject to available space.

Examinations: internal, externally assessed

Qualification: endorsement to the Ordinary National Certificate in Engineering

Higher National Certificate in Mechanical Engineering (A2)

Two-year courses leading to the award of the Higher National Certificate in Mechanical Engineering. The course has been completely re-organised by the Department of Education and Science and as explained on page 16 no longer gives exemption from the requirements of the professional institutions. Students who have completed the old scheme are, however, safeguarded under the transitional regulations of the Council of Engineering Institutions. Such students are advised to consult the Head of Department if they are not already student members of an Institution as, in certain circumstances, endorsement courses under the old scheme may still be available. Other students should establish their position by writing to the Institution membership secretary.

New scheme (DES1077)

Course adviser: Mr F. Tattersall

A two-year part-time day course with continuous assessment of progress throughout. For convenience the subject matter is divided between the two years, but there is no intermediate qualifying examination as such. Students finding difficulty with the course during the first year may transfer to one more suited to their needs. Arrangements are made to ensure that students are aware of their progress, and the Course Tutor will advise those who appear likely to profit from a transfer.

Qualifications for entry: an O.N.C. in engineering with applied mechanics, mathematics, and workshop technology. Exceptionally a student holding a C.G.L.I. Final Certificate of the Mechanical Engineering Technicians' course may enter the first year. Others must take a one-year preliminary course.

1st Year. *Course tutor:* Mr J. R. Nuttall. *Curriculum:* mathematics, general studies, mechanical technology, engineering measurements, properties and forming of materials. Engineering design may be made available in later years.

Examinations: continuous assessment

2nd Year. *Course tutor:* Mr F. Tattersall. *Curriculum:* mechanical technology, general studies, manufacturing technology, properties of materials, together with one elective subject taken from power plants, aeronautics, machine tools, engineering design, jig and tool design, etc.

Examinations: internal, externally assessed

Qualification: the Higher National Certificate in Mechanical Engineering

Old Scheme (DES2980)

3rd and 4th Years. *Course tutor:* Dr D. M. Clapp. *Curriculum:* subjects selected from those not taken in the second year together with industrial administration and metallurgy which may be available subject to sufficient demand. Part-time day and part-time evening courses will be available for Industrial Administration A and B. Other subjects will be available only in the evenings.

Examinations: internal, externally assessed

Qualification: endorsement to the Higher National Certificate in Mechanical Engineering: exemption (subject to the regulations in force) from Graduate Membership Examinations of Professional Institutions (see page 15)

Mechanical Engineering Technicians' Certificate, G.C.L.I. 293

Course adviser: Mr J. A. Burton

A five-year part-time day course offering the option between a Drawing/Design Office bias or a Production Technician bias in the later stages. The fifth year enables the student to pursue specialist subjects to greater depth. A Part I Certificate is awarded by U.L.C.I. at the end of the second year, a Part II Certificate by C.G.L.I. at the end of the fourth year, and a Full Technological Certificate by C.G.L.I. following success in the fifth year of study.

Qualifications for entry: students normally enter the first year, but those with 3 passes (including workshop subjects) in the General Engineering Course and who are 17 years of age may enter the second year. Students may transfer to or from the National Certificate Courses at appropriate stages.

Part I (DES1479)

1st Year (C). *Course tutor:* Mr R. Greenhalgh. *Curriculum:* engineering drawing and materials, workshop processes and practices, mathematics, engineering science, general studies.

Examinations: U.L.C.I. 105-1-1/3

2nd Year (B). *Course tutor:* Mr J. Brennand. *Curriculum:* engineering drawing and materials, workshop processes and practice, mathematics, engineering science, general studies.

Examinations: U.L.C.I. 150–2–1/3

Qualification: U.L.C.I. Part I Certificate

Part II, Design Group (DES355)

1st Year (B). *Course tutor:* Mr L. Eccles. *Curriculum:* engineering drawing, engineering science, mathematics, materials and processes, general studies.

Examinations: internal

2nd Year (A2 NP). *Course tutor:* Mr E. L. Bibby. *Curriculum:* mechanical engineering drawing, engineering science, mathematics, general studies.

Examinations: C.G.L.I. 293/21, 32, 33

Qualifications: City and Guilds of London Institute's Part II Certificate

Part II, Production Group (DES355)

1st Year (B). *Course tutor:* Mr L. Eccles. *Curriculum:* workshop techniques, materials and construction, mathematics, engineering science, general studies.

Examinations: internal

2nd Year (A2 NP). *Course tutor:* Mr E. L. Bibby. *Curriculum:* workshop technology, engineering construction and materials, engineering science, mathematics, general studies.

Examinations: C.G.L.I. 293/21, 22, 23

Qualification: City and Guilds of London Institute's Part II Certificate

Part III (A2 NP) (DES356)

Course tutor: Mr J. A. Burton

Curriculum: applied technology, liberal studies and either product design *or* engineering production.

Examination: C.G.L.I. 293/43, 44, 45, 46

Qualification: City and Guilds of London Institute's Full Technological Certificate

CRAFT AND TRADE COURSES

The training of the Craftsman involves both the acquisition of skill and the appreciation of the fundamental theories behind it. Coupled with this must be the ability to calculate and some facility in reading drawings. Skill is normally acquired in industry, under the direction of the appropriate Training Board. The educational side of the training is normally carried out in the College, though some practical work in College workshops may be necessary. The courses detailed below follow this principle, and assume that the student is engaged in an engineering apprenticeship with some provision for 'training for skill'.

The setting up of the Engineering Industry Training Board has resulted in a re-organisation of many courses. In particular, the first years of all specialist trade or craft courses (except the Motor Vehicle Mechanics Course) have been amalgamated into a single first year course. Success in this will enable students normally to proceed to the second year of a specialist trade course. Students with outstanding examination performance may enter the General Engineering Course—see page 21.

Basic Engineering Craft Course, C.G.L.I. 500 (C)

Course adviser: Mr I. J. Lund

A one-year part-time day course covering the educational requirements of the first year of the Engineering Industry Training Board. This covers the requirements of all trades except those of the Motor Vehicle Repair Industry. Success in this course of a sufficient standard may enable students to proceed to the General Engineering (page 21) or Mechanical Technicians (page 24) Courses.

Curriculum: craft studies, English and general studies

Examinations: U.L.C.I. 500/1, 2 and internal (G1)

Mechanical Engineering Craft Studies, Part II Certificate, C.G.L.I. 503

Course adviser: Mr R. Wood

A two-year part-time day course for general engineering craftsman, leading to the City and Guilds of London Institute's Part II Certificate. Further years of part-time day study will lead to the Mechanical Engineering Craft Studies Part III Certificate. This course will eventually replace the Mechanical Engineering Craft Practice Course, Part II Certificate, C.G.L.I. 193 (page 27).

Qualifications for entry: success in the Basic Engineering Craft Course admits to the first year

1st Year (B). *Course tutor:* Mr A. Murray. *Curriculum:* craft principles and applications, workshop processes laboratory, technical studies and craft project work, English and general studies.

2nd Year (B)

The 2nd year will be offered in 1970–71

Examinations: C.G.L.I. 503

Qualification: City and Guilds of London Institute's Part II Certificate

Mechanical Engineering Craft Studies, Part III Certificate, C.G.L.I. 509

This two-year course will be offered in 1971–72

Qualification for entry: a pass in the Mechanical Engineering Craft Studies Part II Certificate normally admits students to the first year.

Mechanical Engineering Craft Practice, Part II Certificate, C.G.L.I. 193 (DES260)

Course adviser: Mr R. Wood

A part-time day course for the general engineering craftsman, leading to the City and Guilds of London Institute's Part II Certificate. Further years of part-time day study lead to specialist supplementary certificates, and to the U.L.C.I. Certificate in Workshop Organisation (for potential charge-hands and foremen). This course will eventually be replaced by the Mechancial Engineering Craft Studies Course (C.G.L.I. 503 (page 26).

Students who were successful in the third year Craft Practice Course in 1968–69 may proceed to the fourth year shown below. The third year course has been withdrawn.

4th Year (B). *Course tutor:* Mr F. Griffiths. *Curriculum:* craft theory, workshop practice, related studies, general studies.

Examination: C.G.L.I. 193

Qualifications: City and Guilds of London Institute's Part II Certificate

Supplementary Certificate (B) (DES261). *Course tutor:* Mr A. Dickson. *Curriculum:* craft theory, related studies, general studies, workshop practice with option of either fitting processes, machining processes, or toolmaking.

Examinations: C.G.L.I. 193

Qualification: City and Guilds of London Institute's Supplementary Certificate

Welding Engineering Craft Studies, Part II Certificate, C.G.L.I. 523

Course adviser: Mr J. Braddock

A part-time day course of two years' duration leading to the City and Guilds of London Institute's Part II Certificate. This course will eventually replace the Welding Craft Practice Course (C.G.L.I. 323).

Qualifications for entry: students who have completed Part I of the existing Craft Practice Courses or the Basic Engineering Craft Studies Course.

2nd Year (C). *Course tutor:* Mr K. Walker. *Curriculum:* manual metal arc welding, metal arc gas shielded welding, oxy-acetylene welding, tungsten arc gas shielded welding and thermal cutting.

Examinations: U.L.C.I. 523

The 3rd year will be offered in 1970–71.

Welding Craft Practice, Part II Certificate, C.G.L.I. 323 (DES390)

Course adviser: Mr J. Braddock

A part-time day course leading to the C.G.L.I. Part II Certificate. This course is being replaced by the Welding Engineering Craft Studies Part II above. The 3rd, 4th and 5th years are retained only for students who have already embarked on this course.

Qualifications for entry: students who have passed the C.G.L.I. 323 Part I examination or equivalent.

3rd Year (B). *Course tutor:* Mr K. Walker. *Curriculum:* metal arc welding techniques, related studies, welding practice.

Examinations: C.G.L.I. 323

4th Year (B). *Course tutor:* Mr J. Braddock. *Curriculum:* shielded arc welding techniques, related studies, welding practice.

Examinations: C.G.L.I. 323

Qualification: Advanced Craftsman's Certificate of C.G.L.I

5th Year (B). *Course tutor:* Mr J. Braddock. *Curriculum:* oxy-acelylene welding techniques, related studies, welding practice.

Examinations: C.G.L.I. 323

Qualification: Endorsement to Advanced Craftsman's Certificate

Sheet Metal and Thin Plate Craft Studies, Part II Certificate, C.G.L.I. 524

Course adviser: Mr W. E. Pannell

A part-time day course of two years' duration leading to the City and Guilds of London Institute's Part II Certificate. This course will eventually replace the Sheet Metal Trades Course, C.G.L.I. 66.

Qualifications for entry: students who have completed Part I of the existing craft courses or the Basic Engineering Craft Studies Course.

2nd Year (C). *Course tutor:* Mr J. Caunce. *Curriculum:* craft principles, applications, associated studies together with workshop/laboratory activities and craft project work.

Examinations: U.L.C.I. 524

The 3rd Year will be offered in 1970–71

Sheet Metal Trades Advanced Certificate, C.G.L.I. 66 (DES101)

Course adviser: Mr W. E. Pannell

A part-time day course leading to the C.G.L.I. 66 Advanced Certificate. It is followed by a 5th year leading to the Full Technological Certificate. This course is being replaced by the Sheet Metal and Thin Plate Craft Studies C.G.L.I. 524 Part II Certificate Course (above). The 4th and 5th years are retained only for students who have already embarked on this course.

4th Year (B). *Course tutor:* Mr W. E. Pannell. *Curriculum:* pattern development, trade techniques, trade calculations and science, workshop processes and practice.

Examinations: C.G.L.I. 66

Qualification: Advanced Certificate of the City and Guilds of London Institute

Full Technological Certificate in Sheet Metal Work (A2 NP) (DES102). *Course tutor:* Mr W. E. Pannell. *Curriculum:* pattern development, trade technology, calculations, tutorial.

Examinations: C.G.L.I. 66

Qualification: Full Technological Certificate of the City and Guilds of London Institute

Fabrication Engineering Craft Practice, Part II Certificate (DES448)

Course adviser: Mr W. E. Pannell

This course is being replaced by the Sheet Metal and Thin Plate Craft Studies C.G.L.I. 524, Part II. The 3rd year will be available this year (Sheet Metal Work option) with the 4th year offered in 1970–71.

Qualification for entry: success in the Fabrication Engineering Craft Practice Part I admits to the third year.

3rd Year (B). *Course tutor:* Mr J. Caunce. *Curriculum:* craft theory and related studies, drawing and development, workshop processes and practice.

Examination: U.L.C.I. 160–3

Fabrication and Welding Engineering Technicians' Part I Certificate, C.G.L.I. 324 (DES466)

Course adviser: Mr W. E. Pannell

A two-year course leading to the City and Guilds of London Institute's Fabrication and Welding Engineering Technicians Certificate Part I. A further two-year course leads to a Part II Certificate. This course is offered to meet the growing need in industry for technicians in the forming and joining of materials. It is the technicians' counterpart of the Welding and Fabrication Craft Courses.

Qualifications for entry: minimum requirement for direct entry should be a five-year secondary school course which in the final year has included mathematics and an appropriate science subject, or holders of a Part I craft certificate or equivalent.

1st Year (C). *Course tutor:* Mr W. E. Pannell. *Curriculum:* introduction to materials, processes of fabrication and welding, mathematics, science, drawing and development.

Examinations: U.L.C.I. 145–1

The 2nd Year will be offered in 1970–71.

MOTOR VEHICLE REPAIR TRADES COURSES

Courses are offered leading to the National Craftsman Certificate and to Membership requirements of the Institute of the Motor Industry.

The arrangement of all the Motor Trade Courses has been revised to meet the needs of the Transport Training Board and a course for staff of Parts Departments is included.

Motor Vehicle Mechanics Certificate, C.G.L.I. 168

Course adviser: Mr B. P. Mann

A four-year part-time day course, leading to a Part I Certificate at the end of the 2nd year and a (final) Part II certificate after the 4th year. Success in both of the examinations is necessary for the award of the National Craftsman's Certificate following the practical examination at the end of the apprenticeship.

Qualifications for entry: apprentices in their 16th year at enrolment enter the second year of the course. No first year is offered.

Part I (DES233)

2nd Year (C). *Course tutor:* Mr G. E. S. Jepson. *Curriculum:* motor vehicle techniques, motor vehicle practice, general studies.

Examinations: C.G.L.I. 168–1/2

Qualification: City and Guilds of London Institute's Part I Certificate

Part II (DES469)

1st Year (B). *Course tutor:* Mr J. McRory. *Curriculum:* motor vehicle techniques, motor vehicle practice, general studies.

Examinations: internal

2nd Year (B). *Course tutor:* Mr R. H. Mason. *Curriculum:* motor vehicle techniques, motor vehicle practice, general studies.

Examinations: C.G.L.I. 168

Qualification: City and Guilds of London Institute's Part II Certificate

Motor Vehicle Technicians Certificate, C.G.L.I. 170 (DES235)

Course adviser: Mr B. P. Mann

A four-year part-time day course leading to the City and Guilds Certificate for Motor Vehicle Technicians. Success in this course gives partial exemption from the examination of the Institute of the Motor Industry.

Qualifications for entry: success in Part I of C.G.L.I. course 168 admits to the second year. Success in Part II of C.G.L.I. course 168 admits to the third year. No first year is offered.

2nd Year (B). *Course tutor:* Mr F. K. Pearson. *Curriculum:* motor vehicle techniques, motor vehicle practice.

Examinations: C.G.L.I. 170

3rd Year (B). *Course tutor:* Mr F. K. Pearson. *Curriculum:* English, motor vehicle techniques, motor vehicle practice.

Examinations: internal

4th Year (A2 NP). *Course tutor:* Mr T. A. Hulton. *Curriculum:* English, motor vehicle techniques, motor vehicle practice.

Examinations: C.G.L.I. 170

Qualification: City and Guilds of London Institute's Certificate in Motor Vehicle Technicians' Work

P.A.R.D.I.C. Course for Parts Department Staff (B) (DES3654)

Course adviser: Mr B. P. Mann

A two-year part-time day course leading to the Intermediate Certificate in Parts Merchandising.

Qualifications for entry: those who hold a Part I certificate in Motor Vehicle Mechanics work (Course No. 168) enter the first year; those of mature years and those who hold exempting qualifications from Section A of the Institute of the Motor Industry examinations should consult the course adviser.

1st Year. *Course tutor:* Mr B. P. Mann. *Curriculum:* parts department practice, parts sales organisation, liberal studies.

2nd Year. *Course tutor:* Mr B. P. Mann. *Curriculum:* parts department practice, parts sales organisation, liberal studies.

Examinations: C.G.L.I. 384

Qualification: City and Guilds of London Institute's Intermediate Certificate in Parts Merchandising

Institute of the Motor Industry (A2 NP) (DES1318)

Course adviser: Mr B. P. Mann

A one-year part-time day course exempting students from the final of the Institute's examination.

Qualification for entry: a pass in both the C.G.L.I. Motor Vehicle Mechanics' and the Motor Vehicle Technicians' course.

Curriculum: motor industry practice, motor industry management, service organisation and administration, parts organisation and practice.

Examinations: internal, externally assessed

Qualification: exemption from the Associate Membership examinations of the Institute of the Motor Industry

Administrative Staff

Registrar	J. Barnacle, D.M.A., F.C.C.S.
Assistant Registrar	E. D. Hardman
Senior Clerks	Miss E. Stobbart (Examinations and Records)
	R. G. Walton (Finance and Accounts)
Secretary to the Principal	Miss F. M. Jones
Section Clerks	Mrs R. McNamara
	Mrs P. Tinsley
Clerks	Mrs A. Allen
	Miss N. B. Chapman
	Miss E. I. A. Buggy
	Mrs M. Caunce
	Mrs S. Cooper
	Mrs E. V. Crook
	Mrs E. Gower
	Mrs J. Halstead
	Mrs M. J. Livesey
	Mrs C. Matthewson
	Miss J. H. Slee
	Mrs M. Taylor
	Miss J. K. Watt
	Mrs J. C. Horsley (Secretary to the Industrial Liaison Officer)
	Mrs. K. Howarth (Clerk to the Child Care Tutors)
Telephonists	Mrs P. B. Bamford
	Miss M. Eccles
Cashiers	Mrs R. Doherty
	Mrs M. Marland
College Lodgings Officer	Mrs P. M. Cross
Equipment Maintenance	E. Goodson (Chief Engineer)
	E. Davies
	P. Young
Refectory	Mrs M. Hamlyn White (Catering Manageress)
	Miss E. Grunshaw (Assistant Manageress)

Custodian of Premises	W. H. Hatton, M.B.I.C.SC.
Caretakers	L. Whalley (Avenham premises)
	L. Posner (Owen Street premises)
Assistant Caretakers	V. S. Baron
	J. C. Christian
	C. T. Day
	R. A. McConochie
	H. Mee
	H. Nicholls
	E. Parker
	W. Pullan
	T. C. Ritchie
	W. Sanders
	R. Seed
	J. Spencer
Groundsman	G. Cowell
Watchmen	C. Ashton
	S. Dixon
	T. W. Gregson
	A. E. Manley
	F. Miller
	F. E. Oldham
	J. Smith

Calendar

1969	Thursday, 11th September	General Staff Meeting
	ENROLMENT PERIOD	
	Thursday, 11th September	Enrolment, first day
	Friday, 12th September	Enrolment, second day
	Monday, 15th September	Enrolment, third day
	Tuesday, 16th September	Enrolment, last day
	Autumn Term (13 weeks)	
	Monday, 22nd September	All day and evening classes commence for the Autumn term
	Friday, 19th December	All departments close for Christmas after evening classes
	Spring Term (11 weeks)	
1970	Monday, 5th January	All classes re-open for the Spring term
	Tuesday, 10th February	Foundation Celebration and Address: all evening classes closed
	Friday, 20th March	All departments close for Easter after evening classes
	Summer Term (12 weeks)	
	Monday, 6th April	All classes re-open for the Summer term
	Friday, 22nd May	All departments close for Spring Holiday after evening classes
	Monday, 1st June	All classes re-open
	Friday, 3rd July	All classes close: end of term
	Friday, 10th July	Submission of reports: end of session

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

The acceptance of a student into a course must have the approval of the Head of Department. Generally, students under age 16 on the 1st September cannot be admitted.

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

Courses will be provided subject to adequate enrolment and within the limits of available teaching accommodation and staff. They may be discontinued at the discretion of the Principal at any time during the session should the number of students attending fall below a reasonable level.

Full-time and Sandwich Course Students

Application to join a course should be made before the commencement of session on the form obtainable from the Registrar. Students accepted into full-time or sandwich courses must undertake the formal enrolment procedure (described on page 40) either on one of the four advertised enrolment days or during the first two days of the course at a time arranged by the Head of Department.

Each full-time and sandwich course student will be placed under the supervision of a Course Tutor who will supervise the student's progress throughout the session and to whom the student may refer for advice about his or her course of study.

GRANTS: most students will qualify for a grant from a Local Education Authority, and it is the student's responsibility to make application for this to the Local Education Authority of the County or County Borough Council within whose area he permanently resides. Grants are assessed according to the financial position of the student, taking account of parental income and other circumstances. Generally, grants cover tuition fees (this payment is normally made direct to the College), an allowance for books, materials, examination fees, and in the case of students in advanced courses a maintenance grant (see also page 39).

Part-time Students

Intending students wishing for advice should write to the Head of Department. Application to join a course should be made in person during the enrolment period (see page 40).

Overseas Students

An overseas student wishing to join a full-time or sandwich course must complete the special application form obtainable from the Registrar. This form, when completed, should be sent by the student to the student authority in his own country; this authority will forward the form to the College through its London office.

A Certificate of Competence in the English language will be required, stating that the applicant has sufficient proficiency in written and spoken English to be able to follow a course of study conducted in English.

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 course of advanced 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 67% 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 set work, 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 set 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 noted with the name(s) of the subject(s) in which he has thus distinguished himself.

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. The only students excused paying the tuition fee at the time of enrolment are:

(*a*) full-time and sandwich course students who are to be grant-aided by a Local Education Authority; documentary evidence will be required of the offer of a grant, and

(*b*) those whose employers undertake to pay the tuition fees on their behalf; they must produce at enrolment a letter from the employer to that effect.

Fees are graded into three categories corresponding to the academic level of the course, namely:

Grade C: work of an introductory character, for example leading to G.C.E. Ordinary level.

Grade B: work of an intermediate character, above the level of Grade C and leading for example to Ordinary National Diplomas or Certificates and G.C.E. Advanced level.

Grades A2 and A1: work of an advanced character, above the level of Grade B and leading for example to Higher National Diplomas or Certificates, final professional qualifications, degrees.

The grade of each course is shown in brackets after the course title, or after the year of the course where a full course covers more than one grade of work.

Part-time students from the administrative counties of Lancashire and Westmorland and all students from Wigan County Borough who are age 16 and under age 18 on the 1st September will be enrolled without payment of the tuition fee.

NOTE TO LOCAL AUTHORITIES

The course grade designation (A2 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.

Sandwich Courses	Students under age 18 on 1st September			Students age 18 and over on 1st September		
	£	s.	d.	£	s.	d.
Higher National Diplomas in:						
Mechanical Engineering (1st, 2nd, 3rd Years)	50	2	6	51	10	0
Mechanical Engineering (4th Year)				76	10	0
Mechanical Engineering (Industrial Design)	50	2	6	51	10	0
Production Engineering	50	2	6	51	10	0

Part-time Courses	Students under age 18 on 1st September			Students age 18 and over on 1st September		
	£	s.	d.	£	s.	d.
Grade C	1	17	6	3	12	6
Grade B	3	0	0	4	12	6
Grades A2 and A1	5	2	6	6	2	6

RESIDENTIAL GENERAL 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 period of a course, or where only partial financial support is offered by the employer.

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.

Enrolment

Students will be enrolled on the following days and during the times shown:

	morning	*afternoon*	*evening*
Thursday, 11th September	none	2.00 to 4.00	6.00 to 8.30
Friday, 12th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Monday, 15th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Tuesday, 16th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30

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 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.

Permission Vouchers

All students must obtain permission vouchers each year and present them at enrolment except (*a*) those normally resident in the County Borough of Preston or in the administrative area of Lancashire County and (*b*) part-time students normally resident in the County Borough of Wigan.

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 and Design (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52)

E BLOCK

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

F BLOCK

Chemistry and Biology Department (F37)

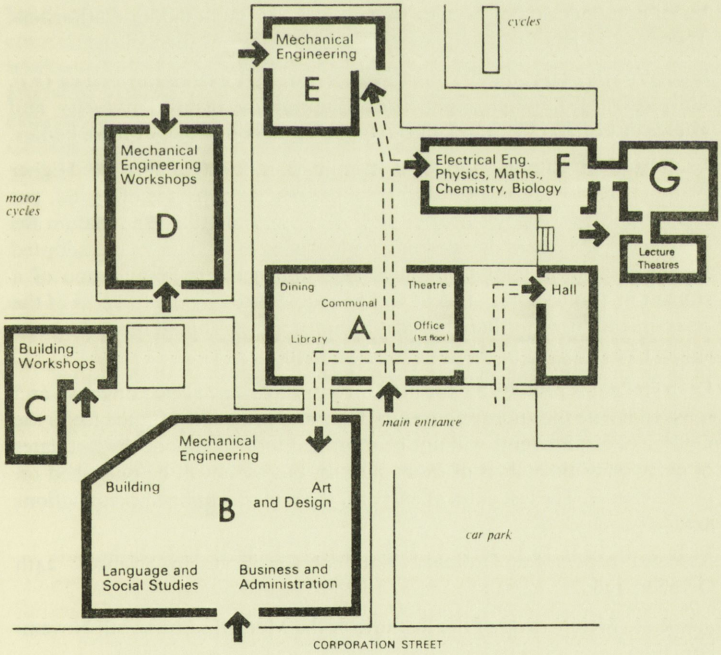
Electrical and Electronic Engineering Department (F1, F8, F9 and F10)

Physics Department, Mathematics and Computer Studies 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.



Students will not be permitted to attend classes until they have completed the enrolment procedure. 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.

Examinations

ENTRY TO 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.* University of London, Council of Engineering Institutions, City and Guilds of London Institute) 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 and 15s. od. per project and, if appropriate, 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 Ordinary National Certificate in Sciences: 24th October, 1969

Associate Membership of the Institute of the Motor Industry: 7th November, 1969

Assessed papers for National Diplomas and Certificates, including endorsements: 19th December, 1969

London University B.Sc. (Sociology): 16th January, 1970

Assessed papers for Ordinary National Certificate in Business Studies: 30th January, 1970

Union of Lancashire and Cheshire Institutes, series B and C: 30th January 1970

City and Guilds of London Institute: 6th February, 1970

General Certificate of Education papers (N.U.J.M.B.): 6th February, 1970

Pitmans: 20th March, 1970

Training Council for Teachers of the Mentally Handicapped: 20th March, 1970

Royal Society of Arts, Summer Series: 1st May, 1970

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.

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. Roadway and delivery areas 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.

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.

The Recreation 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 11-45 a.m. 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.

In the interests of hygiene staff and students are requested to observe any restrictions on smoking in the dining room.

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.

STUDENT LODGINGS

The College Authorities prepare each year a register of householders and hotel keepers who are willing to offer lodging accommodation. This register is kept by the College Lodgings Officer, who initially approves and thereafter regularly inspects all registered accommodation.

Some accommodation is available in Preston and surrounding districts, but many students will have to be accommodated some distance from the College, possibly in Blackpool and Lytham. Students who are grant-aided will generally be assisted by their supporting Local Authorities if their necessary travelling expenses exceed the amount included in the grant.

Intending students should write to the College Lodgings Officer as soon as they receive confirmation of their acceptance into a course. Priority will be given to those students whose homes are 20 miles or more from the College.

CHANGES 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 home or lodgings 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 Department. 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 outside the main College premises. These classes are indicated by room number prefixes as follows in the several College documents dealing with teaching accommodation:

Av	School of Art Annexe, Avenham Lane, Preston
BTU	Blood Transfusion Unit, Lancaster
NWGB	North Western Gas Board Training Centre, Moor Lane, Preston
On	Owen Street Annexe, off Crook Street, Ribbleton Lane, Preston
PRI	Preston Royal Infirmary, Deepdale Road, Preston
TH	G.P.O. Telephone House, Moor Lane, Preston
Ty	Trinity County Secondary School, Great Shaw Street, Preston

SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of socieities 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.

The Library

Telephone: Preston 51831, ext 15

Librarian	A. Lawrence, A.L.A.
Assistant Librarians	Miss S. M. Brindle
	Miss E. Jenkins
Library Assistants	Miss J. E. Bamford
	Mrs I. M. Fuller

The College library is available to all students for reference purposes. 400 journals are now received in addition to the continuing expansion of the book stock. A set of British Standard Specifications is maintained, as also is a comprehensive set of bibliographic research works and a considerable number of indexing and abstracting publications.

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.

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.

Computing Facilities

Telephone: Preston 51831, ext 43

Computer Manager	F. Fowler
Operator/Programmer	Vacancy
Punch Operator	Mrs C. M. Hoyle

The College's computer configuration consists of an ICL1901 Acentral processing unit of 16K words of core storage, two twin exchangeable disc stores, paper tape reader/punch, card reader, line printer and console typewriter which are housed, together with adequate data preparation equipment, in a specially designed suite of rooms in the Department of Mathematics and Computer Studies.

Computer appreciation and programming is taught in advanced courses which require these modern techniques. Short courses in various computer languages, and more extensive courses in data processing and systems analysis, are arranged throughout the session. Increasing demands are being made on the computer for research and consultancy work undertaken by the teaching staff of the College.

It is proposed to collaborate with local schools in introducing modern computing methods to Sixth Form pupils.

The computer will eventually be used as the focal point of specialist degree and diploma courses in computer studies.

The Computer Manager will be pleased to give advice to representatives of industrial or commercial undertakings who may be considering the use of a computer for their own needs.

Industrial Liaison Centre

Telephone: Preston 51831, ext 41

Industrial Liaison Officer G. A. Redhead, B.SC.
Secretary Mrs J. C. Horsley

Technological knowledge and innovation are progressing so rapidly that it is difficult for any one individual to keep himself up to date. Particular difficulties are felt by small and medium sized manufacturing firms, many of which would welcome information about the results of industrial research or would appreciate access to local and national sources of information relevant to their own particular problems.

To help firms of this kind the Ministry of Technology, in conjunction with selected Technical Colleges, has established a network of Industrial Liaison Centres with the specific intention of offering assistance with technical and management problems and of encouraging the use of modern techniques.

Industrial Liaison Centres are financed from public funds and no charge is made for advice offered. However, some individuals or organisations brought in to help (only at the firm's invitation) might expect to negotiate fees. Consultations will take place in the strictest confidence, and if solutions to particular problems are found these would not be revealed outside without the firm's consent.

Close co-operation between College and Industry is intended, and the Industrial Liaison Officer is a member of the College staff; he will be pleased to visit any firm regardless of whether problems exist or not.

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.
	J. Montgomery, DIP.P.E.
Visiting Lecturers	J. H. Dickens
	R. Hindle
	A. Lewis
	R. Poole
	B. Strettle, B.J.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.

SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's nine 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 17s. 6d. if under age 18 on the 1st September or £3 12s. 6d. if age 18 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

P. F. Sanger, *President*
J. D. Callon, *Vice-President* (*Internal Affairs*)
K. N. Tolladay, *Vice-President* (*External Affairs*)
Miss J. A. Davies, *Vice-President* (*Female Students*) *and Secretary*
P. C. Johnson, *Student Treasurer*
A. G. Cottam, *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.

The Harris Students' Union Fund

The Students' Union in December 1966 established by deed a trust fund called the 'Harris Students' Union Fund.' They appointed four Trustees and invested in the fund a small sum of accumulated moneys. The fund has been registered as a charitable trust.

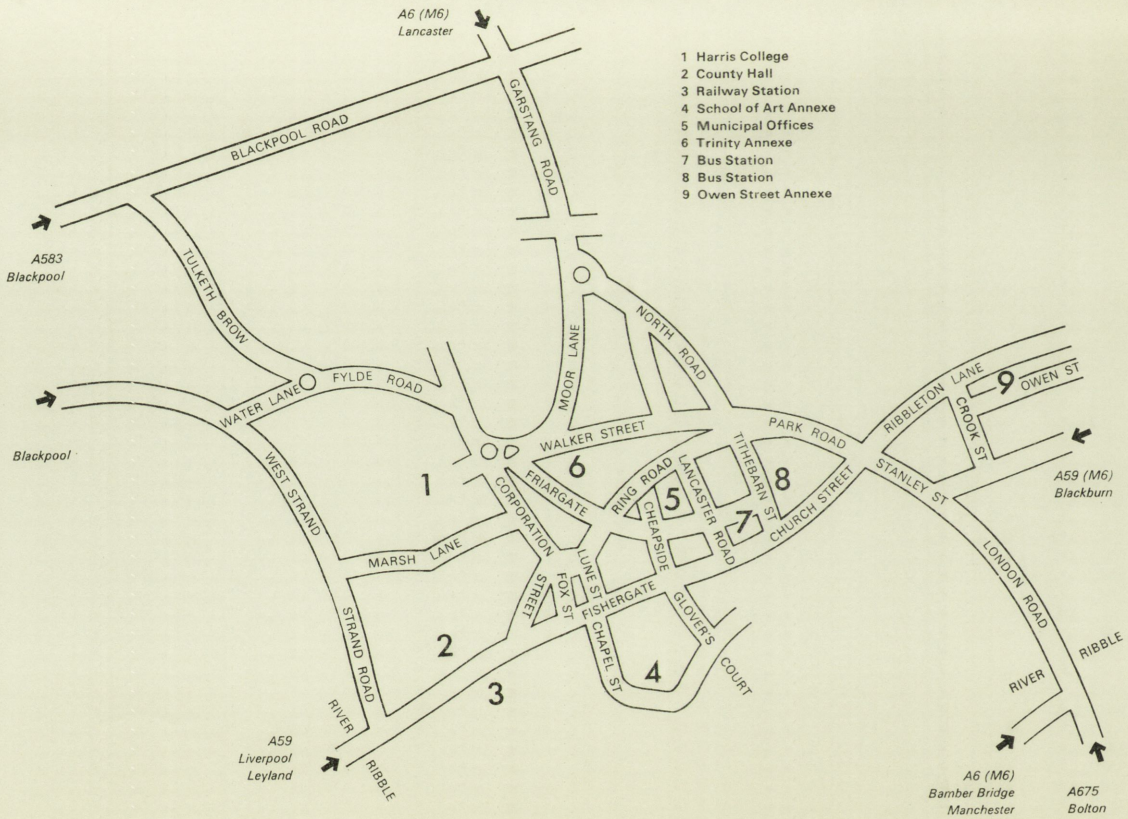
The fund is in two parts: capital moneys and revenue moneys. Both are invested by the Trustees and the annual interest from the total fund is paid to the Union as income to be expended on those of the Union's activities which 'are of an educational or otherwise charitable nature.' The capital moneys remain permanently in the fund, and as they are increased by donations they provide an increasing income to the Union.

It is intended to accumulate money in the 'revenue' section of the fund to be withdrawn at some future time for a major charitable project (such as the acquisition of property for the Union), and the trust deed prescribes that the Union may request the Trustees to sell investments and realise securities in this section of the fund to provide the outlay for such a project as is proper.

The total fund at present stands at approximately £1,000. It is in the interest of all students, present and future, to assist in augmenting it.

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. 6d., 32s. 6d. and 8s. 11d. each respectively.


A6 (M6)
Lancaster
BLACKPOOL ROAD
GARSTANG ROAD
A583
Blackpool
TULKETH BROW
FYLDE ROAD
WATER LANE
Blackpool
MOOR LANE
NORTH ROAD
WALKER STREET
PARK ROAD
RIBBLETON LANE
OWEN ST
CROOK ST
A59 (M6)
Blackburn
WEST STRAND
CORPORATION
FRIARGATE
RING ROAD
LANCASTER ROAD
TITHEBARN ST
CHURCH STREET
STANLEY ST
MARSH LANE
CHEAPSIDE
LUNE ST
FOX ST
FISHERGATE
GLOVERS
COURT
CHAPEL ST
LONDON ROAD
STRAND ROAD
RIVER
RIBBLE
A59
Liverpool
Leyland
A6 (M6)
Bamber Bridge
Manchester
A675
Bolton
1 Harris College
2 County Hall
3 Railway Station
4 School of Art Annexe
5 Municipal Offices
6 Trinity Annexe
7 Bus Station
8 Bus Station
9 Owen Street Annexe

Harris College

Department of Physics
Department of Mathematics and Computer Studies

Session 1969–70

Harris College, Corporation Street, Preston, Lancashire
Telephone: Preston 51831–7

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, M.M., O.B.E., J.P.

Vice-President: County Councillor T. V. Brown

Members:

Alderman J. Atkinson
Alderman H. Beaumont
Alderman Mrs D. M. Dewhurst, J.P.
Alderman Mrs R. Lytton
Alderman Mrs M. A. Wignall, J.P.
Councillor E. W. Bunker
Councillor Mrs K. E. Crozier
Councillor Mrs D. Smith

County Alderman J. Bradley, M.B.E., J.P.
County Alderman J. P. Ennis, J.P.
County Alderman Sir Fred Longworth (Deputy Lieutenant of Lancashire; Vice-Chairman of Lancashire County Council)
County Councillor C. W. Eastwood
County Councillor M. J. Fitzherbert-Brockholes, J.P.
County Councillor A. J. Whittall
County Councillor Mrs W. Winn
County Councillor G. Woods

F. D. Crowe, B.SC., C.ENG., F.R.AE.S.
C. M. Hey, B.SC.TECH., A.T.I.
R. A. Hornby, F.C.A.
T. M. Naylor, M.SC., 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.

Professor E. Roland Dobbs

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, M.M., O.B.E., J.P., *President of the Harris Council*

Members:
County Councillor T. V. Brown, *Vice-President of the Harris Council*
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

The Harris College is a major college in the North West, serving North Lancashire and neighbouring Counties and County Boroughs. There are nine teaching departments in the College: the School of Art and Design, the Departments of Building, Business and Administration, Chemistry and Biology, Electrical and Electronic Engineering, Language and Social Studies, Mathematics and Computer Studies, Mechanical Civil and Production Engineering, and Physics. 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 increasing use by industrialists of the Industrial Liaison Centre is expected to widen the range of these activities.

The Academic Board

Subject to the ultimate responsibility of the Harris Council the responsibility for the planning, co-ordination, development and oversight of the academic work of the College is delegated to an Academic Board of 30 members which includes representatives from all departmental Boards of Studies, representatives of the teaching staff generally, and students' representatives. The Board has power to co-opt specialist advisers from Universities, Colleges and other bodies when appropriate.

The Department of Physics

The Department of Physics 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, Licentiateship of the Institute of Physics and the Ordinary National Certificate in Sciences. The department provides tuition in physics 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.

The Department of Mathematics and Computer Studies

Subject to approval by the Department of Education and Science the department will offer a full-time course for the newly-established Higher National Diploma in Computer Studies. At present it offers part-time courses for the Higher National Certificate in Mathematics, Computing and Statistics, for the Licentiateship of the Institute of Mathematics and

its Applications, and for the C.G.L.I. Course 383 Data Processing for Computer Users. The department provides both full-time and part-time courses for the G.C.E. at Advanced level and part-time courses for the G.C.E. at Ordinary level. The department also provides tuition in mathematics, statistics and computer studies for courses organised by other departments of the College. Special Courses in computing techniques and their various applications are arranged and facilities are available for the production and processing of programs in all the commonly used computer languages. The College possesses an I.C.L. 1901A computer which is staffed and controlled by the department. In addition the department has three laboratories fully equipped to deal with all relevant methods of numerical analysis, statistical experimentation and experimental work in the basic logic of computer design and analogue computing.

The Department of Physics and the Department of Mathematics and Computer Studies maintain close links with industry, and regular meetings of their professional bodies are held in the College. These include meetings of the newly formed Lancaster branch of the Institute of Physics and the Physical Society, the local branch of the British Computer Society, and the Lancashire and North Western Branch of the Institute of Mathematics and Its Applications.

Service facilities to industry and commerce. 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. The Department of Mathematics and Computer Studies is able to offer advice and assistance to organisations which wish to consider the feasibility of transferring the work of their data processing departments to a computerised system, and enquiries are 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 luminescence in compounds made from elements in groups II and VI. The accommodation of the Physics Department includes well equipped research laboratories. The Governing Body of the College offers each year a number of Research Assistantships.

The Departmental Boards of Studies

The Board of Studies in each department is directly responsible to the Academic Board, offering advice on the planning, co-ordination and development of the academic work of the department. Members include senior teaching staff, representatives of the teaching staff of the department generally, and students' representatives.

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Department of Physics

Telephone: Preston 51831

Head of Department	To be appointed
Senior Lecturers	G. R. Marr, M.SC., A.INST.P.
	M. A. S. Sweet, B.SC., PH.D.
Lecturers	P. R. Bissell, B.SC., GRAD.INST.P.
	T. Davies, M.SC., A.INST.P.
	F. R. Dean, M.SC., A.INST.P.
	R. T. Egerton, B.SC.
	J. S. Fisher, B.SC.
	A. R. Howells, B.SC., A.INST.P.
	E. Webster, B.SC., PH.D.
Research Assistant	C. J. Wareing, GRAD.INST.P.
Technicians	A. M. Kent (*Senior*)
	R. R. Gray (*Research*)
	Mrs M. E. Brown
	V. Odehnal
	P. Floate (*Photographic*)

Department of Mathematics and Computer Studies

Telcphone: Preston 51831

Head of Department	W. Woodcock, B.SC., F.I.M.A., M.B.C.S.
Senior Lecturers	J. S. Moorman, B.SC.
	J. D. Rimmer, B.SC., M.B.C.S.
Lecturers	J. Ashworth, M.SC.TECH., A.M.C.T., A.T.I.
	G. J. Blackledge, B.SC.
	A. Lewis, C.ENG., M.I.E.E.
	S. B. Lucas, B.SC.
	D. K. Monk, B.SC.
	A. Payne, B.SC.
	L. R. Peace, M.A., A.F.I.M.A.
	R. L. Pickering, M.SC.
	J. B. Wignall, B.A., A.F.I.M.A.
Computer Manager	F. Fowler
Operator/Programmer	Vacancy
Punch Operator	Mrs C. M. Hoyle

List of Courses

FULL-TIME AND SANDWICH

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19 Graduateship of the Institute of Physics, two-year course
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29 Higher National Diploma in Computer Studies
30 General Certificate of Education, Advanced level mathematics etc.

PART-TIME DAY

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21 Licentiateship of the Institute of Physics
22 Ordinary National Certificate in Sciences
23 General Certificate of Education, Advanced level physics etc.
23 General Certificate of Education, Ordinary level physics etc.
23 Ancillary subjects for Royal Institute of Chemistry Qualifications
31 Higher National Certificate in Mathematics, Statistics and Computing
32 General Certificate of Education, Advanced level pure mathematics
32 General Certificate of Education, Ordinary level mathematics etc.

EVENING

23 General Certificate of Education, Advanced level physics etc
23 General Certificate of Education, Ordinary level physics, mathematics etc.
23 Ancillary subjects for Royal Institute of Chemistry Qualifications
33 Associateship of the Institute of Statisticians
33 Registered Statistical Assistant and Parts I and II of the Institute of Statisticians examinations
34 Higher National Certificate in Mathematics, Statistics and Computing
35 Licentiateship of the Institute of Mathematics and its Applications
35 Data Processing for Computer Users
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SPECIAL COURSES

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24 Nuffield Physics Apparatus
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24 Physics for Sixth Formers
25 The Physics and Applications of Microscopy
25 Semiconductor Physics
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37 Computer Programming on Fortran IV
37 Introduction to Systems Analysis
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Courses offered by the Department of Physics

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 applications 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: four-year course (DES2147)

Course adviser: Mr G. R. Marr

This is a sandwich course in which 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 1 of the Institute's Graduateship examinations and qualifies a student for 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 (A2). *Tutor:* Dr E. Webster. *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; general studies.

College course: 22nd September to 20th March (24 weeks)

Examinations: internal

2nd Year (A2). *Tutor:* Mr A. R. Howells. *Curriculum:* physics: viscosity kinetic theory 2, thermodynamics, optics 2, electricity; mathematics: statistics 2, complex numbers 2, Laplace transforms, vector algebra; electronics: amplifiers, noise, feedback, motion of charged particles; instrumentation and control: open and closed loop servomechanisms, error networks; atomic and nuclear physics: radio activity, quantum theory, x-ray spectra, Zeeman effect; spectroscopy: origin of spectra, types of source, absorption; properties of materials; related studies.

College course: 22nd September to 20th March (24 weeks)

Examinations: internal

3rd Year (A2). *Tutor:* Mr 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; general studies.

College course: 22nd September to 3rd July (36 weeks)

Examinations: H.N.D. in Applied Physics

4th Year (A1). *Tutor:* Dr M. A. S. Sweet. *Curriculum:* physics: thermodynamics, optics, solid state physics; electronics or high energy radiations.

College course: 22nd September to 3rd July (36 weeks)

Examinations: Grad.Inst.P. Part II

Qualification: Graduateship of the Institute of Physics and the Physical Society

Graduateship of the Institute of Physics: two-year course (DES2147)

Course adviser: Mr G. R. Marr

A 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 final year.

Qualifications for entry: 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. Applicants may be admitted directly to the final year of the course after consultation with the Head of Department.

3rd Year (A2). *Tutor:* Mr G. R. Marr. *Curriculum:* physics: wave mechanics, low temperatures, thermodynamics, physical optics; mathematics: determinants, matrices, Fourier analysis; electronics; spectroscopy; photography; general studies.

College course: 22nd September to 3rd July (36 weeks)

Examinations: H.N.D. in Applied Physics

4th Year (A1). *Tutor:* Dr M. A. S. Sweet. *Curriculum:* physics: thermodynamics, optics, solid state physics; electronics or high energy radiations.

College course: 22nd September to 3rd July (36 weeks)

Examinations: Grad.Inst.P. Part II

Qualification: Graduateship of the Institute of Physics and the Physical Society

General Certificate of Education, Advanced level (B) (DES1194)

Tutor: Mr F. R. Dean

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: physics, mathematics, computations, chemistry, biology.

College course: 22nd September to 3rd July (36 weeks)

Examinations: N.U.J.M.B.

Qualifications: General Certificate of Education, Advanced level

Higher National Certificate in Applied Physics (A2) (DES1072)

Course adviser: Dr M. A. S. Sweet

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, together with 'O' level chemistry.

1st Year. *Tutor:* Mr P. R. Bissell. *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, general studies.

Attendance: all day Monday and Monday evening

Examinations: internal

2nd Year. *Tutor:* Mr P. R. Bissell. *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; general studies.

Attendance: all day Monday and Monday evening

Examinations: internal, externally assessed

Qualification: Higher National Certificate in Applied Physics

Licentiateship of the Institute of Physics (A2) (DES3022)

Tutor: Dr E. Webster

A one or two-year part-time course for endorsements to the Higher National Certificate in Applied Physics. Success in the examinations of three endorsement subjects qualifies a student for 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

Qualification: Licentiateship of the Institute of Physics and the Physical Society

Ordinary National Certificate in Sciences (B) (DES2969)

Course adviser: Mr R. T. Egerton

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:* Mr J. S. Fisher. *Curriculum:* basic physics, basic mathematics, basic chemistry, general studies.

Attendance: all day Wednesday and Wednesday evening

Examinations: internal, externally assessed, at the end of the fourth term

2nd Year. *Tutor:* Mr R. T. Egerton. *Curriculum:* basic physics (1 term) basic mathematics (1 term), basic chemistry (1 term), elective physics with supplementary mathematics (2 terms), general studies.

Attendance: all day Friday and one evening

Examinations: internal, externally assessed, in basic physics, basic mathematics and basic chemistry at the end of fourth term; elective physics theory (internal, externally assessed) and practical (internal) at the end of the sixth term

Qualification: Ordinary National Certificate in Sciences

General Certificate of Education, Advanced level (B) (DES1194)

Tutor: Mr R. T. Egerton

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: physics, mathematics, 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

Qualification: General Certificate of Education, Advanced level (N.U.J.M.B.)

General Certificate of Education, Ordinary level (C) (DES1193)

Tutor: Mr 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: physics and/or mathematics. Courses are also available in chemistry and English language.

Attendance: one half day or evening per subject per week

Qualification: General Certificate of Education, Ordinary level (N.U.J.M.B.)

Ancillary Subjects for Royal Institute of Chemistry Qualifications (B) (DES3914)

Course tutor: Mr R. T. Egerton

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.

Qualifications for entry: mathematics and physics should have been studied beyond G.C.E. 'O' level

Curriculum: physics (90 hours), mathematics (70 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

Qualification: Royal Institute of Chemistry assessed ancillary subject passes

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 Later Years of Nuffield Physics

Organiser: Mr F. R. Dean

A course designed for teachers in schools offering the G.C.E. 'O' level Nuffield Physics scheme. It will extend over ten weekly meetings arranged for Tuesday evenings commencing on the 30th September, 1969 at 6.0 p.m. Attendance at earlier courses is not a prerequisite.

Nuffield Physics Apparatus

Organiser: Mr F. R. Dean

A course for teachers and school laboratory technicians who are or who expect to be concerned with making Nuffield Physics apparatus. It will extend over ten weekly meetings arranged for Tuesday evenings commencing on the 6th January 1970 at 6.0 p.m.

Space Physics

Organiser: Dr E. Webster

A one-day course for sixth form pupils and others interested in space exploration developments. It is designed to provide a comprehensive introduction to modern aspects of space research including space exploration, astronomy and physics of the universe. No specialist knowledge will be assumed. To be organised early in the spring term.

Physics for Sixth Formers

Organisers: Dr M. A. Sweet and Dr E. Webster

A two-day course for sixth form pupils with emphasis on practical work. The topics to be covered will include: spectroscopy, nucleonics, low temperature physics, electronics and optics. To be arranged during the Easter vacation.

The Physics and Applications of Microscopy

Organiser: Mr F. R. Dean

A two-day course designed to appeal to research and scientific workers in industry as well as to teachers. To be arranged early in the summer term.

Semiconductor Physics

Organiser: Dr M. A. S. Sweet

A course designed to give an indication of advanced theory and research in semiconductor physics. It will extend over two days during the summer term.

Courses offered by the Department of Mathematics and Computer Studies

Corporate Membership of the British Computer Society. The British Computer Society is the acknowledged professional organisation for computer personnel in this country, its members being engaged in the advancement, teaching and practice of computing and data processing and of their application in industry, commerce and the public service. The academic requirements for Associate Membership are the passing or exemption from Part I of the Society's examination. This exemption will be granted to holders of Higher National Diplomas in Computer Studies.

The general education requirements are: G.C.E. 'O' level passes in mathematics, English language and three other subjects, or an approved equivalent.

Higher National Diploma in Computer Studies (A2) (DES3501)

Course adviser: Mr J. D. Rimmer

Subject to final approval by the Department of Education and Science the first year a two-year full-time course will be offered from September, 1970.

The second year will be offered from 1971.

Qualifications for entry: applicants must show evidence of adequate ability in the use of English and must possess one of the following qualifications:

(*a*) G.C.E. passes in mathematics and three other subjects, one of which must be at 'A' level,

(*b*) an Ordinary National Certificate or Diploma in Sciences,

(*c*) an Ordinary National Certificate or Diploma in Engineering,

(*d*) an Ordinary National Certificate or Diploma in Business Studies with an attainment in mathematics equivalent at least to an 'O' level pass,

(*e*) G.C.E. passes in three subjects together with the Certificate for Computer Personnel (C.G.L.I. No. 319) with an attainment in mathematics at least to an 'O' level pass, or

(*f*) a qualification deemed by the Joint Committee to be equivalent to any of the above.

1st Year. *Tutor:* Mr J. D. Rimmer. *Curriculum:* programming, data processing, mathematics for computer studies, basic statistics, general office and computer room organisation and methods, related studies.

College course: September to July (36 weeks)

Examinations: internal

2nd Year. *Tutor:* Mr J. D. Rimmer. *Curriculum:* programming, data processing, systems analysis and methods, mathematical techniques of management control, accounting, related studies.

College course: September to July (36 weeks)

Examinations: internal, externally assessed

Qualification: Higher National Diploma in Computer Studies

General Certificate of Education, Advanced level (B) (DES1194)

Tutor: Mr J. B. Wignall

A one-year full-time course in preparation for the G.C.E. Advanced level examinations. The course will also be appropriate for mature students seeking qualifications for entry to move advanced courses.

Qualifications for entry: it will be assumed that students have previously attended G.C.E. Advanced level courses in their chosen subjects

Curriculum: suitable combinations of subjects chosen from: mathematics, computations, physics, chemistry, biology

College course: 22nd September to 3rd July (36 weeks)

Examinations: N.U.J.M.B.

Qualification: General Certificate of Education, Advanced level

Corporate Membership of the Institute of Mathematics and Its Applications. The Institute of Mathematics and its Applications is the acknowledged professional organisation for mathematicians in this country. Its members are engaged in the advancement, teaching and practice of mathematics and its application in industry and the public service. The academic requirements for the professional grades of Fellow and Associate Fellow are not less than those required for a good honours degree of a British University. There is also the Corporate grade of Licentiateship which can be attained by the successful completion of a course for the Higher National Certificate in Mathematics, Statistics and Computing together with a course of supplementary study.

Higher National Certificate in Mathematics, Statistics and Computing (A2) (DES3144)

Course adviser: Mr J. S. Moorman

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:* Mr 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:* Mr 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

Qualification: Higher National Certificate in Mathematics, Statistics and Computing.

General Certificate of Education, Advanced level (B) (DES1194)

Tutor: Mr R. L. Pickering

A one-year revision course in pure mathematics in preparation for G.C.E. 'A' level examination

Qualifications for entry: students will have attended courses at this level

Attendance: one half day per week

Qualification: General Certificate of Education, Advanced level (N.U.J.M.B.)

General Certificate of Education, Ordinary level (C) (DES1193)

Tutor: Mr R. L. Pickering

A one-year revision course in preparation for G.C.E. 'O' level examinations

Qualifications for entry: students will have attended courses at this level

Curriculum: mathematics. Courses are also available in physics, chemistry and English language but students will not be permitted to enrol for more than two subjects in one session.

Attendance: one half day per week

Qualification: General Certificate of Education, Ordinary level (N.U.J.M.B.)

COURSES IN STATISTICS

Course adviser: Mr L. R. Peace

Courses are provided in preparation for the examinations of the Institute of Statisticians.

Associateship of the Institute of Statisticians (A2) (DES2145)

Tutor: Mr L. R. Peace

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 IIIa 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 IIIa of the examination of the Institute of Statisticians

Final qualification: Associateship of the Institute of Statisticians

Registered Statistical Assistant and Parts I and II of the Examinations of the Institute of Statisticians (B) (DES2124)

Tutor: Mr L. R. Peace

A one-year course is provided. The course also covers the syllabus of the Associated Examining Board's General Certificate of Education as Advanced level in statistics. It is also found to be eminently suitable for those who, whilst not requiring an examination qualification, desire an introduction to the subject or 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: one evening per week

Examinations: external

Qualification: Parts I and II of the examinations of the Institute of Statisticians

Higher National Certificate in Mathematics, Statistics and Computing (A2) (DES3144)

Course adviser: Mr J. S. Moorman

A two-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:* Mr J. B. Wignall. *Curriculum:* mathematics, algebra, vectors and matrices, analytical geometry; numerical analysis: iterative methods, solutions of sets of linear equations, matrices; statistics: probability theory, descriptive statistics, confidence limits, tests of significance, quality control.

Attendance: three evenings per week

Examinations: internal, with statistics paper assessed

2nd Year. *Tutor:* Mr G. J. Blackledge. *Curriculum:* mathematics, functions of a real variable, ordinary differential equations, functions of a complex variable, partial differential equations, Fourier series; numerical analysis:

solution of differential equations, interpolation, numerical differentiation and integration; automatic computation.

Attendance: three evenings per week

Examinations: internal, externally assessed

Qualification: Higher National Certificate in Mathematics, Statistics and Computing

Licentiateship of the Institute of Mathematics and its Applications (A2) (DES3692)

Course adviser: Mr J. S. Moorman

A two-year course for those who have obtained a Higher National Certificate in Mathematics, Statistics and Computing.

Curriculum: mathematical techniques of operational research, numerical methods and a high level computing language

Examinations: internal, externally assessed

Qualification: the academic requirements for the qualification of Licentiateship of the Institute of Mathematics and its Applications

Data Processing for Computer Users (B) (DES463)

Course adviser: Mr J. D. Rimmer

This two-year course of evening study and related examinations is intended as a supplementary qualification for people requiring a formal computer education to a greater depth than an appreciation course, even though they do not intend to become practising programmers or systems analysts. Such personnel will normally be working closely in conjunction with a computer, at the intermediate level of management and will already have reached or be approaching a recognised standard of qualification in their own profession.

Qualifications for entry: students should be at least 20 years of age and have obtained one of the following qualifications, or the equivalent:

(*a*) an appropriate commercial qualification of intermediate professional standard,

(*b*) an Ordinary National Certificate in an appropriate subject,

(*c*) a Technicians Certificate in an appropriate subject.

Those who do not hold one of the above qualifications, but who have attained a sufficient standard through extended experience or academic study such that they can benefit from the course, may be admitted at the discretion of the Principal.

1st Year. *Curriculum:* data processing fundamentals, computer programming.

Attendance: one evening per week

2nd Year. *Curriculum:* data processing for industry, commerce and public administration, data processing for management.

Attendance: one evening per week

Examinations: C.G.L.I. 383

Qualification: City and Guilds of London Institute's Certificate in Data Processing for Computer Users

General Certificate of Education, Advanced Level (B) (DES1194)

Tutor: Mr A. Payne

A two-year course in pure mathematics and/or applied mathematics in preparation for G.C.E. 'A' level examinations

Qualifications for entry: students will have passed the General Certificate of Education at Ordinary level or the equivalent

Attendance: one or two evenings per week

Examinations: N.U.J.M.B.

Qualification: General Certificate of Education, Advanced level

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 department is always prepared to arrange and conduct special courses for which there is adequate demand and would be interested to know of any special requirements which organisations may have.

Introduction to Computers

Organiser: Mr J. D. Rimmer

A course of eight lectures on Monday evenings, commencing on the 29th September, 1969 to introduce the subject of computers at an elementary level and the advantages which can be gained by their use.

Computer Programming in Fortran IV

Organiser: Mr J. D. Rimmer

A course of ten lectures on Tuesday evenings, commencing on the 30th September, 1969 introducing this high-level scientific language. Members of the course will write programs which will be processed on the College computer.

Introduction to Systems Analysis

Organiser: Mr J. D. Rimmer

A course of eight lectures on Monday evenings, commencing on the 12th January, 1970.

Computer Programming in Cobol

Organiser: Mr J. D. Rimmer

A course of ten lectures on Tuesday evenings, commencing on the 13th January, 1970. Members of the course will write programs in Cobol which will be processed on the College computer.

Administrative Staff

Registrar	J. Barnacle, D.M.A., F.C.C.S.
Assistant Registrar	E. D. Hardman
Senior Clerks	Miss E. Stobbart (Examinations and Records)
	R. G. Walton (Finance and Accounts)
Secretary to the Principal	Miss F. M. Jones
Section Clerks	Mrs R. McNamara
	Mrs P. Tinsley
Clerks	Mrs A. Allen
	Miss N. B. Chapman
	Miss E. I. A. Buggy
	Mrs M. Caunce
	Mrs S. Cooper
	Mrs E. V. Crook
	Mrs E. Gower
	Mrs J. Halstead
	Mrs M. J. Livesey
	Mrs C. Matthewson
	Miss J. H. Slee
	Mrs M. Taylor
	Miss J. K. Watt
	Mrs J. C. Horsley (Secretary to the Industrial Liaison Officer)
	Mrs. K. Howarth (Clerk to the Child Care Tutors)
Telephonists	Mrs P. B. Bamford
	Miss M. Eccles
Cashiers	Mrs R. Doherty
	Mrs M. Marland
College Lodgings Officer	Mrs P. M. Cross
Equipment Maintenance	E. Goodson (Chief Engineer)
	E. Davies
	P. Young
Refectory	Mrs M. Hamlyn White (Catering Manageress)
	Miss E. Grunshaw (Assistant Manageress)

Custodian of Premises	W. H. Hatton, M.B.I.C.SC.
Caretakers	L. Whalley (Avenham premises)
	L. Posner (Owen Street premises)
Assistant Caretakers	V. S. Baron
	J. C. Christian
	C. T. Day
	R. A. McConochie
	H. Mee
	H. Nicholls
	E. Parker
	W. Pullan
	T. C. Ritchie
	W. Sanders
	R. Seed
	J. Spencer
Groundsman	G. Cowell
Watchmen	C. Ashton
	S. Dixon
	T. W. Gregson
	A. E. Manley
	F. Miller
	F. E. Oldham
	J. Smith

Calendar

1969	Thursday, 11th September	General Staff Meeting
	ENROLMENT PERIOD	
	Thursday, 11th September	Enrolment, first day
	Friday, 12th September	Enrolment, second day
	Monday, 15th September	Enrolment, third day
	Tuesday, 16th September	Enrolment, last day
	Autumn Term (13 weeks)	
	Monday, 22nd September	All day and evening classes commence for the Autumn term
	Friday, 19th December	All departments close for Christmas after evening classes
	Spring Term (11 weeks)	
1970	Monday, 5th January	All classes re-open for the Spring term
	Tuesday, 10th February	Foundation Celebration and Address: all evening classes closed
	Friday, 20th March	All departments close for Easter after evening classes
	Summer Term (12 weeks)	
	Monday, 6th April	All classes re-open for the Summer term
	Friday, 22nd May	All departments close for Spring Holiday after evening classes
	Monday, 1st June	All classes re-open
	Friday, 3rd July	All classes close: end of term
	Friday, 10th July	Submission of reports: end of session

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.

The acceptance of a student into a course must have the approval of the Head of Department. Generally, students under age 16 on the 1st September cannot be admitted.

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

Courses will be provided subject to adequate enrolment and within the limits of available teaching accommodation and staff. They may be discontinued at the discretion of the Principal at any time during the session should the number of students attending fall below a reasonable level.

Full-time and Sandwich Course Students

Application to join a course should be made before the commencement of session on the form obtainable from the Registrar. Students accepted into full-time or sandwich courses must undertake the formal enrolment procedure (described on page 46) either on one of the four advertised enrolment days or during the first two days of the course at a time arranged by the Head of Department.

Each full-time and sandwich course student will be placed under the supervision of a Course Tutor who will supervise the student's progress throughout the session and to whom the student may refer for advice about his or her course of study.

GRANTS: most students will qualify for a grant from a Local Education Authority, and it is the student's responsibility to make application for this to the Local Education Authority of the County or County Borough Council within whose area he permanently resides. Grants are assessed according to the financial position of the student, taking account of parental income and other circumstances. Generally, grants cover tuition fees (this payment is normally made direct to the College), an allowance for books, materials, examination fees, and in the case of students in advanced courses a maintenance grant (see also page 45).

Part-time Students

Intending students wishing for advice should write to the Head of Department. Application to join a course should be made in person during the enrolment period (see page 46).

Overseas Students

An overseas student wishing to join a full-time or sandwich course must complete the special application form obtainable from the Registrar. This form, when completed, should be sent by the student to the student authority in his own country; this authority will forward the form to the College through its London office.

A Certificate of Competence in the English language will be required, stating that the applicant has sufficient proficiency in written and spoken English to be able to follow a course of study conducted in English.

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 course of advanced 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 67% 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 set work, 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 set 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 noted with the name(s) of the subject(s) in which he has thus distinguished himself.

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. The only students excused paying the tuition fee at the time of enrolment are:

(*a*) full-time and sandwich course students who are to be grant-aided by a Local Education Authority; documentary evidence will be required of the offer of a grant, and

(*b*) those whose employers undertake to pay the tuition fees on their behalf; they must produce at enrolment a letter from the employer to that effect.

Fees are graded into three categories corresponding to the academic level of the course, namely:

Grade C: work of an introductory character, for example leading to G.C.E. Ordinary level.

Grade B: work of an intermediate character, above the level of Grade C and leading for example to Ordinary National Diplomas or Certificates and G.C.E. Advanced level.

Grades A2 and A1: work of an advanced character, above the level of Grade B and leading for example to Higher National Diplomas or Certificates, final professional qualifications, degrees.

The grade of each course is shown in brackets after the course title, or after the year of the course where a full course covers more than one grade of work.

Part-time students from the administrative counties of Lancashire and Westmorland and all students from Wigan County Borough who are age 16 and under age 18 on the 1st September will be enrolled without payment of the tuition fee.

NOTE TO LOCAL AUTHORITIES

The course grade designation (A2 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.

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	50 2 6	51 10 0
	2nd year		51 10 0
	3rd year		76 10 0
	4th year		76 10 0
Higher National Diploma in Computer Studies		75 2 6	76 10 0
General Certificate of Education, 'A' level		42 2 6	43 10 0

Part-time Courses	Students under age 18 on 1st September £ s. d.	Students age 18 and over on 1st September £ s. d.
Grade C	1 17 6	3 12 6
Grade B	3 0 0	4 12 6
Grades A2 and A1	5 2 6	6 2 6

RESIDENTIAL GENERAL 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 period of a course, or where only partial financial support is offered by the employer.

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.

Enrolment

Students will be enrolled on the following days and during the times shown:

	morning	*afternoon*	*evening*
Thursday, 11th September	none	2.00 to 4.00	6.00 to 8.30
Friday, 12th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Monday, 15th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30
Tuesday, 16th September	10.00 to 12.00	2.00 to 4.00	6.00 to 8.30

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 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.

Permission Vouchers

All students must obtain permission vouchers each year and present them at enrolment except (*a*) those normally resident in the County Borough of Preston or in the administrative area of Lancashire County and (*b*) part-time students normally resident in the County Borough of Wigan.

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

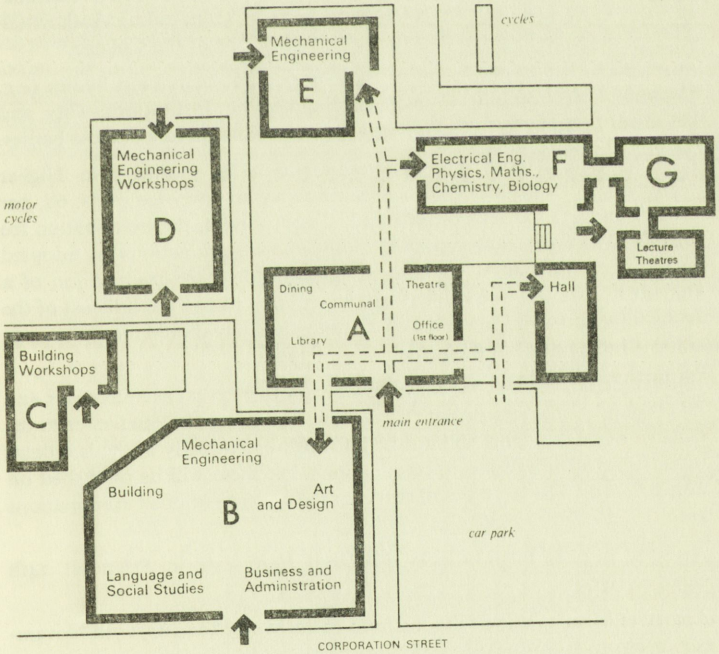
School of Art and Design (B7 and B8)
Building Department (B30, B31, B32 and B34)
Business and Administration Department (B45 to B50)
Language and Social Studies Department (B52)

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

F BLOCK
Chemistry and Biology Department (F37)
Electrical and Electronic Engineering Department (F1, F8, F9 and F10)
Physics Department, Mathematics and Computer Studies 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.



Students will not be permitted to attend classes until they have completed the enrolment procedure. 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.

Examinations

ENTRY TO 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.* University of London, Council of Engineering Institutions, City and Guilds of London Institute) 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 and 15s. od. per project and, if appropriate, 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 Ordinary National Certificate in Sciences: 24th October, 1969

Associate Membership of the Institute of the Motor Industry: 7th November, 1969

Assessed papers for National Diplomas and Certificates, including endorsements: 19th December, 1969

London University B.Sc. (Sociology): 16th January, 1970

Assessed papers for Ordinary National Certificate in Business Studies: 30th January, 1970

Union of Lancashire and Cheshire Institutes, series B and C: 30th January 1970

City and Guilds of London Institute: 6th February, 1970

General Certificate of Education papers (N.U.J.M.B.): 6th February, 1970

Pitmans: 20th March, 1970

Training Council for Teachers of the Mentally Handicapped: 20th March, 1970

Royal Society of Arts, Summer Series: 1st May, 1970

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.

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. Roadway and delivery areas 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.

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.

The Recreation 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 11-45 a.m. 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.

In the interests of hygiene staff and students are requested to observe any restrictions on smoking in the dining room.

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.

STUDENT LODGINGS

The College Authorities prepare each year a register of householders and hotel keepers who are willing to offer lodging accommodation. This register is kept by the College Lodgings Officer, who initially approves and thereafter regularly inspects all registered accommodation.

Some accommodation is available in Preston and surrounding districts, but many students will have to be accommodated some distance from the College, possibly in Blackpool and Lytham. Students who are grant-aided will generally be assisted by their supporting Local Authorities if their necessary travelling expenses exceed the amount included in the grant.

Intending students should write to the College Lodgings Officer as soon as they receive confirmation of their acceptance into a course. Priority will be given to those students whose homes are 20 miles or more from the College.

CHANGES 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 home or lodgings 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 Department. 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 outside the main College premises. These classes are indicated by room number prefixes as follows in the several College documents dealing with teaching accommodation:

Av	School of Art Annexe, Avenham Lane, Preston
BTU	Blood Transfusion Unit, Lancaster
NWGB	North Western Gas Board Training Centre, Moor Lane, Preston
On	Owen Street Annexe, off Crook Street, Ribbleton Lane, Preston
PRI	Preston Royal Infirmary, Deepdale Road, Preston
TH	G.P.O. Telephone House, Moor Lane, Preston
Ty	Trinity County Secondary School, Great Shaw Street, Preston

SOCIETIES AND PROFESSIONAL BODIES

Lecture meetings of socieities 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.

The Library

Telephone: Preston 51831, ext 15

Librarian	A. Lawrence, A.L.A.
Assistant Librarians	Miss S. M. Brindle
	Miss E. Jenkins
Library Assistants	Miss J. E. Bamford
	Mrs I. M. Fuller

The College library is available to all students for reference purposes. 400 journals are now received in addition to the continuing expansion of the book stock. A set of British Standard Specifications is maintained, as also is a comprehensive set of bibliographic research works and a considerable number of indexing and abstracting publications.

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.

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.

Computing Facilities

Telephone: Preston 51831, ext 43

Computer Manager	F. Fowler
Operator/Programmer	Vacancy
Punch Operator	Mrs C. M. Hoyle

The College's computer configuration consists of an ICL1901A central processing unit of 16K words of core storage, two twin exchangeable disc stores, paper tape reader/punch, card reader, line printer and console typewriter which are housed, together with adequate data preparation equipment, in a specially designed suite of rooms in the Department of Mathematics and Computer Studies.

Computer appreciation and programming is taught in advanced courses which require these modern techniques. Short courses in various computer languages, and more extensive courses in data processing and systems analysis, are arranged throughout the session. Increasing demands are being made on the computer for research and consultancy work undertaken by the teaching staff of the College.

It is proposed to collaborate with local schools in introducing modern computing methods to Sixth Form pupils.

The computer will eventually be used as the focal point of specialist degree and diploma courses in computer studies.

The Computer Manager will be pleased to give advice to representatives of industrial or commercial undertakings who may be considering the use of a computer for their own needs.

Industrial Liaison Centre

Telephone: Preston 51831, ext 41

Industrial Liaison Officer G. A. Redhead, B.SC.
Secretary Mrs J. C. Horsley

Technological knowledge and innovation are progressing so rapidly that it is difficult for any one individual to keep himself up to date. Particular difficulties are felt by small and medium sized manufacturing firms, many of which would welcome information about the results of industrial research or would appreciate access to local and national sources of information relevant to their own particular problems.

To help firms of this kind the Ministry of Technology, in conjunction with selected Technical Colleges, has established a network of Industrial Liaison Centres with the specific intention of offering assistance with technical and management problems and of encouraging the use of modern techniques.

Industrial Liaison Centres are financed from public funds and no charge is made for advice offered. However, some individuals or organisations brought in to help (only at the firm's invitation) might expect to negotiate fees. Consultations will take place in the strictest confidence, and if solutions to particular problems are found these would not be revealed outside without the firm's consent.

Close co-operation between College and Industry is intended, and the Industrial Liaison Officer is a member of the College staff; he will be pleased to visit any firm regardless of whether problems exist or not.

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.
	J. Montgomery, DIP.P.E.
Visiting Lecturers	J. H. Dickens
	R. Hindle
	A. Lewis
	R. Poole
	B. Strettle, B.J.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.

SCHEDULED CLASSES

The activities detailed above are primarily intended for students enrolled into one of the College's nine 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 17s. 6d. if under age 18 on the 1st September or £3 12s. 6d. if age 18 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

P. F. Sanger, *President*
J. D. Callon, *Vice-President* (*Internal Affairs*)
K. N. Tolladay, *Vice-President* (*External Affairs*)
Miss J. A. Davies, *Vice-President* (*Female Students*) *and Secretary*
P. C. Johnson, *Student Treasurer*
A. G. Cottam, *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.

The Harris Students' Union Fund

The Students' Union in December 1966 established by deed a trust fund called the 'Harris Students' Union Fund.' They appointed four Trustees and invested in the fund a small sum of accumulated moneys. The fund has been registered as a charitable trust.

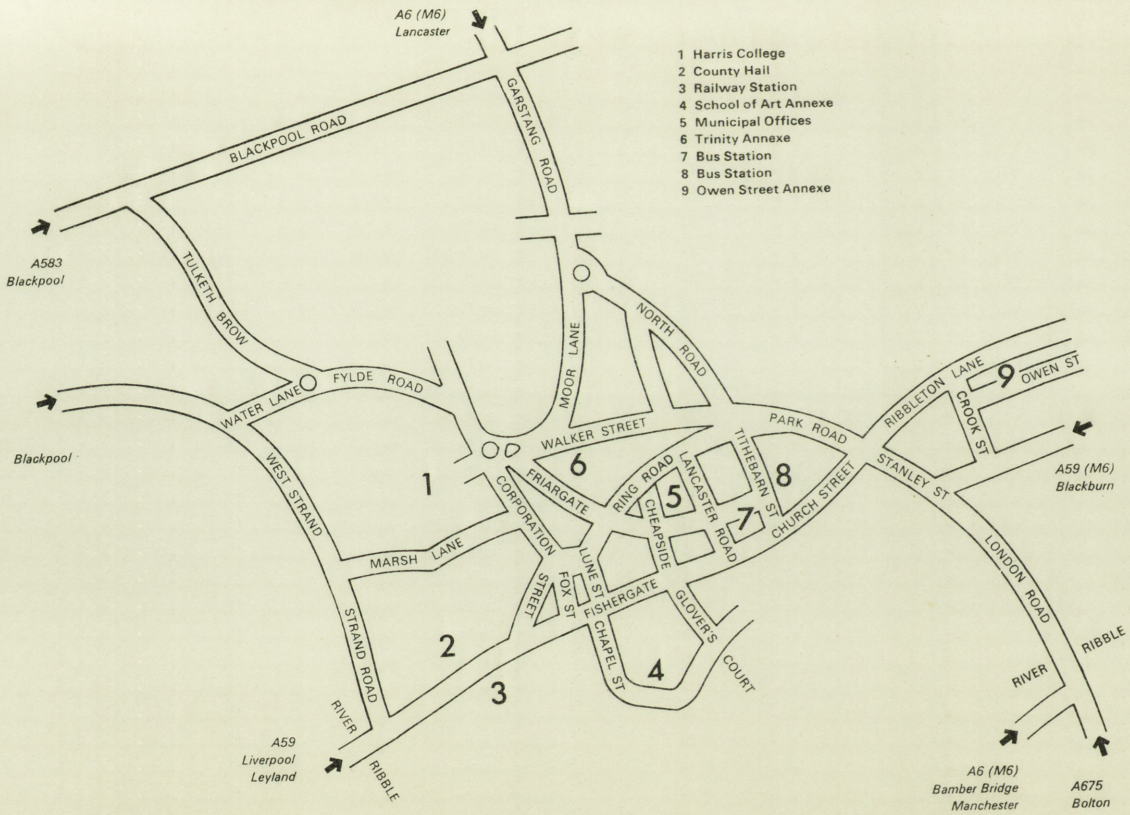
The fund is in two parts: capital moneys and revenue moneys. Both are invested by the Trustees and the annual interest from the total fund is paid to the Union as income to be expended on those of the Union's activities which 'are of an educational or otherwise charitable nature.' The capital moneys remain permanently in the fund, and as they are increased by donations they provide an increasing income to the Union.

It is intended to accumulate money in the 'revenue' section of the fund to be withdrawn at some future time for a major charitable project (such as the acquisition of property for the Union), and the trust deed prescribes that the Union may request the Trustees to sell investments and realise securities in this section of the fund to provide the outlay for such a project as is proper.

The total fund at present stands at approximately £1,000. It is in the interest of all students, present and future, to assist in augmenting it.

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. 6d., 32s. 6d. and 8s. 11d. each respectively.


A6 (M6)
Lancaster
BLACKPOOL ROAD
GARSTANG ROAD
A583
Blackpool
TULKETH BROW
FYLDE ROAD
WATER LANE
Blackpool
MOOR LANE
NORTH ROAD
WALKER STREET
PARK ROAD
RIBBLETON LANE
OWEN ST
CROOK ST
A59 (M6)
Blackburn
WEST STRAND
FRIARGATE
RING ROAD
LANCASTER ROAD
TITHEBARN ST
CHURCH STREET
STANLEY ST
CORPORATION STREET
CHEAPSIDE
MARSH LANE
LUNE ST
FOX ST
FISHERGATE
GLOVER'S COURT
CHAPEL ST
LONDON ROAD
RIBBLE
RIVER
STRAND ROAD
RIVER
A59
Liverpool
Leyland
RIBBLE
A6 (M6)
Bamber Bridge
Manchester
A675
Bolton
1 Harris College
2 County Hall
3 Railway Station
4 School of Art Annexe
5 Municipal Offices
6 Trinity Annexe
7 Bus Station
8 Bus Station
9 Owen Street Annexe