

1968

Engineering: Fulltime Courses

City of Dublin Vocational Education Committee

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Recommended Citation

City of Dublin Vocational Education Committee, "Engineering: Fulltime Courses" (1968). *Prospectus: Bolton Street*. 70.

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COLLEGE OF TECHNOLOGY
BOLTON STREET
DUBLIN 1

SCHOOL OF ENGINEERING

FULL-TIME COURSES

COLLEGE OF TECHNOLOGY

BOLTON STREET

DUBLIN I.

SCHOOL OF ENGINEERING

Full-time Courses in Session 1968/69

UNIVERSITY OF MICHIGAN
SCHOOL OF ENGINEERING
DEPARTMENT OF INDUSTRIAL ENGINEERING
ANN ARBOR, MICHIGAN

SCHOOL OF ENGINEERING

Full-time Courses in Summer 1963

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This booklet of CONTENTS of the full-time summer 1963 Engineering courses at the College of Technology, Michigan State University, East Lansing, Michigan. The entry level for admission to the courses are not all the same as described in some detail in subsequent pages.

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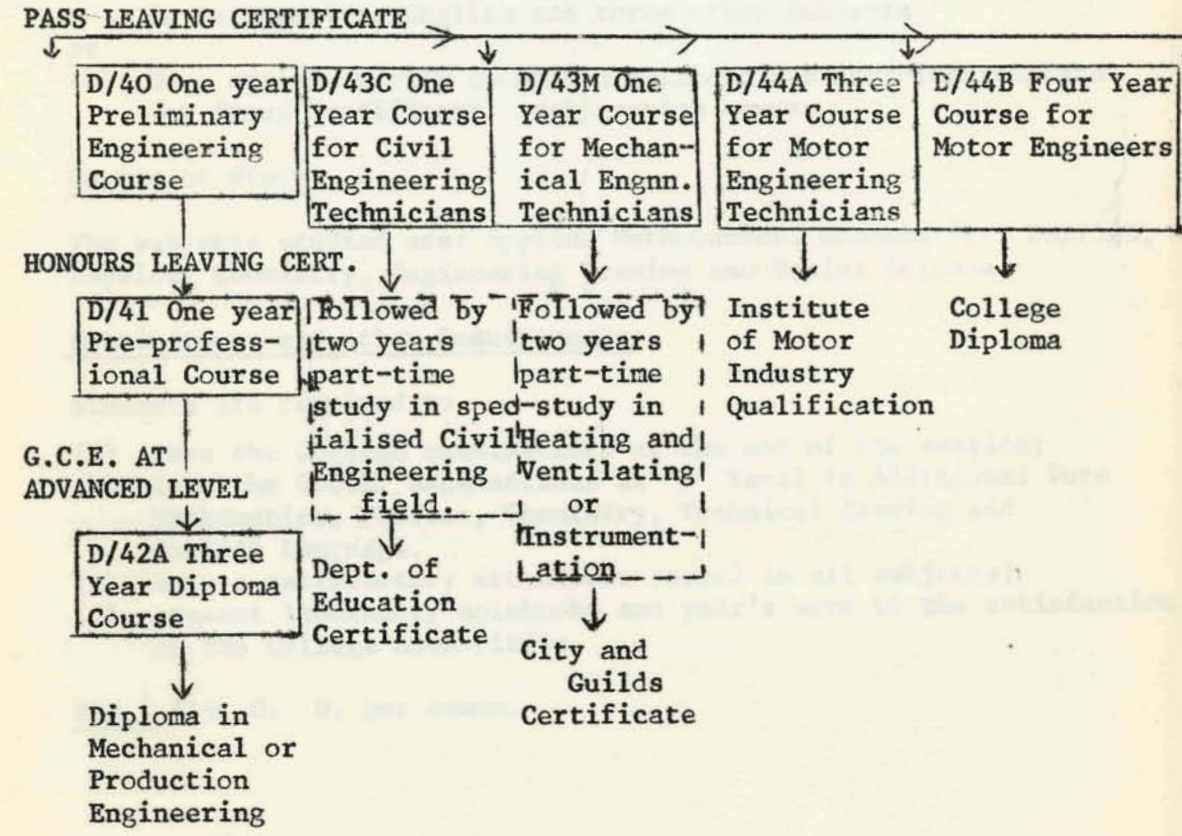
D/42A How
Your System
Operates

Diploma in
Mechanical or
Electrical
Engineering



This booklet gives details of the fulltime courses in Engineering available at the College of Technology, Bolton Street, Dublin. The entry levels for the different courses are set out diagrammatically below and the courses are then described in some detail in subsequent pages.

Entrance) For subjects see following pages.
Standard)



Course D/40 Preliminary Engineering

This is a one year wholetime course commencing each year in mid-September. Its purpose is to prepare suitable students for entry to the Pre-professional Course in Engineering or for positions as trainee technicians in industry.

Entrance Requirements:

- (a) Leaving Certificate of the Department of Education with passes in Mathematics, English and three other subjects
- or
- (b) Have satisfactorily completed a recognised Post-Intermediate (or Group Certificate) continuation course.

Course of Study:

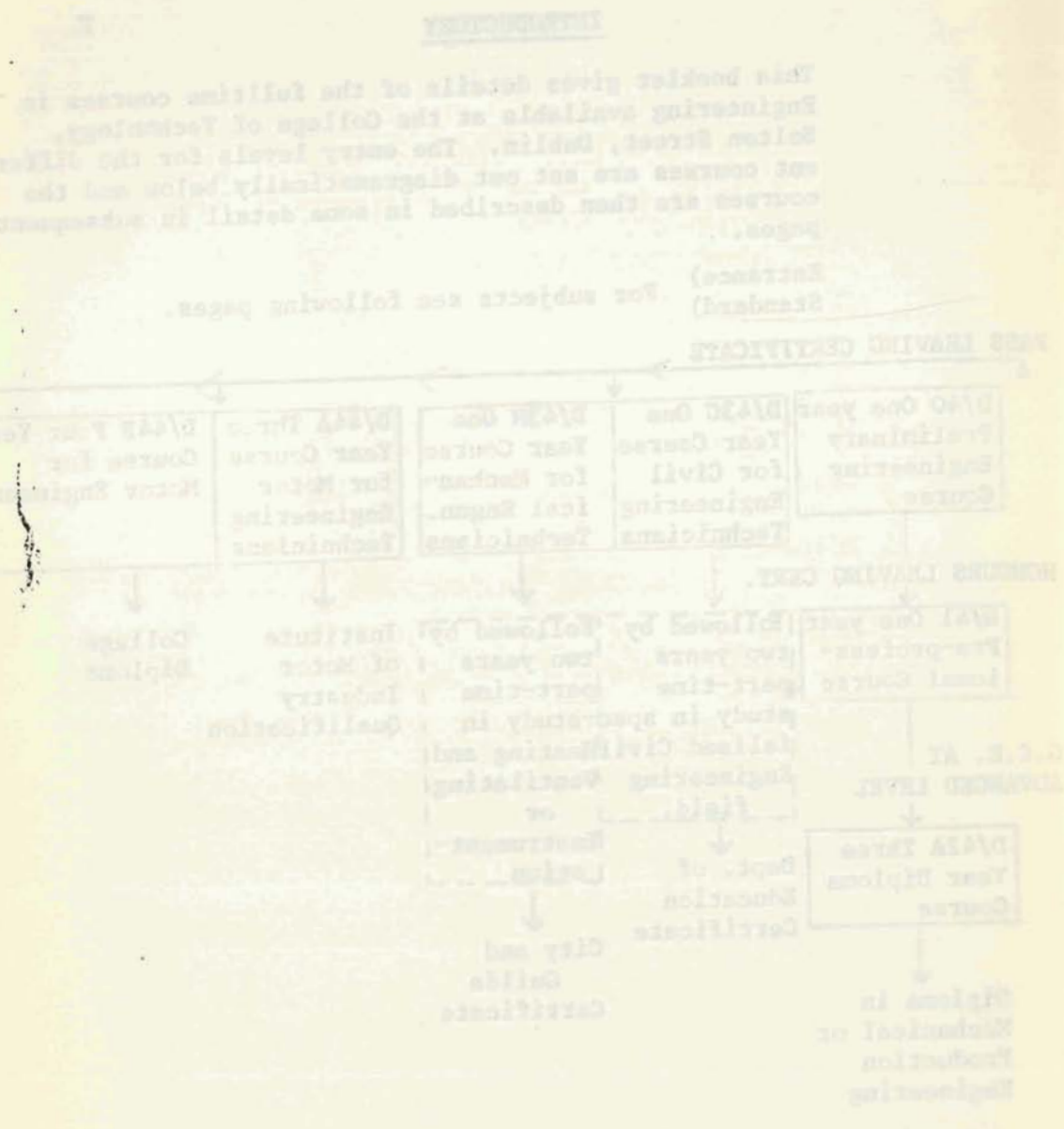
The subjects studied are: Applied Mathematics, Mathematics, English, Physics, Chemistry, Engineering Drawing and Social Science.

Examinations and other Requirements:

Students are required to

- (a) take the College examinations at the end of the session;
- (b) take the G.C.E. examinations at 'O' level in Additional Pure Mathematics, Physics, Chemistry, Technical Drawing and English Language.
- (c) have a satisfactory attendance record in all subjects;
- (d) present laboratory notebooks and year's work to the satisfaction of the College authorities.

FEE : £15 0. 0. per annum.



This is a one-year Sandwich Course consisting of 8 months academic work commencing in mid-September, followed by three months practical training in industry. Its primary purpose is to prepare suitable students for entry to the Diploma Courses in Mechanical and Production Engineering. This course is included in the Department of Education University Grant scheme.

Entrance Requirements:

(a) Leaving Certificate of the Department of Education with honours in Mathematics, Physics, English and two other subjects, preferably Chemistry and Drawing

OR

(b) The General Certificate of Education at Ordinary Level in Additional Pure Mathematics, Physics, English Language and two other subjects, preferably Chemistry and Drawing.

OR

(c) Such other qualifications as the College may deem to be appropriate.

Course of Study:

The subjects studied are: Mathematics, Applied Mathematics, Engineering Drawing, Experimental Physics, German, Chemistry and Philosophy.

Examinations and Other Requirements:

Students are required to:

- take the College examination at the end of the session.
- take the G.C.E. at 'A' Level in Mathematics and Physics. They may also take the 'A' Level examination in Technical Drawing and Applied Mathematics.
- have a satisfactory attendance record in all subjects.
- present laboratory notebooks and year's work to the satisfaction of the examiners.
- complete the vacation training programme at the end of the year.

FEE: £35 0. 0. per annum.

D/42A Diploma Course in Mechanical and Production Engineering

This is a three-year sandwich course consisting of eight months academic work each year, commencing in mid-September, and three months practical training in industry. The following schemes are in operation:

(a) College-based scheme: Suitable students are enrolled by the College, which then directs their academic studies and assists in arranging vacation training each summer. Certain Local Authorities award scholarships which are applicable to this course and it is also included in the Department of Education's University Grant Scheme.

(b) Industry-based Scheme: Suitable students whose employers are prepared to sponsor them for the duration of the course may be admitted. Employers make their own arrangements with their students regarding the payment of fees, wages, books, etc. The practical training in industry is designed by the College in collaboration with the industrial sponsor.

Entrance Requirements to the First Year;

(a) Passes at Advanced Level in the General Certificate of Education examinations in Physics and Mathematics or Applied Mathematics.

and

(b) Passes in English, Chemistry and Drawing at General Certificate of Education Ordinary Level, or at Honours Level in the Leaving Certificate of the Department of Education

and

(c) A minimum of three months approved practical training in industry.

or

(d) Such other qualifications as the College may deem to be appropriate, including satisfactory completion of course D/41.

The attention of the students who do not meet these requirements is directed to the Pre-professional Course (D/41).

Course of Study:

The subjects are as follows:

FIRST YEAR:

Mathematics, Principles of Electricity, Applied Mechanics, Thermodynamics, Fluids, Modern Physics, Engineering Drawing, Fundamentals of Production, General Studies, Laboratory Work and Workshops, Tutorials.

SECOND YEAR:

Strength of Materials, Mechanics of Machines, Principles of Production, Thermodynamics, Fluid Mechanics, Electrotechnology and Controls, Civil Engineering, Mathematics and Statistics, Engineering Administration, Engineering Laboratories, General Studies and Tutorials.

FINAL YEAR:

Strength of Materials, Mechanics of Machines, Design for Production, Applied Thermodynamics and Hydraulic Machines, or Production Engineering, Electrotechnology and Controls, Computer Applications, Mathematics and Statistics, Engineering Administration, Project, General Studies and Tutorials.

In the Final Year students are required to carry out an individual design or research project and to submit for examination a short thesis on the work performed.

Examinations and Other Requirements:

Students will not be permitted to advance to the next year of the course unless they have

- (a) satisfied the examination requirements;
- (b) have a satisfactory attendance record in each subject they are required to attend;

- (c) have presented laboratory and year's work to the satisfaction of the examiners;
- (d) have satisfactorily completed the vacation training programme for the year.

Award of Diploma (Dip.Eng.)

At the completion of the course students who have been successful in the Final examination and who have satisfactorily completed their project will be eligible for the award of the diploma in Mechanical Engineering or in Production Engineering. Students holding the Diploma in Mechanical Engineering will be granted complete exemption from the Parts 1, 11 and 111 examination requirements of the Institution of Mechanical Engineers. Students holding the Diploma in Production Engineering will be granted exemption from the Parts 1, 11 and 111 of the Institution of Production Engineers.

FEE: £50 0. 0. per annum.

Course D /43C Civil Engineering Technicians

This is a three year (one year full-time and two years part-time) which prepares students for employment as technicians in various branches of Civil Engineering. At the end of the first year successful students take up employment but continue to attend the College on a part-time basis (one day and two evenings) over the remaining two years.

Entrance Requirements:

(a) Leaving Certificate, Matriculation or equivalent with Passes in Mathematics and English

OR

(b) have successfully completed a General Certificate of Education 'O' Level course.

Students who have only reached Intermediate or Group Certificate are not eligible for entry. They should first complete a G.C.E. course as are available in the Technical Institute Ringsend, Dundrum, Clogher Road, etc.

Course of Study:

First Year (Full-time):

Mathematics, Mechanics, Applied Physics, Technical Drawing, Building Construction, Surveying, Engineering Materials and General Studies.

Second and Third Years:

Selected subjects from the final stage Department of Education Civil Engineering Technician Certificate which includes Structural Design, Surveying, Soil Mechanics and Geology, Bills Specifications and Quantities Administration, Civil Engineering Construction, Hydraulics and Mechanical Plant.

Civil Engineering Technician

This is a three year full-time and two year part-time program for students who are interested in a career in Civil Engineering. At the end of the first year successful students take up employment for a period of one year at a part-time basis (one day and two evenings) over the remaining two years.

Entrance Requirements:

- (a) Leaving Certificate, Mathematics or equivalent with passes in Mathematics and English.
 - (b) Have successfully completed a General Certificate of Education 'O' Level course.
- Students who have only passed Intermediate or Group Certificate are not eligible for entry. They should first complete a G.C.E. course at one of the Technical Institute, Dundee, or other similar, etc.

Course of Study:

First Year (Full-time):

Mathematics, Mechanics, Applied Physics, Technical Drawing, Building Construction, Surveying, Engineering Materials and General Studies.

Second and Third Years:

Selected subjects from the final stage Department of Education Civil Engineering Technician Certificate which includes Structural Design, Surveying, Soil Mechanics and Geology, Site Specifications and Quantities, Administration, Civil Engineering Construction, Hydraulics and Mechanical Plant.

Examination and Other Requirements:

Students must pass the Department of Education Intermediate examination for Civil Engineering Technicians at the end of the first year and the Final examination for Civil Engineering Technicians at the end of the Third year. They will also be required to take College examinations.

FEE: £15 0. 0. per annum.

First Year (Part-time):

Mathematics, Applied Physics, Mechanics, Technical Drawing, Building Construction, Surveying, Engineering Materials, Workshop Technology and General Studies.

Second and Third Years (Part-time):

Selected subjects from the final stage Department of Education Civil Engineering Technician Certificate which includes Structural Design, Surveying, Soil Mechanics and Geology, Site Specifications and Quantities, Administration, Civil Engineering Construction, Hydraulics and Mechanical Plant.

Examination and Other Requirements:

Students must pass the Department of Education Intermediate examination for Civil Engineering Technicians at the end of the first year and the Final examination for Civil Engineering Technicians at the end of the Third year. They will also be required to take College examinations.

FEE: £15 0. 0. per annum.

Students must pass the Department of Education Intermediate examination for Civil Engineering Technicians at the end of the first year and the Final examination for Civil Engineering Technicians at the end of the Third year. They will also be required to take College examinations.

This is a three-year course (one year full-time and two years part-time) which prepares students for employment as Heating and Ventilating Draughtsmen or Instrumentation Technicians. The first year course is common and at the end of the year successful students take up employment but continue to attend the College on a part-time basis (one day and two evenings) over the remaining two years.

Entrance Requirements:

- (a) Leaving Certificate, Matriculation or equivalent with Passes in Mathematics and English.
- OR
- (b) Have successfully completed a G.C.E. 'O' Level course.

Course of Study:

First Year (Full-time):

Mathematics, Applied Physics, Mechanics, Technical Drawing Instrument Technology, Engineering Materials, Workshop Technology and Practice, and General Studies.

Second and Third Years (Heating and Ventilating):

Subjects for the 339 City and Guilds Certificate in Heating and Ventilating.

Second and Third Years (Instrumentation):

Subjects for the 310 City and Guilds Certificate in Instrumentation.

Examination and Other Requirements:

Students are required to take the Part 1 of the 310 City and Guilds Certificate at the end of the First Year and also a College examination. Heating and Ventilating students take the Part 1 of the 339 City and Guilds Certificate examination at the end of the second year and the Part 11 at the end of the Third Year.

Instrumentation students are required to take the Part 11 of the City and Guilds Certificate examination at the end of the Third year.

FEE: £15 0. 0. per annum.

Course D/44A General Course in Automobile Engineering

This course is arranged to meet the examination requirements of the Institute of the Motor Industry(Inc.) Students attend the College for 32 hours per week for the period mid-September to May. The full course extends over three years. During the summer recess students are required to obtain suitable employment in the Automobile Engineering Industry.

Entrance Requirements:

The entrance standard required is the Secondary Schools Leaving Certificate which includes a pass in English, Mathematics and Physics.

Course of Study:First Year:

English, Mathematics, Engineering Science, Engineering Drawing, Electricity, Vehicle Technology - Theory and Practice, Philosophy and Physical Education.

Second Year:

English, Mathematics, Engineering Science, Engineering Drawing, Motor Vehicle Technology - Theory and Practice, Principles of Management, Automobile Electricity, Philosophy and Physical Education.

Final Year:

Mathematics, Heat and Heat Engines, Mechanics, Engineering Drawing, Motor Vehicle Technology - Theory and Practice, Principles of Management, Motor Vehicle Construction and Design, Workshop Administration and Organisation, Automobile Electricity, Philosophy and Physical Education.

Examination and Other Requirements:

Students are required to

- (a) take a College examination at the end of each session.

(b) take the final examination of the Institute of Motor Industry at the end of the third year.

FEE: £25 0. 0. per annum.

Course of Study in Automobile Engineering

The course is arranged so that the candidate requirements of the Institute of Motor Industry (IMI) students attend the College for 35 hours per week for the period of 3 years. The first two years extend over three years. During the second year students are required to obtain suitable employment in the automobile engineering industry.

First Year

The entrance standard required is the Secondary School leaving certificate which includes a pass in English, Mathematics and Physics.

Second Year

English, Mathematics, Engineering Drawing, Electricity, Vehicle Technology - Theory and Practice, Philosophy and Physical Education.

Third Year

English, Mathematics, Engineering Drawing, Vehicle Technology - Theory and Practice, Principles of Management, Automobile Electricity, Philosophy and Physical Education.

Final Year

Automotive, Heat and Heat Engines, Mechanics, Engineering Drawing, Vehicle Technology - Theory and Practice, Principles of Management, Vehicle Construction and Design, Workshop Administration and Production, Automobile Electricity, Philosophy and Physical Education.

Examination and Other Requirements

Students are required to

attend a College examination at the end of each session.

Course D/44B Diploma Course in Automobile Engineering

This is a four-year wholetime course and is designed to prepare students for Senior Managerial and Technical posts in the Motor trade, Heavy Road Transport Industry, Mechanical Handling Industry and Automobile Research Establishments.

Entrance Requirements:

Leaving Certificate of the Department of Education - with a good mark in Physics, Mathematics and English.

Examination and Other Requirements:

Students will be required to take a College examination at the end of each year of the course.

Students will not be permitted to advance to the next year of the Course unless they have

- (a) satisfied the examination requirements.
- (b) have a satisfactory attendance record in each subject.
- (c) have presented Laboratory and Year's Work to the satisfaction of the examiners.
- (d) have satisfactorily completed the vacation training programme for the year.

Diploma in Motor Engineering:

Students who satisfactorily complete the D/44B Course will be eligible for the award of the College Diploma in Motor Engineering.

FEE : £25 0. 0. per annum.

ACADEMIC STAFF

Head of School: John D. Barry, M.Sc., B.E., M.I.Mech.E., M.I.C.E.I.
 Assistant Head: Denis Fitzgibbon M.Sc., B.E., C.Eng., A.M.I.Mech.E.
 Desmond Aungier
 William J. Brazil
 John A. Butler, A.M.Inst.F., Dip.Eng., C.Eng., M.I.Mech.E.
 Michael Clifton, B.E., A.M.I.C.E.I.
 Jeremiah T. Cotter, B.Sc.
 Thomas Conway, B.Sc., H.Dip.Ed.
 Richard J. Dowling, M.I.M.I.
 Timothy Giblin
 Neil Gillespie, Grad.I.Mech.E., G.I.H.V.E.
 John Gribben M.I. (Hons.)
 John J. Guirke, A.M.I.M.I.
 Alan Harbron
 Michael Kelly
 Gerard Lawlor, M.Sc.
 Thomas McCarthy
 James McGauran
 Denis McGrath
 Thomas McInerney, A.M.S.L.A.E., A.C.D. & X Licences
 John McQuillan, C.Eng., M.I.Mech.E.
 Donal Murphy
 James A. Nunan, B.Sc., H.Dip.Ed.
 Charles B. O'Brien
 John J. O'Brien
 Michael O'Donnell, B.E., B.Comm., M.Econ.Sc., C.Eng., M.I.Prod.E.
 Marguerite O'Kelly, B.A., Dip.Soc.Sc.
 Henry J. O'Neill, C.Eng., F.I.Prod.E.
 John Peelo, B.E., Grad.I.Mech.E.
 Paul Purcell
 Louis R. Purton, B.Sc.
 Joseph Shiels
 Michael Swords, B.Sc.
 Henry F. Taylor, C.Eng., M.I.Mech.E.
 Mary Tully, M.Sc., H.Dip.Ed.