

1928

Printing and Book Production: Prospectus of Courses 1928-29

City of Dublin Vocational Education Committee

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1928-29.

clódoireacht agus déantús leabhar.

CLÁR NA SCÚRSAÍ.

SRÁID BÓLTON.

PRINTING & BOOK PRODUCTION.

Prospectus of Courses.

BOLTON STREET.

City of Dublin Municipal Technical Schools.

BOLTON STREET TECHNICAL INSTITUTE.

SCHOOL OF MECHANICAL AND MOTOR CAR ENGINEERING.
SCHOOL OF ARCHITECTURE AND BUILDING TRADES.
SCHOOL OF BOOK PRODUCTION AND PRINTING TRADES.

KEVIN STREET TECHNICAL INSTITUTE.

SCHOOL OF ELECTRICAL ENGINEERING.
CHEMISTRY, PHYSICS, AND WIRELESS TELEGRAPHY.
ART, ART CRAFTS AND MISCELLANEOUS TRADES.
SCHOOL OF DOMESTIC SCIENCE.

PARNELL SQUARE TECHNICAL INSTITUTE.

SCHOOL OF COMMERCE.
SCHOOL OF DOMESTIC SCIENCE.

CHATHAM ROW.

MUNICIPAL SCHOOL OF MUSIC.

NOTE.—The General Prospectus of the Technical Schools is divided into eight parts, issued separately in booklet form. Each booklet is complete as regards the arrangements, Time Tables, Syllabuses, etc., of the particular Department and classes dealt with. The following is a list of the booklets :—

- No. 1. MECHANICAL AND MOTOR CAR ENGINEERING AND ALLIED TRADES.
- No. 2. ELECTRICAL ENGINEERING, WIRELESS TELEGRAPHY, PHYSICS AND CHEMISTRY.
- No. 3. ARCHITECTURE AND BUILDING TRADES.
- No. 4. BOOK PRODUCTION AND PRINTING TRADES.
- No. 5. COMMERCE.
- No. 6. DOMESTIC SCIENCE.
- No. 7. ART AND ART CRAFTS AND MISCELLANEOUS TRADES.
- No. 8. SCHOOL OF MUSIC.

Copies of any of the booklets may be had at any of the Technical Institutes, at the Public Libraries of the Corporation, or by post (2d.) from the Offices of the Technical Schools.

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BOLTON STREET TECHNICAL INSTITUTE.



KEVIN STREET TECHNICAL INSTITUTE.



PARNELL SQUARE TECHNICAL INSTITUTE.

Σχολεῖα τεχνικὰ καὶ ἀνωτάτων τεχνικῶν,
ἑνὸς τοῦ δήμου.

CITY OF DUBLIN MUNICIPAL TECHNICAL SCHOOLS.



LOUIS ELY O'CARROLL, B.A., B.L.,
Principal Executive Officer.

EDWARD MORTON, A.R.C.S.I., A.I.C.,
*Head Teacher of the School of
Physics, Electrical Engineering and
Chemistry.*

JOHN C. MACGUIGAN, B. Comm.
(N.U.I.); *Headmaster of the Parnell
Square Technical Institute, and
Head of the School of Commerce.*

WILLIAM DAVIDSON, F.B.I.C.C.,
*Head Teacher of the School of
Architecture, Building and
Furnishing Trades.*

ERNEST E. JOYNT, M.I.M.E.,
*Head Teacher of the School of
Mechanical and Motor Car
Engineering.*

WILLIAM H. JOHNSON,
*Acting Head Teacher of the School
of Book Production and Printing
Trades.*

MISS KATHLEEN O'SULLIVAN,
*Head Teacher of the School of
Domestic Science.*

W. L. WHELAN, *Headmaster of Arts and Crafts.*

ARTHUR DARLEY, *Director, School of Music.*

COUNCIL OF STUDIES.

The Council of Studies will consist of the Principal Executive Officer and the Heads of the several departments. For Examinations, representatives of the Part-time Teaching Staff, Employers' Associations and Trade Unions will be included.

All enquiries or communications should be addressed to the Principal Executive Officer, Technical Institute, Bolton Street.

SESSION 1928-29.

CALENDAR and MEMORANDA.

1928

- Mon., 3rd Sept. Day Apprentice School resumes.
- Wed., 5th Sept. First Term, School of Music, begins.
- Mon., 17th Sept. Entrance Examinations and Enrolment of Students for Day and Evening Technical Classes begin.
- Mon., 24th Sept. Instruction in all Technical Classes begins during this week.
- Thurs., 20th Dec. Final Meeting of Classes before Christmas.

1929

- Wed., 2nd Jan. Classes resume after Christmas.
- Mon., 14th Jan. Second Term, School of Music, begins.
- FEBRUARY** Entries for Public Examinations are made about the end of this month. Exact dates will be notified to the Classes.
- Wed., 27th March Final Meeting of Classes before Easter.
- Mon., 8th April Classes resume.
- Fri., 10th May All Evening Classes close except Special Classes preparing for Examinations.
- Sat., 11th May School of Music closes.
- Fri., 26th July Day Apprentice School closes.

Preface.

The City of Dublin Municipal Technical Schools were founded in October, 1887, as an outcome of the Artisans' Exhibition held in the City in 1885. The Schools were originally housed in a historic but unpretentious building in Kevin Street. From the foundation, and practically without interruption, the record of progress and expansion has been continuous, and now the Schools occupy three very large Technical Institutes at Bolton Street, Kevin Street and Parnell Square, and several classes are accommodated in other buildings throughout the City, affording in all accommodation for upwards of 5,000 students.

CURRICULUM.

The present curriculum of the Schools provide complete Courses of Instruction in

Mechanical Engineering and Allied Trades.

Electrical Engineering and Allied Trades.

Radio Communication.

Motor Car Engineering.

Locomotive Engineering.

Naval Architecture.

Architecture, Building Trades and Furniture Trades.

Book Production and Printing Trades.

Applied Chemistry.

Botany, Materia Medica, and Pharmacy.

Art and Art Crafts.

Music.

Commerce.

Domestic Science

Catering Industries.

and numerous Miscellaneous Trades.

EVENING COURSES.

Evening Courses are provided in all the subjects outlined above, and enable those engaged in the day-time to acquire an intimate knowledge of the principles that underlie the processes carried out in their daily work.

DAY COURSES.

Day Courses and Classes are arranged in most of the Departments of the Schools. The DAY APPRENTICE SCHOOL provides whole-time two years' Courses in selected trades for boys who have just left school. The Day Trade Dressmaking Course provides similar training for girls, and Day School of Commerce a whole-time training to boys and girls.

Special Day Courses are provided for those actually engaged in trades—arrangements being made with employers whereby their apprentices can attend the Schools during part of several days each week. At present it has only been possible to arrange such Courses in a few cases—notably Painters and Decorators and the Printing Trades—but it is hoped, with the co-operation of the employers, to gradually extend this system to all trades.

ARRANGEMENT OF COURSES.

The Courses in all Departments, both Evening and Day, are arranged progressively to cover from two to five Sessions, according to the nature of the subject. The Courses in general include two or more subjects bearing on the main subject, and the instruction is given in such a manner as to illustrate the application of the principles of Science and Art to the daily work of the students.

ADVANCED WORK.

The Laboratories and Workshops of the Schools are very completely equipped with the best and latest apparatus and machinery, and senior students are given every facility for advanced or research work.

NEW CLASSES.

If it can be shown that there is a demand for a new class, the teacher and requisite equipment will be provided.

LECTURES.

Special lectures of a popular nature will be given during the Session.

CINEMA.

A complete cinema installation has been provided in the Technical Institute, Bolton Street, and films of an educational nature will be shown from time to time. These displays will be duly notified to students in their classes.

DEBATING SOCIETY.

Students of the Technical Schools are eligible for membership of the Debating Society. Annual subscription, one shilling.

ENTRANCE EXAMINATIONS.

In the present year Entrance Examinations will be held at the Bolton Street, Kevin Street, and Parnell Square Technical Institutes, every evening during the week commencing 17th September, and on as many evenings afterwards as may be necessary. All new Students are advised to attend at 7.0 p.m. Those who can produce the Junior or any Higher Grade Certificate of the Intermediate Education Board, or the Higher Grade Certificate of the National Board, or some equivalent Certificate, need not sit for the Entrance Examination, and should make application for admission early in the Session.

The Entrance Examination consists of easy papers in English, Arithmetic, and Elementary Drawing, and First and Second Class Passes will be awarded. Those who pass in the First Class are eligible to take any Specialised Course.

These Examinations are not obligatory for trades' students.

SPECIALISED COURSES.

The Official Specialised Technical Courses are open to all Students who pass the Entrance Examination in the First Class, or are otherwise qualified. Each one is to take up, under advice or approval, the particular Course which most nearly meets his requirements, and is to adhere to this definite programme without any subsequent variation. If he ceases to attend any component subject of this Course he is liable to forfeit his entire Ticket.

No Student may attend for more than two Sessions in any one stage of the same subject.

Teachers, Pupil Teachers, and Monitors may enter for Special Courses that suit their needs, apart from the Official Courses. Such a Course will be regarded as an Official Technical Course. The same privileges will apply to Students whose needs are not met by the Official Courses. In their case the Course Subjects must be arranged and sanctioned by the Head Teacher.

The stage of any subsidiary subject may be changed to fit the Student's particular grade of knowledge, the special evening allotted to Laboratory or other work may be altered, and a Student may be drafted from one class to an equivalent one. Any such changes must be sanctioned by the Head Teacher.

PREPARATORY COURSES.

Those who pass the Entrance Examination in the SECOND CLASS, or who have spent one year in the Sixth Standard of a National or Secondary School, may enter one of the "Introductory" Courses. Those who pass in the Third Class, or have not passed the Sixth Standard, are only at liberty to join one of the "Preliminary" Courses.

The Introductory Course Classes are of such a nature as to fit students to take up a Specialised Course of Technical Instruction in the following School Session. The subjects of instruction are:

- (a) English.
- (b) Elementary Mathematics and Arithmetic.
- (c) Drawing or Elementary Science or Elementary Domestic Economy.

The Preliminary Courses are similar to the Introductory, but of a more elementary character.

Any Trade Student who is taking an Introductory Course may attend the First Year Practical Class in his particular trade.

A class in Irish may be added to the Introductory or Preliminary Courses if desired, without extra fee.

FEES.

The fee for a full course or for a single class in Technological or Science subjects is usually 7s. 6d., Commercial or Domestic Economy subjects 10s. Special fees are: Wireless Telegraphy, £3 for Day Course; £2 for Evening Course; Day Commercial Course, £2; Motor Car Driving, £2; Practical Chemistry, 15s.; Practical Pharmacy, 15s.; Pharmaceutical Chemistry, £1 10s.; Materia Medica, 7s. 6d.; Botany, 7s. 6d.; Day Classes in Domestic Science, £1.

Holders of the Higher Grade Certificate will be admitted free on production of the Certificate.

If a student wishes to take up a class in addition to those of the Course, an extra fee must be paid except in the case of Irish.

All fees are payable in advance and cover the full Session or Term. Fees are not returnable.

GENERAL NOTICES.

The general enrolment of Students commences on Monday, 17th September, 1928.

Applicants for admission to Courses or Classes must be at least fourteen years of age.

Pupils actually in attendance at a Day National School or Day Secondary School are not eligible for admission to Evening Courses or Classes.

Teachers may be consulted on their class nights as shown in the Time Tables.

If any Student is absent from three consecutive meetings of any Class, unless for valid cause shown before the third meeting, his Ticket for the Class, or for the whole Course of which it is part, is liable to be cancelled without further warning.

The Trade classes are intended for those engaged in the several trades. Others will not be admitted before November 7th, and then only if there be room, and on payment of a quadruple fee.

A laboratory or workshop class can only be taken in conjunction with an approved lecture or drawing class. No Student will be allowed to remain in a laboratory or workshop class if his attendance at the lecture or drawing class proves unsatisfactory.

A class may be discontinued in the event of an insufficient number of Students joining or attending; and the number of evenings allotted weekly to any class may be reduced if there be a falling off in the attendance of Students. The right is reserved to close classes for any other reason whatever.

Students are to make good any damage done by them.

Strict order must be observed at all times within the precincts of the Schools.

Day Apprentice School.

The Scheme for a Day Apprentice School was adopted by the Conference on the Industrial Training of Apprentices, by the Technical Education Committee, by the Department of Agriculture and Technical Instruction, and by the Corporation of Dublin.

The object of the Scheme is to link technical education closely with industry by giving a specialised training from the outset of a boy's industrial career.

Apprenticeship Scholarships—approximately one hundred—may be awarded annually, on the results of examinations, to boys between the ages of fourteen and sixteen years. The Scholarships entitle the holders to a free training for two years in the Apprentice School, together with a payment of six shillings weekly for the first year, and eight shillings weekly for the second year; books and instruments will be supplied.

The Scholarships and Free Places are *strictly confined* to boys whose parents or guardians are resident in rate-paying houses within the boundaries either of the City of Dublin or the Urban Districts of Rathmines and Rathgar.

The course of instruction is altogether in the daytime; it covers 30 hours weekly for 46 weeks in each year; approximately one-third of the time in first year and two-thirds in the second year are devoted to a thoroughly practical and theoretical training in the trade for which the boy is preparing.

Pupils are allowed to select as far as possible the trades they desire to follow, and on the conclusion of the two years' course the Employers' and Trades Associations will allocate the boys to existing vacancies for apprentices.

An attendance of not less than eight hours weekly at the Technical School will be required during the terms of apprenticeship (*i.e.*, after the boy has left the Apprentice School).

The courses at present in operation are:—(1) *Plumbers*; (2) *Carpenters*; (3) *Printers*; (4) *Mechanical Engineering*; (5) *Electrical Engineering*; (6) *Sheet Metal Plate Work*; (7) *Cabinetmaking*; and (8) *Painting and Decorating, Brass-finishing, Motor Car Engineering, Brick-laying, Quantity Surveying*. The date and full particulars of Entrance Examinations will be duly announced in the Schools and in the Dublin Press from time to time.

Shorter Courses varying slightly from the above terms are conducted for the Catering Industry (training of Chefs, Waiters, and Waitresses).

SCHOLARSHIPS.

UNIVERSITY SCHOLARSHIPS.

The Corporation of Dublin provide Sixteen Scholarships and reserve four of these "for Students who have attended the City of Dublin Technical Schools," each of the annual value of £60, tenable for three years. Candidates must have attended the City of Dublin Technical Schools during at least one Session as a condition of eligibility for admission to the Scholarship Examination, and such candidates must have been in (*bona fide*) regular daily employment.

SPECIAL TRAINING FOR DIPLOMAS.

1. Courses of training will be instituted in the autumn session with a special view to the requirements of students preparing for admission to the recognised engineering institutions.

2. For the present the course will be confined to candidates for the Institution of Electrical Engineers and the Institution of Automobile Engineers.

3. The courses will be open to students between the ages of 17 and 25 selected on the results of an entrance examination which will be a test of general educational and of elementary technical attainments.

4. The courses may comprise both day-time and evening classes; they will be of a progressive nature covering a total period of approximately three years.

SCHOLARSHIPS.

1. The Technical Education Authority offers seven Scholarships each in Electrical Engineering and Automobile Engineering. Four of these Scholarships in each subject will be reserved for students of the Day Apprentice School; three in each subject will be open for competition to other students of the Schools or to applicants from elsewhere.

2. The award of the Scholarships will be made on the results of an examination.

3. The value of each Scholarship will be:—

1st Year	...	...	£5
2nd Year	...	...	£7
3rd Year	...	...	£10

4. The Technical Education Authority reserves the right to cancel a Scholarship in the case of faulty attendance, want of progress, indiscipline, or other unsatisfactory conduct.

Note.—For the current year the number of Scholarships in Electrical Engineering will be five, two of which will be reserved for students of the Electrical Engineering Section in the Day Apprentice School.

THE FOY SCHOLARSHIP.

A former student of the City of Dublin Municipal Technical Schools, Mr. W. P. Armstrong, has established a Scholarship in Chemistry, to be called the "Foy Scholarship." The annual value of the Scholarship is about £20, being the proceeds of an investment of £500 in Dublin Corporation Stock.

The Scholarship is awarded each session on the result of an examination in Chemistry, usually held in May. All students who have attended regularly during two sessions in the Chemistry Department are eligible to compete, and the student to whom the Scholarship is awarded must pursue his studies in the Chemistry Department during the following session.

THE DUBLIN MECHANICS' INSTITUTE SCHOLARSHIPS.

The above Scholarships are provided for by the Dublin Mechanics' Institute Residuary Fund, which has been made available for Industrial Scholarships.

Three Scholarships will be awarded annually—one in the Mechanical Engineering Group, one in the Electrical Engineering and Physics Group, and one in the Building Trades Group. The Scholarships are tenable for three years, and are value about £3 each per year.

Candidates must be engaged in an Operative Trade as Apprentices or Learners. They must be between the ages of 16 and 19, and must have attended a Technical Course during the preceding School Session and made 80 per cent. of the possible attendances in two of the subjects of the Course in which they are entered.

THE MULLIGAN SCHOLARSHIPS.

As a result of a bequest, Sixteen Scholarships of £1 each will be awarded on the results of the second year examination of the Department of Education.

DAY APPRENTICE SCHOOL SCHOLARSHIPS.

(See page 10.)

P R I Z E S .**SCHOOL PRIZES.**

First and Second Prizes are awarded in each year of each subject on the results of the Sessional Examination to Students who have obtained not less than 70 per cent. marks and have at least 60 per cent. attendance of the actual class meetings.

SPECIAL PRIZES.

Numerous prizes are offered by Employers and Trade Unions, chiefly the Dublin Building Trade Employers' Association, the Irish Quantity Surveyors' Association, the Dublin Guild of Building Workers' Union, the United Operative Plumbers' Association, Dublin Brick and Stonelayers' Trade Union, Operative Plasterers' Society, Master Drapers' Association, Armstrong Siddeley Motors, Ltd., etc.

PROGRAMME AND TIME TABLE

OF THE

SCHOOL OF BOOK PRODUCTION

AND

PRINTING TRADES

FOR THE

SESSION 1928-29.

STAFF.

WILLIAM H. JOHNSON	...	<i>Acting Head of Department.</i>
WILLIAM D. HORGAN, B.A.	...	<i>Physics and Electricity.</i>
HENRY C. CLIFTON, B.A.	...	<i>Mathematics.</i>
JAMES J. McCORMICK, B.A.	...	<i>English, etc.</i>
W. L. WHELAN	...	<i>Art.</i>

PART TIME LECTURERS AND DEMONSTRATORS.

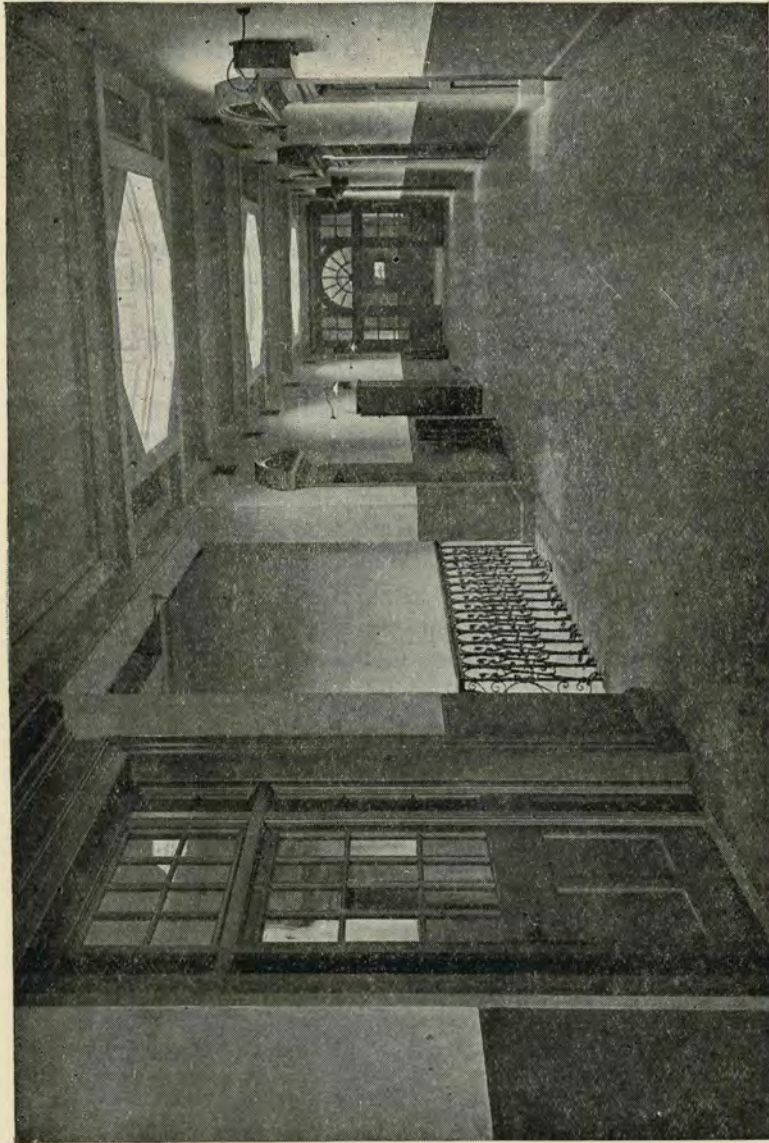
P. MAHER	...	...	<i>Compositors' Work.</i>
A. E. SIMMONS	...	...	<i>Machine Work.</i>
R. A. LATCHFORD	...	...	<i>Linotype Work.</i>
W. NEWTH	...	...	<i>Linotype Work—Day.</i>
T. BUTTERLY	...	...	<i>Monotype Work.</i>
P. McMANUS	...	...	<i>Monotype Casting.</i>
G. O'LEARY	...	...	<i>Lithography—Direct.</i>
T. F. FITZGERALD	...	...	<i>Lithography—Offset.</i>
W. DUNNE	...	...	<i>Litho Art.</i>
F. DUNNE	...	...	<i>Book-binding (Forwarding).</i>
W. LANIGAN	...	...	<i>Book-binding (Finishing).</i>
A. CUMMINS	...	...	<i>Machine Ruling.</i>
J. MACKAY	...	...	<i>Photo-Mechanical Operating.</i>
F. G. HULL	...	...	<i>Etching.</i>
T. V. CLEARY	...	...	<i>Photography.</i>
G. A. WATSON, A.R.I.C.Sc.I.	...	...	<i>Chemistry for Photography.</i>
G. D. FORDE	...	...	<i>English and Calculations</i>

EXPLANATORY STATEMENT.

The School of Book Production and Printing Trades is located in the Bolton Street Technical Institute.

Evening and day courses and classes in all branches are provided. The School has been recently completely equipped at great expense. In the LETTERPRESS SECTION, in addition to the equipment for Compositors, there is installed a "Pony" Miehle Machine, Miehle Vertical Printing Press, Phœnix Platen Machine, Payne's Demy Stop-Cylinder Wharfedale Machine, with face-up delivery, large Guillotine, two Linotype Machines (one latest model), Monotype Keyboard and Monotype Caster. In the LITHOGRAPHY SECTION a Royal Folio Waite Rotary Offset Machine, Furnival Demy Machine, with patent Offset attachment, four presses for transfer work, and a Copper-plate press. In the PHOTOGRAPHY and PHOTO-MECHANICAL SECTION four 12 x 10 Cameras for line and half-tone work in monochrome and colour; together with a range of screens suitable for all grades of work, from the finest book illustration to ordinary newspaper blocks; a Levy Acid Blast Etching Machine for Zinc and Copper, and three-bath power-rocking apparatus; a Royle Routing Machine and Power Beveller, six powerful arc lamps, with special plant for copying, enlarging, and photo-micrography; Collotype and Photo-gravure plant. Amateur photographic work and special processes for Engineers is dealt with. In the BOOKBINDING SECTION the equipment consists of the most up-to-date apparatus for Forwarding and Finishing in both Stationery and Letterpress Binding, and for Machine Ruling, a Treble Striker "Shaw" Machine.

COURSES AND TIME TABLES.



BOLTON STREET TECHNICAL INSTITUTE—TOP FLOOR CORRIDOR.

No. of Course.	SUBJECT	Day	Hour	Room	TEACHER.
SPECIAL CLASSES IN IRISH.					
	Irish—I.A. ...	Mon.	7.30-9.30	B.I.	D. S. MacEoin.
	Irish—I.B. ...	Thurs.	7.30-9.30	B.I.	D. S. MacEoin.
INTRODUCTORY COURSE—Fee, 7s. 6d. for Session.					
200 ^B	English—E. ...	Mon.	7.30-8.30	C4	—
	Elementary Calculations—E. ...	Mon.	8.30-9.30	C4	—
	Drawing—E. ...	Fri.	7.30-8.30	C4	—
TYPOGRAPHY—COMPOSITORS' COURSE—Fee, 7s. 6d. for each Year of Course.					
FIRST YEAR.					
201 ^B	Case Work, Lecture—I.A. ...	Thurs.	7.30-9.30	A1	W. H. Johnson.
	Case Work, Practical—I.A. ...	Tues.	7.30-9.30	A1	P. Maher.
	Calculations and English—I.*	Wed.	7.30-9.30	C3	G. D. Forde.
	Drawing for Compositors—I.*	Wed.	7.30-9.30	C2	W. L. Whelan.
202 ^B	Case Work, Lecture—I.B. ...	Thurs.	7.30-9.30	A1	W. H. Johnson.
	Case Work, Practical—I.B. ...	Fri.	7.30-9.30	A1	P. Maher.
	Calculations and English—I.*	Wed.	7.30-9.30	C3	G. D. Forde.
	Drawing for Compositors—I.*	Wed.	7.30-9.30	C2	W. L. Whelan.
SECOND YEAR.					
203 ^B	Case Work, Lecture—II.A. ...	Tues.	7.30-9.30	A1	W. H. Johnson.
	Case Work, Practical—II.A. ...	Mon.	7.30-9.30	A1	P. Maher.
	Calculations and English—II.*	Wed.	7.30-9.30	C3	G. D. Forde.
	Drawing for Compositors—II.*	Wed.	7.30-9.30	C2	W. L. Whelan.
204 ^B	Case Work, Lecture—II.B. ...	Tues.	7.30-9.30	A1	W. H. Johnson.
	Case Work, Pract.—II.B. ...	Thurs.	7.30-9.30	A1	P. Maher.
	Calculations and English—II.*	Wed.	7.30-9.30	C3	G. D. Forde.
	Drawing for Compositors—II.*	Wed.	7.30-9.30	C2	W. L. Whelan.
THIRD YEAR.					
205 ^B	Case Work, Lecture—III. ...	Mon.	7.30-9.30	A1	W. H. Johnson.
	Case Work, Practical—III. ...	Thurs.	7.30-9.30	A1.	P. Maher.
	Calculations and English—III.	Wed.	7.30-9.30	C3	G. D. Forde.
FOURTH YEAR.					
206 ^B	Case Work, Lecture—IV. ...	Wed.	8.35-9.35	A1	W. H. Johnson.
	Case Work, Practical—IV....	Wed.	7.30-8.30	A1	W. H. Johnson.
	Case Work, Practical—IV....	Fri.	7.30-9.30	A1	W. H. Johnson.
<i>In the Fourth Year Linotype or Monotype Work may be taken instead of or in addition to the Case Work Practical.</i>					
LINOTYPE OPERATORS' COURSE—Fee, 7s. 6d. for each Year of Course.					
FIRST YEAR.					
210 ^B	Linotype Mechanism—I. ...	Mon.	7.30-9.30	A3	R. A. Latchford.
	Linotype Keyboard Operating—I. ...	Tu., W.	7.30-9.30	A3	R. A. Latchford.
	Calculations and English—I.	Fri.	7.30-9.30	B3	G. D. Forde.
SECOND YEAR.					
211 ^B	Linotype Mechanism—II. ...	Thurs.	7.30-9.30	A3	R. A. Latchford.
	Linotype—Keyboard Operating—II. ...	Tu., W.	7.30-9.30	A3	R. A. Latchford.
	Calculations and English—II.	Fri.	7.30-9.30	B3	G. D. Forde.
THIRD YEAR.					
212 ^B	Linotype, Mechanism—III.	Thurs.	7.30-9.30	A3	R. A. Latchford.
	Linotype, Keyboard Operating—III. ...	Tu., W.	7.30-9.30	B2	R. A. Latchford.
	Calculations and English—III.	Fri.	7.30-9.30	B3	G. D. Forde.

* Drawing and English Calculations Classes are taken by First and Second Year Compositor Student alternately on Wednesday nights.

No. of Course.	SUBJECT	Day	Hour	Room	TEACHER
MONOTYPE OPERATORS' COURSE—Fee, 7s. 6d. for each Year of Course.					
FIRST YEAR.					
215 ^B	Monotype, Keyboard Mechanism—I. ...	Mon.	7.30-9.30	A3	T. Butterly.
	Monotype, Keyboard Operating—I. ...	Tu., W.	7.30-9.30	A3	T. Butterly.
	Calculations and English—I. ...	Fri.	7.30-9.30	C3	G. D. Forde.
SECOND YEAR.					
216 ^B	Monotype, Keyboard Mechanism—II. ...	Thurs.	7.30-9.30	A3	T. Butterly.
	Monotype, Keyboard Operating—II. ...	M., Tu.	7.30-9.30	A3	T. Butterly.
	Calculations and English—II. ...	Fri.	7.30-9.30	C3	G. D. Forde.
THIRD YEAR.					
217 ^B	Monotype, Keyboard Mechanism—III. ...	Thurs.	7.30-9.30	A3	T. Butterly.
	Monotype, Keyboard Operating—III. ...	Tues.	7.30-9.30	A3	T. Butterly.
	Calculations and English—III. ...	Fri.	7.30-9.30	C3	G. D. Forde.

Students may add a Class in Monotype Casting.

MONOTYPE CASTERS' COURSE—Fee, 7s. 6d. for each Year of Course.

218 ^B	Practical Operating ...	Tues.	7.30-9.30	A3	P. McManus.
	Caster Mechanism ...	Thurs.	7.30-9.30	A3	P. McManus.
	English Calculations ...	Fri.	7.30-9.30	C3	G. D. Forde.

TYPOGRAPHY—MACHINISTS' COURSE—Fee, 7s. 6d. for each Year of Course.

FIRST YEAR.					
221 ^B	Machine Work, Lecture—I. ...	Fri.	8.35-9.35	A1	A. E. Simmons.
	Machine Work, Pract.—I. ...	Fri.	7.30-8.30	A3	A. E. Simmons.
	Machine Work, Pract.—I. ...	Mon.	8.0-10.0	A3	A. E. Simmons.
	Calculations and English—I. ...	Wed.	8.0-10.0	C3	G. D. Forde.
SECOND YEAR.					
222 ^B	Machine Work, Pract.—II. ...	Thurs.	7.30-8.30	A3	A. E. Simmons.
	Machine Work, Lect.—II. ...	Thurs.	8.35-9.35	A1	A. E. Simmons.
	Machine Work, Pract.—II. ...	Tues.	8.0-10.0	A3	A. E. Simmons.
	Calculations and English—II. ...	Wed.	8.0-10.0	C3	G. D. Forde.
THIRD YEAR.					
223 ^B	Machine Work, Lecture—III. ...	Thurs.	7.30-9.30	A1	W. H. Johnson.
	Machine Work, Pract.—III. ...	Tues.	7.30-9.30	A3	A. E. Simmons.
	Calculations and English—III. ...	Wed.	7.30-9.30	C3	G. D. Forde.
FOURTH YEAR.					
224 ^B	Machine Work, Lect.—IV. ...	Wed.	7.30-9.30	A1	W. H. Johnson.
	Machine Work, Pract.—IV. ...	Thurs.	7.30-9.30	A3	A. E. Simmons.

PHOTOGRAPHY—Fee, 7s. 6d. for each Year of Course.

FIRST YEAR.					
227 ^B	Pure Photography ...	Fri.	7.30-9.0	A11	T. V. Cleary.
	Chemistry for Photography	Thurs.	7.30-9.0	25	G. A. Watson.
SECOND YEAR.					
228 ^B	Pure Photography ...	Tues.	7.30-9.30	A11	T. V. Cleary.
THIRD YEAR.					
229 ^B	Pure Photography ...	Tues.	7.30-9.30	A11	T. V. Cleary.

* Class held at Kevin Street Technical Institute.

No. of Course	SUBJECT	Day	Hour	Room	TEACHER
PHOTO-MECHANICAL (PROCESS) WORK—Fee, 7s. 6d. for each Year of Course.					
FIRST YEAR.					
230 ^B	Photo-Mechanical Work—				
	Operating I. ...	Mon.	7.30-9.30	A11	J. Mackay.
	Etching II. ...	Mon.	7.30-9.30	A11	F. G. Hull.
	Pure Photography—I. ...	Fri.	7.30-9.30	A11	T. V. Cleary.
	Chemistry for Photographers	Thurs.	7.30-9.0	25	G. A. Watson.
SECOND YEAR.					
231 ^B	Photo-Mechanical Work				
	Operating II. ...	Wed.	7.30-9.30	A11	J. Mackay.
	Etching I. ...	Wed.	7.30-9.30	A11	F. G. Hull.
	Pure Photography—II. ...	Tues.	7.30-9.30	A11	T. V. Cleary.
THIRD YEAR.					
232 ^B	Photo-Mechanical Work—				
	Operating ...	M., W.	8.0-10.0	A11	J. Mackay.
	Etching ...	M., W.	8.0-10.0	A11	F. G. Hull.
LITHOGRAPHY—Fee, 7s. 6d. for each Year of Course.					
FIRST YEAR.					
236 ^B	Lithography—Lect. & Pract. ...	Tues.	7.30-9.30	A2	C. O'Leary.
	Lithography—Pract. I. ...	Fri.	7.30-9.30	A2	C. O'Leary.
	Drawing for Lithography—I. ...	Thurs.	7.30-9.30	C2	
	Chemistry ...	Wed.	7.30-9.0	25	G. A. Watson.
SECOND YEAR.					
237 ^B	Lithography II.—Lect. & Pract. ...	Thurs.	7.30-9.30	A2	T. F. Fitzgerald.
	Lithography—Pract. II. ...	Tues.	7.30-9.30	A2	T. F. Fitzgerald.
	Drawing for Lithography—II. ...	Fri.	7.30-9.30	C2	
	Chemistry ...	Wed.	7.30-9.0	25	G. A. Watson.
THIRD YEAR.					
238 ^B	Lithography—III. ...	Thurs.	7.30-9.30	A2	T. F. Fitzgerald.
	Lithographic Art—III. ...	Wed., Fri.	7.30-9.30	C2	W. Dunne.
BOOKBINDING (FORWARDING)—Fee, 7s. 6d. for each Year of Course.					
FIRST YEAR.					
240 ^B	Forwarding—I. ...	Tues.	7.30-9.30	A9	F. Dunne.
	Paper Marbling—I. ...	Thurs.	7.30-9.30	A9	F. Dunne.
SECOND YEAR.					
241 ^B	Forwarding—II. ...	Fri.	7.30-9.30	A9	F. Dunne.
	Paper Marbling—II. ...	Thurs.	7.30-9.30	A9	F. Dunne.
THIRD YEAR.					
242 ^B	Forwarding—III. ...	Wed.	7.30-9.30	A9	F. Dunne.
BOOKBINDING (FINISHING)—Fee, 7s. 6d. for each Year of Course.					
FIRST YEAR.					
246 ^B	Finishing—I. ...	Thurs.	7.30-9.30	A9	W. Lanigan.
	Design and Composition—I. ...	Wed.	7.30-9.30	C2	W. L. Whelan.
SECOND YEAR.					
247 ^B	Finishing—II. ...	Thurs.	7.30-9.30	A9	W. Lanigan.
	Design and Composition—II. ...	Wed.	7.30-9.30	C2	W. L. Whelan.
THIRD YEAR.					
248 ^B	Finishing—III. ...	Wed.	7.30-9.30	A9	W. Lanigan.
	Design and Composition—III. ...	Fri.	7.30-9.30	C2	W. L. Whelan.
MACHINE RULERS' COURSE—Fee, 7s. 6d. for each Year of Course.					
251 ^B	Machine Ruling ...	Mon.	7.30-9.30	A9	A. Cummins.
	English and Calculations ...	Fri.	7.30-9.30	C3	G. D. Forde.
SPECIAL CLASSES—Fee, 7s. 6d. each, unless taken with a Course.					
	Etching and Engraving ...	Fri.	2.0-5.0	A2	
	Stationery Binding ...	Tu., F.	7.30-9.30	A9	F. Dunne.
	Linotype Work ...	M., Tu.	3.0-5.0	A3	W. Newth.
	W., Th.				
	Linotype—Summer Class ...	M., Tu., W., Th., Fri.	7.30-9.30	—	W. Newth.
	Apprentices' Day Classes ...	M., Tu.	2.0-5.0	A3	W. H. Johnson.
	Thurs.				

* Class held at Kevin Street Technical Institute.

FIRST YEAR COURSE IN
Typography—Compositors.

Subjects:

CASE WORK, LECTURE.
 CASE WORK, PRACTICAL.
 ENGLISH AND CALCULATIONS.
 DRAWING FOR COMPOSITORS.

CASE WORK, LECTURE.

FIRST YEAR.

Definition and care of materials and appliances used—parts of a single type character—a fount of type and description of the various characters contained therein—habits to acquire and avoid to ensure rapid and clean composition—rules for spacing and justifying—pulling proofs and correcting—proof-readers' marks—locking-up—distribution of solid and display matter—technical terms—casting-off copy—casting-up type pages—the point system—reporters' contractions—elementary imposition schemes and dressing formes—signatures and their uses—style—dividing and compounding words—use of capitals, italics, figures, numerals, etc.—Definition of woodcut, stereo, electro and process blocks—paper sizes and sub-divisions.

CASE WORK, PRACTICAL.

FIRST YEAR.

The lay of the case—simple exercises in setting plain matter on approved methods—style and bearing—spacing and justifying—distribution and how to handle type—pulling proofs—proof corrections—simple display work—various type faces—reading manuscript.

ENGLISH AND CALCULATIONS.

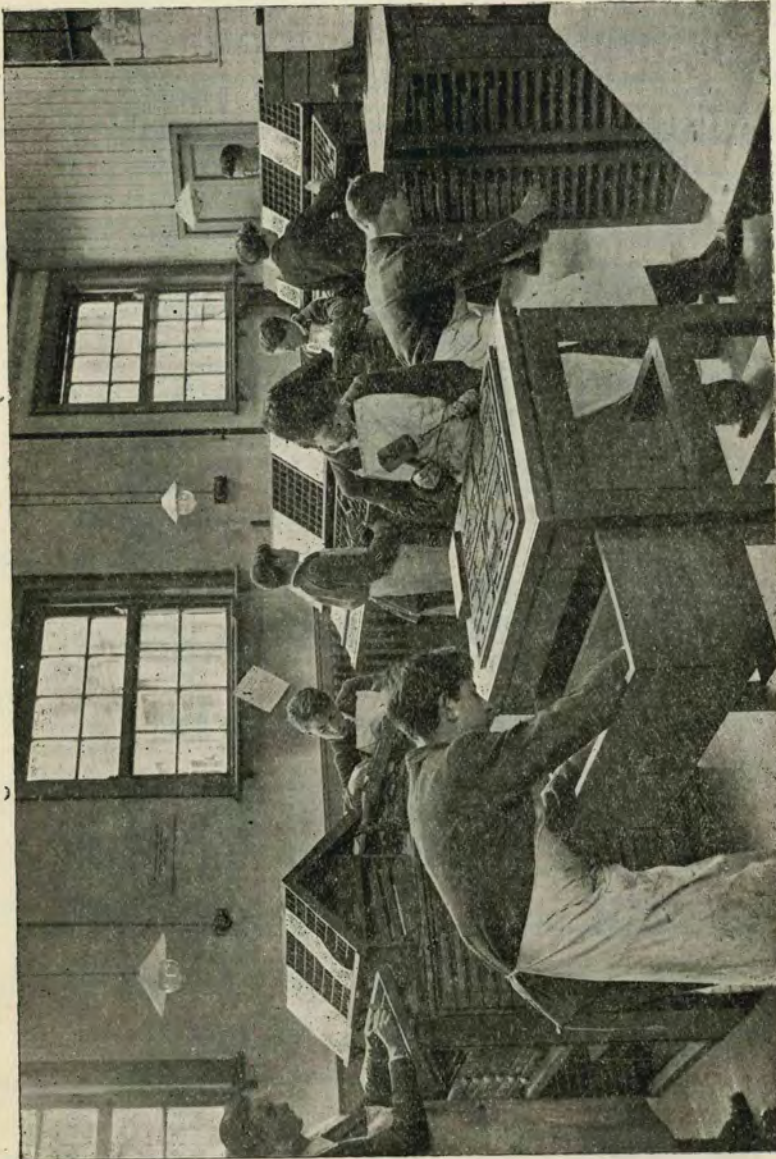
FIRST YEAR.

Etymology and syntax so far as they bear on corrections of errors in written composition—writing and punctuating—dictated passages—analysis of simple sentences—English composition—ratio and proportion—casting-off copy—casting-up—weight of leads—weight of type—calculating extra pages, leaded—paper and equivalent weights.

DRAWING FOR COMPOSITORS.

FIRST YEAR.

Free hand drill exercises in drawing—the vertical and horizontal in conjunction with the curved line—training the hand and eye to measure proportion and space without mechanical means—lettering—symmetry—proportion—simple designs.



SECTION OF CASEROOM (COMPOSITORS' WORK).

SECOND YEAR COURSE IN

Typography—Compositors.*Subjects:*

CASE WORK, LECTURE.
 CASE WORK, PRACTICAL.
 ENGLISH AND CALCULATIONS.
 DRAWING AND DESIGNING FOR COMPOSITORS.

CASE WORK, LECTURE.

SECOND YEAR.

A more advanced knowledge of the first year course—history of printing—casting-off copy for pamphlets, bookwork and jobbing work—tabular work, etc.—reducing and enlarging pages—various problems in type bodies, leads, etc.—bookwork style, chapter and page heads, preliminary matter, oddments, shoulder notes, footnotes, sidenotes, cut-in notes, etc.—suitable type faces—ratio of type page to paper—making margin—making up—correct position of page on paper—imposition—sheet and half-sheet work—various schemes to suit different classes of work—squaring the pages—working out margins for register work—schemes for gangs and for working two up to fold together, etc.—table, tabular, and pedigree work, how to cast-off and set—display to suit all classes of work—make-up of work in two or more colours—pencil lay-outs and sketches—readers' marks and qualifications for a corrector of the press—paper, hand and machine-made, weights and qualities, equivalent weights, sizes and sub-divisions—cards—sizes and sub-divisions.

CASE WORK, PRACTICAL.

SECOND YEAR.

Setting from difficult M.S.—display work, commercial and artistic—use and manipulation of borders, rules and ornaments—colour in display work—pamphlet work—book work—imposition schemes—margins—register work—dissecting for colour—table and tabular work—pedigree.

ENGLISH AND CALCULATIONS.

SECOND YEAR.

Etymology and syntax with application to the correction of faulty sentences—more advanced exercises in analysis of sentences—English composition—reading—writing and punctuating—dictated passages—ratio and proportion—problems on the point system—computation of labour value—weight of leads and type—leaded matter—extra pages—paper and equivalent weights—size of type to given space and copy—changing size of type and number of pages.

DRAWING AND DESIGNING FOR COMPOSITORS.

SECOND YEAR.

Freehand and model drawing—lettering, ancient and modern—memory drawing—principles of light and shade—designing display to suit various style of type and classes of work, such as programmes, advertisements, title pages, posters, etc.

THIRD YEAR COURSE IN

Typography—Compositors.*Subjects:*

CASE WORK, LECTURE.
 CASE WORK, PRACTICAL.
 ENGLISH AND CALCULATIONS.

CASE WORK, LECTURE

THIRD YEAR.

A detailed knowledge of the first and second year courses—outline of type casting—alloys of type metal—essential qualities of good type—selection of suitable type for various classes of work—weight of type and spacing material required for specified work—arrangement of case room—mechanical composition—instructions necessary when giving out work—designing and laying out copy; paper—equivalent weights of standard and odd sizes—various classes (hand-made, machine-made, mould-made), printings, writing, coated, banks, plate, drawings, blottings, manillas, retree, outsides, insides, overmake, watermarks, mill numbers, etc.—metals—results of over-heating, fluxing and renovating—general principles of cost finding—time and work dockets, cost sheets, analysis sheets, work orders—supervision of work.

CASE WORK, PRACTICAL.

THIRD YEAR.

Advanced composition—artistic and colour work—book work—intricate tabular work—arrangement of panels to suit style of display and shape of page—making up and preparing for machine.

ENGLISH AND CALCULATIONS.

THIRD YEAR.

Etymology and syntax in detail—correction of errors—English composition—essay writing—reading—spelling—punctuation—advanced problems in calculating sizes of type for given spaces, leads required for given work, weight of type, paper, etc.

FOURTH YEAR COURSE IN

Typography—Compositors.*Subjects:*

CASE WORK, LECTURE.
 CASE WORK, PRACTICAL.
 or MECHANICAL COMPOSITION.

CASE THEORY.

FOURTH YEAR.

The course will be devoted to problems appertaining to management of the case room, the issuing of work and keep track, estimating, cost finding, advanced typographical problems, with lectures on trades allied to letterpress printing, paper-making and testing, etc.

CASE WORK, PRACTICAL.

FOURTH YEAR.

The practical work will consist of advanced case work or a first-year course in mechanical composition, either Lino or Mono.

MECHANICAL COMPOSITION.

FOURTH YEAR.

See *Linotype and Monotype Work Syllabuses.*

FIRST YEAR COURSE IN
Linotype Work.

Subjects:

LINOTYPE MECHANISM.
LINOTYPE KEYBOARD OPERATING.
ENGLISH AND CALCULATIONS.

LINOTYPE MECHANISM.

FIRST YEAR.

Keyboard: Construction—replacing cams—operation from keyboard to magazine—how rods are worked by cams. *Matrix:* its object—care of—alignment. *Spaceband:* object and use—line justification—importance of cleanliness. *Assembler:* star-wheel—guides—chute—brake—adjustments. *Line Delivery Carriage:* components—control—adjustments. *Magazine:* single—multiple—split—auxiliary—entrance—escapements—changes. *Distributor:* distributor bar—distributor box—controls—single and multiple mechanisms—adjustments. *Mould:* varieties and care of—making changes. *Metal:* constituent parts—qualities—temperature—cleansing. *Metal Pot:* plunger—mouthpiece—burners and governors—adjustment. *Knives:* back and trimming—varieties and care of—how to adjust. *Vice:* jaws and lock—adjustments. *Elevators:* first and second—their adjustment. *Cams:* their names and functions—adjustment. *Driving Mechanism:* Clutch and associated mechanism—adjustments. *Care of Machine:* oiling, cleanliness, etc. *Automatic Stops:* vice and delivery carriage cam safety stops.

LINOTYPE KEYBOARD OPERATING.

FIRST YEAR.

Practical work is undertaken in operating the keyboard and fingering and touch fully explained, in addition to general advice on operating, each student working under the personal supervision of the instructor.

ENGLISH AND CALCULATIONS.

FIRST YEAR.

See First Year Compositors' Course.

SECOND YEAR COURSE IN
Linotype Work.

Subjects:

LINOTYPE MECHANISM.
LINOTYPE KEYBOARD OPERATING.
ENGLISH AND CALCULATIONS.

LINOTYPE MECHANISM.

SECOND YEAR.

The syllabus for the second year students will be similar to the first year, but students will be expected to study the mechanism in greater detail.

LINOTYPE KEYBOARD OPERATING.

SECOND YEAR.

Practical work of a more advanced nature will be given, including simple table work, while attention will be given to the style of operating and correctness.

ENGLISH AND CALCULATIONS.

SECOND YEAR.

See Second Year Compositors' Course.

THIRD YEAR COURSE IN
Linotype Work.

Subjects:

LINOTYPE MECHANISM.
LINOTYPE KEYBOARD OPERATING.
ENGLISH AND CALCULATIONS.

LINOTYPE MECHANISM.

THIRD YEAR.

The syllabus will be as that of the two previous years, but in addition, to complete detailed knowledge of the mechanism of early and late models, each student will be taught to take asunder and readjust the various working parts.

LINOTYPE KEYBOARD OPERATING.

THIRD YEAR.

As in previous years, with more advanced work such as twin-slug composition—tabular and advertisement work, introducing a two-line letter, headline work, etc.

ENGLISH AND CALCULATIONS.

THIRD YEAR.

See Third Year Compositors' Course.

FIRST YEAR COURSE IN
Monotype Operating.

Subjects:

KEYBOARD MECHANISM.
PRACTICAL OPERATING.
ENGLISH AND CALCULATIONS.

KEYBOARD MECHANISM.**FIRST YEAR.**

Action of key buttons and valves—operation of punches and recording units—how unit wheel is driven and units recorded—justifying scale and M scale pointer—recording mechanism—paper feed and take-up and release mechanism—automatic cut-out—operation of bell trip and line counter—reversing valve and switch—mechanism for adjusting length of line—justifying and reversing keys—air compressor and filter—mechanism for automatically moving sticking valves—method of placing keybanks and keybar frames in position.

PRACTICAL KEYBOARD OPERATING.**FIRST YEAR.**

Practical work is undertaken in operating the keyboard and the method of correct fingering taught in addition to the general principles regarding practical work.

ENGLISH AND CALCULATIONS.

See First Year Compositors' Course.

SECOND YEAR COURSE IN
Monotype Operating.

Subjects:

KEYBOARD MECHANISM.
PRACTICAL OPERATING.
ENGLISH AND CALCULATIONS.

KEYBOARD MECHANISM.**SECOND YEAR.**

The syllabus covers that of the first year, but a more detailed explanation of the parts is given.

PRACTICAL KEYBOARD OPERATING.**SECOND YEAR.**

More advanced practical work is given, including tabular work and the calculations connected therewith.

ENGLISH AND CALCULATIONS.**SECOND YEAR.**

See Second Year Compositors' Course.

THIRD YEAR COURSE IN
Monotype Operating.

Subjects:

KEYBOARD MECHANISM.
PRACTICAL OPERATING.
ENGLISH AND CALCULATIONS.

KEYBOARD MECHANISM.**THIRD YEAR.**

The syllabus will cover that taken in the previous years, while in addition the student will be given a detailed knowledge of all parts of the keyboard mechanism, compressor, etc.

PRACTICAL KEYBOARD OPERATING.**THIRD YEAR.**

Advanced and difficult composition will be undertaken and speed tests taken.

ENGLISH AND CALCULATIONS.**THIRD YEAR.**

See Third Year Compositors' Course.

Monotype Caster.

Subjects:

CASTER MECHANISM.
CASTER OPERATING.
ENGLISH AND CALCULATIONS.

MECHANISM.

Driving gear—cam levers—type carrier and its adjustments—pump action—transfer wedges and their adjustments—die centring lever—tong mechanism—locking racks—mould blade moving gear—type pusher—paper tower bridge and its adjustments—line shifting and galley mechanism—changing founts, centring, sizing and aligning—justification—care of matrices—system of locating derangements—the mould, its care, taking apart, assembling and adjusting—compressor and air tank.

PRACTICAL OPERATING.

The practical operating of the caster, including care necessary while working, and the running adjustments, are fully dealt with and explained.

ENGLISH AND CALCULATIONS.

See Compositors' Course.

FIRST YEAR COURSE IN **Typography—Machinists.**

Subjects:

MACHINE WORK, LECTURE.
MACHINE WORK, PRACTICAL.
ENGLISH AND CALCULATIONS.

FIRST YEAR. **MACHINE WORK, LECTURE.**

Technical terms—materials and appliances used—description and parts of hand-press, platens and cylinder machines—covering tympan and cutting out frisket—pulling proofs—preparing platen and cylinder machines for make-ready—result of over-packing and under-packing cylinder—care and condition of rollers—care of inks—cleansing and preservation of type and blocks—locking-up—elementary imposition schemes—sheet and half-sheet work—signatures and their uses—sizes and sub-division of paper and cards—sheets and quires in reams—various grades and qualities of paper—definition of woodcut, stereo, electro and process blocks.

FIRST YEAR. **MACHINE WORK, PRACTICAL.**

Graduated exercises in the care and manipulation of letterpress machinery—working the hand-press—proof pulling—handling and use of inks and paper—make-ready on platen and hand-press—cutting overlays and underlays—make-ready on cylinder machines.

FIRST YEAR. **ENGLISH AND CALCULATIONS.**

See First Year Compositors' Course.

SECOND YEAR COURSE IN

Typography—Machinists.

Subjects:

MACHINE WORK, LECTURE.
MACHINE WORK, PRACTICAL.
ENGLISH AND CALCULATIONS.

SECOND YEAR. **MACHINE THEORY.**

Advanced knowledge of first year course—principal working parts of light and heavy platens, stop cylinder and two-revolution machines—automatic feeders—choosing a machine, points to consider—suitability for various classes of work—make-ready for job, poster and bookwork—making register—underlaying, interlaying and overlaying—various classes of cylinder packing—setting rollers and duct—embossing—composition of rollers and casting—qualities of a good roller, care and treatment in hot and cold weather—inks, qualities, drying, suitability for various papers, covering properties, etc.—bronzing—colour printing, difficulties of register; working off—running-up colour, slurring, paper stretching, set-off, backing-up, etc.—impositions, various schemes for ordinary and inset work—laying down plates, mounting and fastening—paper, sizes, weights, qualities and sub-divisions, effect of heat and damp on coated and super-calendered, qualities required—drying printed work—stereos, electros and process blocks—manufacture and preservation of.

MACHINEWORK, PRACTICAL.

SECOND YEAR.

The mechanism of all classes of printing machinery and care of—making ready better class work—laying down plates and registering—working margin—cutting paper—colour, etc.

ENGLISH AND CALCULATIONS.

SECOND YEAR.

See Second Year Compositors' Course.

THIRD YEAR COURSE IN

Typography—Machinists.

Subjects:

MACHINE WORK, LECTURE.
MACHINE WORK, PRACTICAL.
ENGLISH AND CALCULATIONS.

MACHINE THEORY.

THIRD YEAR.

A detailed knowledge of the first and second year courses—construction of the various classes of printing machines and principles of make-ready—average runs per hour—power and transmission—steam, gas, and electric—shafting and lubricators—paper—cockling and creasing, stretching, fluffing, etc.; boards—paste, pulp, art, strawboards and millboards—inks, properties of various qualities and colours, copyable, double tone, trichromatic, etc.—outline of the methods of reproducing illustrations—machine room costs and how to ascertain and check them—cost of production—percentages for handling—time and work sheets—general supervision.

MACHINE WORK, PRACTICAL.

THIRD YEAR.

Practical work in making ready every class of work of a higher grade from the laying-on of the forme to the completion of the printed sheets.

ENGLISH AND CALCULATIONS.

THIRD YEAR.

See Third Year Compositors' Course.

FOURTH YEAR COURSE IN

Typography—Machinists.

Subjects:

MACHINE WORK, LECTURE.
MACHINE WORK, PRACTICAL.

MACHINE WORK, LECTURE.

FOURTH YEAR.

The course will deal mainly with the principles of ascertaining costs, estimating, paper testing and lectures on trades allied to letterpress printing.

MACHINE WORK, PRACTICAL.

FOURTH YEAR.

Working two-revolution machine—make-ready of three-colour work—fine half-tone—colour mixing, etc.

FIRST YEAR COURSE IN
Photography.

Subjects :

PURE PHOTOGRAPHY, THEORY.
 PURE PHOTOGRAPHY, PRACTICAL.
 CHEMISTRY FOR PHOTOGRAPHY.

PURE PHOTOGRAPHY—THEORY AND PRACTICAL.

FIRST YEAR.

Instruction in the use of cameras—exposure and development of dry plates and films—after treatment of negatives—intensification, reduction, retouching and varnishing—printing process, print-out papers and development papers, bromide and gaslight—toning of prints—trimming, mounting, spotting and finishing—theory of lenses used in photography—optical calculations—orthochromatic photography and printing in carbon—copying and enlarging.

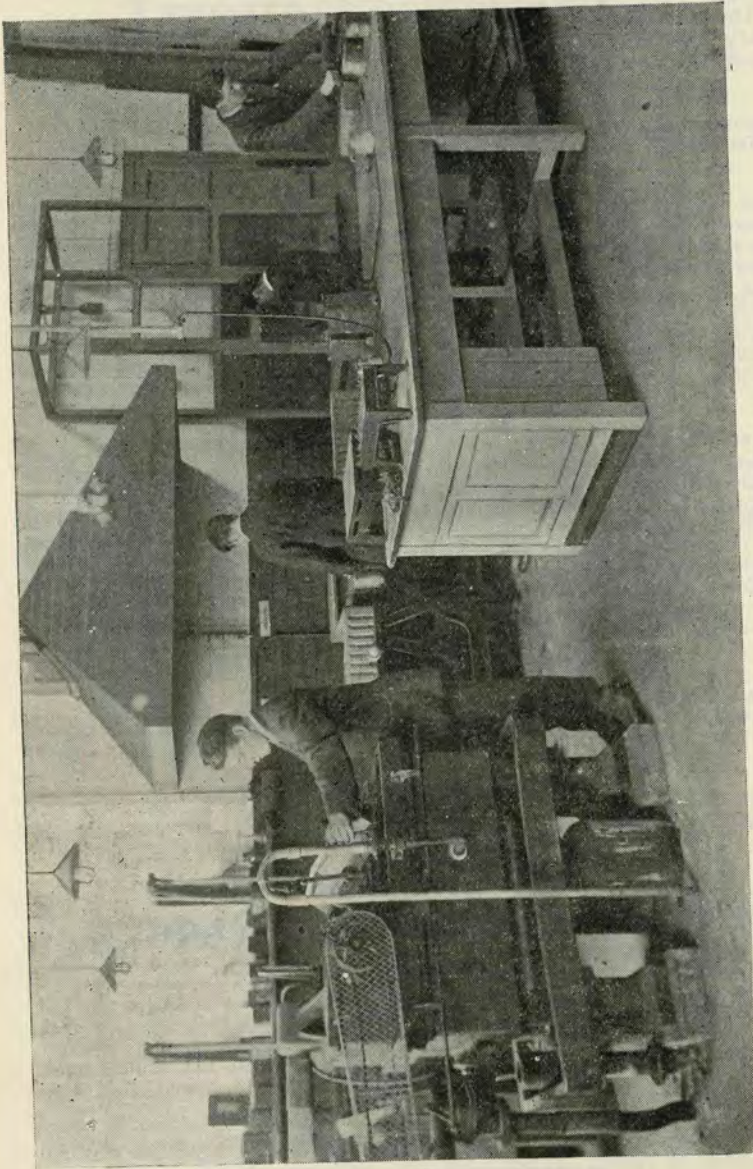
The practical work will include the theory practically applied.

CHEMISTRY FOR PHOTOGRAPHY, Etc.

To understand the processes used in PHOTOGRAPHY, PHOTO-MECHANICAL WORK, LITHOGRAPHY, etc., it is necessary to have some knowledge of chemistry and its general principles. Throughout the part of the syllabus devoted to general chemistry, frequent reference is made to applications to these technical processes.

FIRST YEAR.

General Chemistry : Physical and chemical changes—mixtures and compounds—elements—chemical laws—elementary treatment of the atomic theory—the atmosphere ; constitution of the atmosphere, oxygen, nitrogen—acids ; general study of the common acids, sulphuric, nitric, hydrochloric—alkalies ; lime, caustic soda, sodium carbonate, ammonia—salts ; methods of formation, water of crystallisation—water : hydrogen, carbon dioxide, natural waters—sulphur : oxides, sulphites, sulphates, thiosulphates—halogens : detailed supply of chlorine, bromine and iodine—oxidation and reduction : study of typical examples with particular reference to photographic operations—metallic salts : silver, gold, copper, iron, uranium. *Applied Chemistry :* Photo-chemistry of certain metallic salts—photo-chemistry of silver salts—theories concerning latent image—sensitisers—history of photographic processes—collodion and gelatine emulsions—ripening—dry plates—theory of developers and retainers—acid and alkaline developments—fixing agents—intensification and weakening of silver image—printing processes—toning processes—platinotype—chemistry of photo-mechanical processes—chemistry of lithographic processes.



SECTION OF PHOTO-MECHANICAL WORKSHOP.

SECOND YEAR COURSE IN
Photography.

Subjects :

PURE PHOTOGRAPHY, THEORY.
PURE PHOTOGRAPHY, PRACTICAL.

PURE PHOTOGRAPHY—THEORY AND PRACTICAL.

SECOND YEAR.

More advanced and detailed instruction in subjects covered in first year course—the theory of light as applied to photography—orthochromatic and panchromatic photography—the use of colour filters—the chemistry and process of manufacture of dry plate emulsions—platinotype printing—colour photography, autochrone, Paget, etc.—the wet collection process—scientific and technical uses of photography—photo-micrography—telephotography—photography by flashlight and other artificial light.

The practical work will be of more advanced nature than the first year, and will include retouching.

THIRD YEAR COURSE IN

Photography.

Subjects :

PURE PHOTOGRAPHY, THEORY.
PURE PHOTOGRAPHY, PRACTICAL.

PURE PHOTOGRAPHY—THEORY AND PRACTICAL.

THIRD YEAR.

Detailed instruction in first and second year courses—research work in the theory of light action on photo salts—spectrum analysis—preparation of colour filters—dye—sensitising of plates.

The practical work will comprise an advanced knowledge of the previous courses and the making of dry plates, enlarging, etc.

FIRST YEAR COURSE IN

Photo-Mechanical (Process) Work.

Subjects :

PHOTO-MECHANICAL WORK, THEORY AND PRACTICE.
PURE PHOTOGRAPHY.
CHEMISTRY FOR PHOTOGRAPHY, ETC.

PHOTO-MECHANICAL (PROCESS) WORK.

FIRST YEAR.

The instruction will consist mainly of practical work with frequent lectures and demonstrations explaining the scientific principles underlying the various processes. The subjects dealt with will comprise instruction in the use of the apparatus required—physical and chemical theory of "wet" and "dry" plate photography—formulae—line etching by roller and dragon's

blood methods—half-tone blocks in course and fine grain on zinc and copper—routing and mounting of line and half-tone blocks—negative making by collodion and dry plate methods in line and half-tone.

PURE PHOTOGRAPHY.

FIRST YEAR.

See First Year Course in Photography.

CHEMISTRY AND PHOTOGRAPHERS

FIRST YEAR.

See First Year Course in Photography.

SECOND YEAR COURSE IN

Photo-Mechanical (Process) Work

Subjects :

PHOTO-MECHANICAL WORK, THEORY.
PHOTO-MECHANICAL WORK, PRACTICAL.
PURE PHOTOGRAPHY.

PHOTO-MECHANICAL (PROCESS) WORK.

SECOND YEAR.

The second year course will consist of more advanced instruction than the first year, and in addition the production of three colour negatives and blocks—the different methods employed in photo-mechanical processes for the rendering of graduations of light and shade—the principles underlying the photographic rendering of colours and the elementary stages of carbon.

PURE PHOTOGRAPHY.

SECOND YEAR.

See Second Year Course in Pure Photography.

THIRD YEAR COURSE IN

Photo-Mechanical (Process) Work.

Subjects :

PHOTO-MECHANICAL WORK, THEORY.
PHOTO-MECHANICAL WORK, PRACTICAL.

PHOTO-MECHANICAL (PROCESS) WORK.

THIRD YEAR.

The course will consist of both Practical and Theoretical work in the reproduction of all classes of work on zinc and copper—photo-litho transfers work—colour work—the varied allied processes.

FIRST YEAR COURSE IN

Lithography.*Subjects :*

LITHOGRAPHY, LECTURE.
 LITHOGRAPHY, PRACTICAL WORK.
 DRAWING FOR LITHOGRAPHY.
 CHEMISTRY FOR LITHOGRAPHY, ETC.

LITHOGRAPHY, LECTURE.

FIRST YEAR.

Litho stone, its composition and physical nature—its preparation, grinding, polishing and graining—plates, re-cleaning, re-grinding—nature and use of materials employed, tallow, gum arabic, wax, shellac, turps, caustic soda, potash, soap, paraffin, and various oils—papers, natures and qualities, sizes, etc.—inks, nature and properties of black and coloured, driers, etc.—litho press—copper plate press—rollers, their structure, covering and breaking in—transferring, essential principles, commercial work for hand press and machine—making up of transfers—pulling of transfers—composition of transfer inks and papers—doctoring work—bronzing—transposing.

LITHOGRAPHY, PRACTICAL WORK.

FIRST YEAR.

Preparation of the stone—laying down transfers—pulling register proofs—working presses—rollers and inks.

DRAWING FOR LITHOGRAPHY.

FIRST YEAR.

See Art and Art Crafts Prospectus.

CHEMISTRY FOR LITHOGRAPHY, Etc.

FIRST YEAR.

See Syllabus under First Year Course in Photography.

SECOND YEAR COURSE IN

Lithography.*Subjects :*

LITHOGRAPHY, LECTURE.
 LITHOGRAPHY, PRACTICAL WORK.
 DRAWING FOR LITHOGRAPHY.
 CHEMISTRY FOR LITHOGRAPHY.

LITHOGRAPHY, LECTURE.

SECOND YEAR.

Characteristics of the various surfaces employed—chemical and physical principles on which lithography is based—stones, origin, character and backing of thin stones—aluminography—zincography—alterations and corrections—papers, hand and machine made, tinted, glazed, etc.—cards, plain and glazed—inks, source and nature of coloured pigments, mixing of tints—mediums and pomades—driers—creasing of paper and remedies—

machines, construction and management—hand presses—rollers, breaking in “nap” and “glazed,” re-packing and re-covering—transferring, various papers, inks and crayons—patching-up—treatment of drawings on grained stones—etching and proving—chromo-lithography, superimposing colours, registrations, etc.—shading mediums, stippling film, splash work, aerography—metal-leaf work—photo-lithography by the various transfer methods—transpositions and reverse image methods.

LITHOGRAPHY, PRACTICAL WORK.

SECOND YEAR.

Preparing “glazed” and “nap” rollers—working register colour work—proving—transferring—transposing—reversing—strengthening weak work—preparing and working of press and cylinder machines.

DRAWING FOR LITHOGRAPHY.

SECOND YEAR.

See Art and Art Crafts Prospectus.

CHEMISTRY FOR LITHOGRAPHY.

SECOND YEAR.

See Syllabus under First Year Course in Photography.

THIRD YEAR COURSE IN

Lithography.*Subjects :*

LITHOGRAPHY, LECTURE.
 LITHOGRAPHY, PRACTICAL WORK.
 LITHOGRAPHIC ART.

LITHOGRAPHY, LECTURE.

THIRD YEAR.

A detailed knowledge of the subjects of first and second year courses—testing of materials—primary colours and their combinations—colour harmony—off-set work on flat-bed and rotary machines—rubber blankets, their composition and treatment in working—transferring, transposing and reversing—rotary off-set machine, fixing the plate, adjustment of inking rollers and dampers, cylinder and plate adjustment, and the working mechanism of the machine—fine register work—paper, tests for printing properties and suitability for various classes of work—estimating for work, Ink and paper.

LITHOGRAPHY, PRACTICAL WORK.

THIRD YEAR.

The working and preparation of litho machines, flat-bed and rotary, in both the direct and offset methods—preparing and running-off colour work—registering—mixing colours, etc.

LITHOGRAPHIC ART.

THIRD YEAR.

See Art and Art Crafts Prospectus.

FIRST YEAR COURSE IN **Bookbinding—Forwarding.**

Subjects :

FORWARDING, THEORY AND PRACTICE.
PAPER MARBLING:

FORWARDING.

FIRST YEAR.

Sizes and qualities of paper, boards and books—preparation and uses of glue and paste—folding, re-folding and pulling to pieces—various styles of end papers and their uses—sewing methods of preparation and various styles—glueing, rounding, backing and pressing—cutting in boards and out of boards—edge decoration and materials used—sprinkling, marbling and gilding—head banding—covering books and methods—siding and pasting down—tools used.

In the Practical Class instruction will be given in various styles and methods, folding, sewing and generally preparing the book for finishing.

MARBLING.

FIRST YEAR.

The course will consist of a full explanation of the principles of the process.

SECOND YEAR COURSE IN

Bookbinding—Forwarding.

Subjects :

FORWARDING, THEORY AND PRACTICE.
PAPER MARBLING.

FORWARDING.

SECOND YEAR.

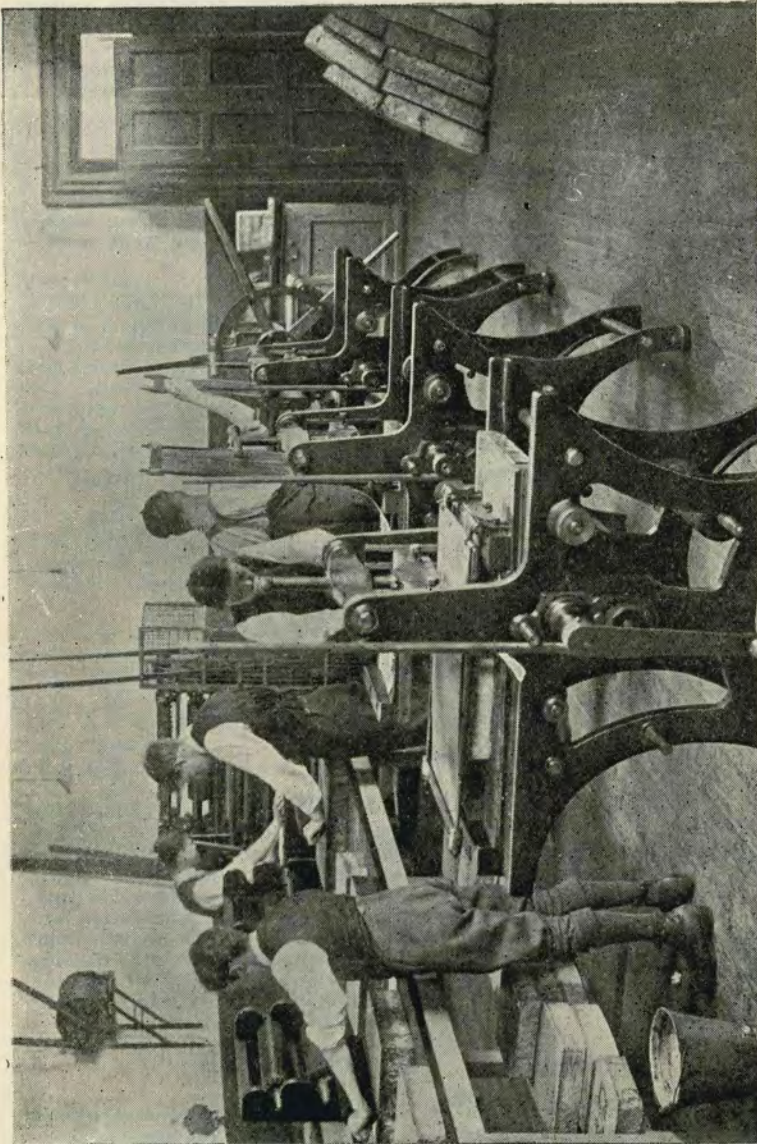
A detailed knowledge of the first year course—sewing, lining up and marking up for letterpress and stationery work—map mounting—plate inlaying—interleaving—guarding—flexible work—tight and spring backs—whole bound leather work—lacing, etc.

The Practical Work will consist of instruction in all classes of forwarding work.

MARBLING.

SECOND YEAR.

General outline of the various methods and the practical manipulation of the colours.



LITHOGRAPHIC MACHINE ROOM.

THIRD YEAR COURSE IN
Bookbinding—Forwarding.

Subject :

FORWARDING, STATIONERY AND LETTERPRESS.

THIRD YEAR. **FORWARDING.**

A complete knowledge of the first and second year courses—restoration of old books and MSS.—causes of stains and their removal—use of paper splitting—colours used in edge decoration—washing, sizing and staining—cost of materials used—cost of different styles of binding.

The Practical Class will include a knowledge of all work in connection with both letterpress and stationery forwarding.

FIRST YEAR COURSE IN
Bookbinding—Finishing.

Subjects :

FINISHING, THEORY AND PRACTICE.
DESIGN AND COMPOSITION FOR BOOKBINDERS.

FIRST YEAR. **FINISHING.**

Ordinary materials used in covering books—paste, paste-water, size, vinegar and glair, their preparation, mixture and effect on various leathers—marking-up and methods of preparing for finishing with bands—various operations in tooling—blocking—lining for lettering—cleaning up work.

The Practical Work will include the finishing of books and preparation.

FIRST YEAR. **DESIGN AND COMPOSITION.**

See Art and Art Crafts Prospectus.

SECOND YEAR COURSE IN
Bookbinding—Finishing.

Subjects :

FINISHING, THEORY AND PRACTICE.
DESIGN AND COMPOSITION FOR BOOKBINDERS.

SECOND YEAR. **FINISHING.**

Names and qualities of the various leathers used in covering books—names and uses of the various tools used—tooling, blind and gold—methods of cleaning off gold after tooling—pressing and “finishing out” of a half-calf or half-morocco book, plain or polished—causes of gold not adhering and the remedies—methods of preparing and finishing for leathers and skins—finishing a half-back, preparation not to show, polished all over.

The Practical side will include more advanced work than the first year.

SECOND YEAR. **DESIGN AND COMPOSITION.**

See Art and Art Crafts Prospectus.

THIRD YEAR COURSE IN
Bookbinding—Finishing.

Subjects :

FINISHING, THEORY AND PRACTICE.
DESIGN AND COMPOSITION FOR BOOKBINDING.

THIRD YEAR.

A detailed knowledge of the first and second year courses—equipment and organisation of a finishing shop—designing backs, sides, corners and lettering panels—cost of finishing materials and tools—estimating for specified work in time and materials.

The Practical Work will include the finishing of designs previously prepared in the Art Class.

DESIGN AND COMPOSITION.

THIRD YEAR.

See Art and Art Crafts Prospectus.

Machine Ruling.

Subjects :

MACHINE RULING, THEORY AND PRACTICE.
ENGLISH AND CALCULATIONS.

RULING.

Mechanism of Ruling Machines—different styles of run-through and striking work—mechanism and setting of striker—adjustment of striker for different sizes of paper—marking off—making and dressing of pens—setting pens—the use of sandpaper, etc.—setting cams—mixing inks for different classes of paper—the use of gall, etc.—single, double, and treble carriage work—working two or more colours at one operation—making up books of various patterns—loose leaf work—parchment ruling—sizes of paper and quantities.

ENGLISH AND CALCULATIONS.

See Compositors' Course.

COURSE IN ETCHING AND MEZZOTINT ENGRAVING.

The course will include Drawing on Copper and Zinc, the process of etching and printing, sand ground etching, dry point, line work, transferring, laying ground, biting plates, scraping, polishing, burnishing, linoleum block cutting, sharpening, tools, etc.

Special Day Classes.

APPRENTICE COMPOSITORS' DAY CLASSES.

The Day classes are for apprentice compositors nominated by their employers, who also attend the Evening courses. They attend one afternoon per week during printing shop hours.

The classes meet on Monday, Tuesday and Thursday afternoon from 2 to 5, the instruction following the syllabus laid down for evening classes.

DAY LINOTYPE CLASSES.

The classes meet on Monday, Tuesday, Wednesday and Thursday from 2 to 5, and are arranged to meet the needs of those who cannot attend in the evening, and also to enable any disengaged compositors to take up a course to equip them as operators.

The syllabus is the same as laid down for the evening classes.

IRISH LANGUAGE.

All Students of the Schools are entitled to attend a class in Irish if they so desire, without extra charge. Classes in the First Year only are held in the Bolton Street Institute, but more advanced students will be provided with instruction in any stage at the Technical Institute, Parnell Square.

IRISH.

FIRST YEAR.

Oral: Conversation lessons (questions, answers and general remarks) to afford each student the necessary practice to attain reasonable fluency in conversing on simple matters such as the following:—name and home or residence—salutations on meeting and parting—the clock—days of the week—months and seasons—the weather—money—easy counting—colours and other ordinary properties of common objects—location of objects in the classroom and immediate neighbourhood—parts of the body and clothing—giving and carrying out simple orders. With the conversational lessons, the student will be familiarised with the ordinary constructions in regard to the use of *is*, *seadh*, *ní headh*, *an eadh*, *nach eadh*, *gurb eadh*, *sé*, *ní hé*, *an é*, *nach é*, *gurb é*, *cad é*, *an bhfuil*, *níl*, *tá*, *go bhfuil*, *nach bhfuil*, *an raibh*, *ní raibh*, *bhí*, *go raibh*, *nach raibh*; and of some of the more commonly used verbal nouns such as *suidhe*, *seasamh*, *teacht*, *siubhal*, etc.

Written Work: Each student will keep a note-book to record salutations, simple phrases, his own name and address, etc., in correct Irish. Rough notes may also be written according to English phonetics or otherwise to aid in the memorising and pronunciation of words and phrases.

Cultural: Students will be taught to memorise simple songs, rhymes, stories, recitations, etc., so as to be able to repeat them with correct *blas*. Verses, etc., will be according to Gaelic metres, and stories or recitations by Gaelic authors.

TEXT BOOK: "AN TARB DREAC." Dr. Hyde.

Day Apprentice School.

The course covers a period of two years, during which time the students devote their whole time to the study of the trade and subjects of general education. They attend 30 hours per week, and devote, during the first year, one-third of the time to the trade theory and practice, and during the second year two-thirds.

The course includes:—

TRADE THEORY AND PRACTICE.
DRAWING AND DESIGN.
SCIENCE, AS APPLIED TO PRINTING.
ENGLISH AND IRISH.
GEOMETRY.
MATHEMATICS.

TYPOGRAPHY.

SYLLABUS.

Origin of printing and its history. Materials and appliances used—definition and care of; parts of type; a fount; characters in a fount. *Composing*: habits to acquire and avoid to ensure clean composition—rules for spacing and justifying—correcting—proof-pulling—locking-up—proof-reading and proof reader's marks—distribution—technical terms—technical calculations on the old style and on the point system—weight of types and leads—calculation of leaded matter—casting-off copy—casting up type pages, etc.—laying a fount—style of office—reporter's contractions. *Bookwork*: general principles, signatures and their uses—headlines—notes, cut in, side, foot, centre, shoulder, etc. *Display*: value of type faces—grouping—centre style—artistic, etc.—definition of the various processes in printing and its allied trades, letterpress, lithographic, intaglio. *Paper*: origin and history—principles of manufacture—qualities—sizes and sub-divisions—calculation of quantities—definition of the various methods of relief printing, wood-cut, stereo, electro, process blocks.

DRAWING AND DESIGNING.

SYLLABUS.

Simple freehand drill exercises in drawing the vertical and horizontal in conjunction with the curved line—training the hand and eye to measure, without mechanical means, proportion, distance and spaces—*Architecture*: Greek and Roman, Greek Doric, Roman Doric, Tuscan, Greek Ionic, Roman Ionic, Greek and Roman Corinthian. *Design*: proportion, symmetry, even distribution and variety of the various well-known styles, with their characteristics: Barbaric, Egyptian, Persian, Greek, Pompeian, Roman, Byzantine, Arabic, Moorish, Indian, Chinese, Celtic, Renaissance, Rococo, 18th Century. *Lettering*: various styles, ancient and modern, and their origin—designing display work to suit various styles of type design and classes of work, such as programmes, advertisements, title pages, posters, etc.—memory drawing—principles of light and shade.

SCIENCE.

SYLLABUS.

Measurement of length area, volume, mass, weight, and density—the laws of pressure of liquids and gases, with particular reference to the atmosphere—the mechanics of the lever leading to the recognition of the principle of work—study of heat, involving expansion, change of state, specific heat,

latent heat, conductivity—light and colour—metals and their alloys—composition of pigments, their interaction, permanence, etc.

As far as possible the experimental work to be illustrative of those principles of physics which bear most closely on printing.

ENGLISH.

SYLLABUS.

Reading, Grammar, Dictation, etc. : Reader for general purposes—selected descriptive sketches of particular interest—dictated passages—grammar inferred therefrom—the sentence, and its structure—punctuation—the paragraph—broad analysis—indexing—printing terms—tabulation. *Geography* : Ireland : physical features, geographical position, etc.—climatic conditions—resources (peat, coal, minerals, etc.), industries, markets—means of internal communication—sea routes—population density—outlines of Irish Local Government. *Composition* : Great Britain : Industries, etc.—railway systems, etc.—map-making—determination of distances and areas—marshalling of matter—sequence—condensation of matter—reproduction—letter writing—drafting of reports—essay structure—utilisation of trade journals. *History; Literature* : Outlines of the history of printing and of paper manufacture—biographies—choice excerpts from English literature, prose and verse—memorisation.

IRISH.

CLÁR ZAEÓILGE.

FUAMANNA FOCAL—AIMMNEACÁ RUDAÍ ATÁ LE FEICSIINT I SEOMRA NA SCOILE, AR AN ZRÁID, SAN ZCISTOIN, ZRL.—RÁIÖE ZO ÖPUII NA HAINMNEACÁ SAN IONNAC—AN CLOS—AN POSR—SIOPÁI—AIRZEAÖ—LAECEANTA IS MIÖSA—CÚRSÁI AN LAE—AN CÁIRT ; PICTIÚIRÍ CAIMNE NA ÖEAOB, CEIRTEANNA IS FREAZRAÍ—CORA CAIMNEA : IS AZUS LE : TÁ AZUS AZ ; TÁ AZUS AR ; TÁ AZUS Ó—NA BRIACRA COITCEANTA—RÁIÖTE—ÖEACZUZAÖ—AIMMNEACÁ ÖAOIMNE ; AIMMNEACÁ—ÁITCEANNA—LEABAR CUM LEZÖTEÖIREACÁ—SEANCÁS—ÁMHRÁIN ÖE ZLAN—MÉADBAIR.

PRACTICAL GEOMETRY.

SYLLABUS.

Use of instruments—T and set squares—lettering for titles, etc.—rectangular figures, angles, triangles, use of protractor—elementary constructions—simple exercises on the circle, inscribed and circumscribed figures—tangents—regular polygons—simple patterns and designs based on foregoing—similar figures and proportionals—areas of parallelograms and triangles—reduction of irregular figures to regular figures of equal area—enlarging and reduction of figures—elements of projection.

MATHEMATICS.

SYLLABUS.

Arithmetic : General calculations worked to fully accurate results—fractions—ratio and proportion—square root—commercial problems : practice bills, Interest (simple and compound), discount—mental calculations : rough estimate of values—approximations and percentage error—decimals—metric tables with conversions—contracted multiplication and division—use of log-tables and the slide-rule. *Algebra* : Use of symbols—negative quantities in addition, subtraction, multiplication and division—geometrical illustration of algebraic results—use of brackets—simple factors—equations ; simple, simultaneous and quadratic—graphical representation of an algebraic expression, and graphical solution of equations—tabulation, with explanations of the symbols generally used in mathematical and engineering text books. *Geometry* : Angles and their measurement in degrees, in circular measure, and by trigonometrical functions—construction of triangles—parallels—similar triangles—simple and duplicate ratio—properties of the circle, parabola, ellipse and hyperbola—mensuration of plane figures, rectangular solids, cylinders, spheres and cones.

