1936

Printing and Book Production: Prospectus of Courses Session 1936-37

City of Dublin Vocational Education Committee

City of Dublin
Vocational Education Committee

Scoileanna Ceárd-Oideachais
City of Dublin Technical Schools

Seirsiún
1936-37

Session
1936-37

PRINTING AND BOOK PRODUCTION
BOLTON STREET TECHNICAL INSTITUTE
PROSPECTUS OF COURSES

1936.

SEPT. 7, MONDAY	Whole-time Day Schools open for enrolment. Day Apprentice School resumes work.
SEPT. 14, MONDAY	Whole-time Day Schools commence work and Part-time Day Classes open for enrolment.
SEPT. 21, MONDAY	Evening Classes open for enrolment and Part-time Day Classes commence work.
SEPT. 28, MONDAY	Evening Classes commence work.
NOV. 1, SUNDAY	*All Saints' Day.*
DEC. 8, TUESDAY	*Feast of Immaculate Conception.* Whole-time Day Schools—excepting Day Apprentice School and Special Classes—closed.
DEC. 12, SATURDAY	Teaching work in Whole-time Day Schools ceases (excepting Day Apprentice School and Special Classes).
DEC. 14, MONDAY	Term Examinations in Whole-time Day Schools commence.
DEC. 18, FRIDAY	Schools close for Christmas Vacation.

1937.

JAN. 4, MONDAY	All Classes resume work after Christmas Vacation.
JAN. 6, WEDNESDAY	*Feast of Epiphany.* Whole-time Day Schools—excepting Day Apprentice School and Special Classes—closed.
MAR. 5, FRIDAY	Land Surveying and Levelling Course begins.
MAR. 17, WEDNESDAY	*St. Patrick's Day.* Schools closed.
MAR. 20, SATURDAY	Land Surveying Field Work begins. Motor Car Driving Lessons begin.
MAR. 23, TUESDAY	Last meeting of classes before Easter Vacation.
MAR. 31, WEDNESDAY	All classes resume work after Easter Vacation.
MAY 1, SATURDAY	Evening Classes close — excepting Special classes.
MAY 3, MONDAY	Evening Written Sessional Examinations commence (except for Special classes).
MAY 6, THURSDAY	*Ascension Day.* Whole-time Day Schools—excepting Day Apprentice School and Special Classes—closed.
MAY 17, MONDAY	*Whit-Monday.* Schools closed.
MAY 27, THURSDAY	*Feast of Corpus Christi.* Whole-time Day Schools—excepting Day Apprentice School and Special classes—closed.
JUNE 26, SATURDAY	Teaching work ceases in Whole-time Day Schools—excepting Day Apprentice School and Special classes.
JUNE 28, MONDAY	Sessional Examinations commence in Whole-time Day Schools—excepting Day Apprentice School and Special classes.
JUNE 29, TUESDAY	*Feast of Saints Peter and Paul.* Whole-time Day Schools—excepting Day Apprentice School and Special classes—closed.
JULY 3, SATURDAY	Whole-time Day Schools and Part-time Domestic Economy classes close—excepting Day Apprentice School and Special classes.
JULY 17, SATURDAY	Day Apprentice School and Special classes close.

Schools closed on all Bank Holidays not specified in above Calendar

CITY OF DUBLIN
VOCATIONAL EDUCATION COMMITTEE

COMMITTEE

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„ Mrs. M. Walsh, 16 Elgin Road.
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„ M. O'Sullivan, p.c., 74 Ballymun Road, Glasnevin.
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Mr. Michael Somerville, 1 O'Curry Road, South Circular Road.
Dr. Lorcan G. Sherlock, 21 Parliament Street.
Mr. W. J. Whelan, 35 Lower Gardiner Street.

Offices :—
Technical Institute,
Bolton Street,
Dublin.

L. E. O'Carroll, b.a., b.l.,
Chief Executive Officer.

LOCAL SUB-COMMITTEES

For triennial period 1934-37.

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Mr. W. Woods Hill, 5 Parliament Street.
Mr. M. J. O'Reilly, 31 Kenilworth Square.

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Sean O'h-Uadhaigh, 12 Dawson Street.
Liam O'Cearbhaill, 88 Manor Street.
Miss H. Chenevix, 48 Fleet Street.
Mr. J. W. Kelly, 16 St. Joseph's Parade, Nelson Street.
Mr. Bernard Moran, 7 Talbot Street.

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MR. GERALD DOYLE, 32 East Essex Street.
MR. THOS. DARCY, 91 Ceannt Fort, Mount Brown.
MR. R. MURPHY, Messrs. Hopkins and Hopkins, O'Connell Street.
MR. J. G. WILSON, 13 Sackville Place.
MR. T. A. CRAMPTON, Hammersmith Works, Ballsbridge.

PEMBROKE (Ballsbridge and Ringsend).

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L. G. SHERLOCK, LL.D., 21 Parliament Street.
REV. J. HOOKE, C.C., St. Mary's, Haddington Road.
MR. J. J. BEGGAN, c/o. McEntagart Bros., Percy Place.
PROFESSOR B. F. SHIELDS, 87 Pembroke Road.
MR. WILLIAM HANLON, 29 Home Villas, Donnybrook.

KEVIN STREET.

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MR. M. SOMERVILLE, 1 O'Curry Road, S.C.R.
REV. M. GERAGHTY, C.C., The Presbytery, High Street.
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MR. J. W. KELLY, 16 St. Joseph's Parade, Nelson Street.
MR. J. ANDREWS, B.SC., Messrs. A. Guinness, Son and Co., James's Street.

CHATHAM ROW (School of Music).

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COUNCILLOR MRS. M. WALSH, 16 Elgin Road.
COUNCILLOR M. O'SULLIVAN, 74 Ballymun Road, Glasnevin.
COUNCILLOR MRS. T. CLARKE, Baymount, 95 Clontarf Road.
MADAME KATHLEEN RODDY, Broadcasting Station, Henry Street.
MR. W. J. WHELAN, 35 Lower Gardiner Street.
MR. M. P. ROWAN, 52 Capel Street.
MR. J. T. DOYLE, Osborne Lodge, Mount Prospect Road, Dollymount.
MR. THOS. MURPHY, 16 Cowper Road.
MR. JOS. O'REILLY, 9 Lower Leeson Street.
L. G. SHERLOCK, LL.D., 21 Parliament Street.

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MR. G. THORNLEY.
MR. R. MURPHY.
MR. L. BEIRLEY.
MR. J. SHEERIN.
MR. SLEATOR.

MASTER TAILORS.

MR. E. J. MCWILLIAM.
MR. W. O'CONNOR.
MR. W. SCOTT.
MR. R. BOYD.

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GENERAL NOTICES

FEES AND REGULATIONS.

Students who cannot produce satisfactory evidence of education may be required to take an Entrance Examination. Introductory Courses are provided for those who are anxious to improve their general education.

FEES.

General Fee for Trade Courses	7/6
Students may take a Class in Irish at an additional fee of	2/6

Fees cannot be refunded.

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

The Trade Classes are primarily intended for those engaged in the several trades. Others will not be admitted before November 8th, 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 continue in a Laboratory or Workshop Class if his attendance at the Lecture or Drawing Class is unsatisfactory.

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

Students must make good any damage done by them.

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

A complete course of study in any section generally occupies about three years.

Where possible, separate classes for journeymen will be arranged in trades subjects.

SPECIAL WORK.

Arrangements will, as far as possible, be made to enable highly qualified students to carry on drawings or practical work of a special nature. Students who desire to take advantage of this privilege should make application to the Head of the Department.

SCHOOL OF PRINTING
AND
BOOK PRODUCTION

The School of Printing and Book Production 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, Phœnix Platen Machine, Heidelberg Automatic Platen; Dawson Payne S.W. Automatic Cylinder Machine, Payne's Demy Stop-Cylinder Wharfedale Machine, with face-up delivery, two Linotype Machines (one latest model), one Intertype Machine (latest model), two Monotype Keyboards and Monotype Caster, with Lead and Rule and Display Type Attachment. In the LITHOGRAPHY SECTION a Royal Folio Waite Rotary Offset Machine, Furnival Demy Flat-Bed, 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. In the BOOKBINDING SECTION the equipment consists of Wirestitching, Forwarding and Finishing in both Stationery and Letterpress Binding, and for Machine Ruling, a Treble Striker "Shaw" Machine.

TEACHING STAFF

COLM O LOCHLAINN, M.A.	*Head Master.*
W. J. FITZPATRICK	*Typography—Compositor's Work*
W. QUINN	,, *Machine Work*
P. MAHER	*Typography—Compositor's Work*
W. G. PAXTON	*Linotype and Intertpye*
J. SULLIVAN	*Monotype Keyboard*
P. McMANUS	*Monotype Caster*
G. A. WATSON	*Photographic Chemistry*
J. ROONEY	*Costing and Estimating*
C. CHAMBERLAINE	*Bookbinding and Gilding*
P. DUFFY	*Stationery Binding and Marbling*
W. L. WHELAN	*Design and Lettering*

Syllabus

A.—TYPOGRAPHY.*

1. Compositor's Work.
2. Machine Work.
3. Linotype and Intertype Work.
4. Monotype Keyboard.
5. Monotype Caster.

B.—BOOKBINDING.*

1. Stationery Binding and Marbling.
2. Letterpress Binding and Gilding.
3. General Warehouse and Stationery Work.
   (*a*) Men's Section. (*b*) Women's Section.

C.—LITHOGRAPHY.*

Transfer Work—Stone and Plate.
Machine Work—Flatbed and Offset.

D.—PHOTOGRAPHY AND BLOCKMAKING.

Pure Photography.
Photographic Chemistry.
Process Photography and Etching.
Photo Lithography.

E.—OFFICE WORK.

1. Junior Clerks and Warehousemen (Tuesday).
2. Costing and Estimating. (Monday).

F.—BOOK CRAFTS. (Wednesday).

Printing and Illustration (Methods and Processes), History and Development of Printing, Binding (Stationery, Publishers' and Library Work), Factory and Warehouse Management.

G.—PRINTING ART AND DESIGN. (Friday).

Lettering and Type Design; Commercial, Professional and Book Work; Advertising Lay-out and Copywriting; Lettering and Scribe Work.

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* NOTE.—With each of these "Practical" Classes a course in either E, F or G *must* be taken by all second year and more advanced students. Only one "Practical" Class may be attended by any one student, but a Special Course—E., F; E, G, or F, G., may also be chosen if desired, without any practical work.

COURSES AND TIME TABLES

For 1st and 2nd Year Courses in Typography see Programme for Day Apprentice Classes.

No. of Course	Subject	Day	Hour	Room	Teacher
	TYPOGRAPHY—COMPOSITORS' WORK.				
	THIRD YEAR.				
205 B	Case Work, Lecture	Mon.	7.30–9.30	A 1	P. Maher.
	Case Work, Practical	Fri.	7.30–9.30	A 1	P. Maher.
	E, F or G (see Syllabus).				
	FOURTH YEAR.				
206 B	Case Work, Lecture	Wed.	7.30–9.30	A 1	Colm O Lochlainn.
	Case Work, Practical	Mon. & Fri	7.30–9.30	A 1	Colm O Lochlainn.
	E. F. or G. (see Syllabus).				
	In Fourth Year, Linotype or Monotype Work may be taken instead of or in addition to Case Work, Practical				
	TYPOGRAPHY—MECHANICAL				
	LINOTYPE AND INTERTYPE OPERATORS' COURSE.				
	FIRST YEAR [Third Term—Mar.–May]. Intensive Course.				
210 B	Linotype and Intertype Keyboard	Mon.	7.30–9.30	A 3	W. G. Paxton
	Operating	Tues., Wed.	7.30–9.30	A 3	W. G. Paxton
	Lecture and Demonstration	Thurs.	7 30–9.30	A 3	W. G. Paxton
	SECOND YEAR [Second Term—Dec.–Feb]. Intensive Course.				
211 B	Linotype and Intertype Keyboard	Mon.	7.30–9.30	A 3	W. G. Paxton
	Operating	Tues., Wed.	7.30–9.30	A 3	W. G. Paxton
	Lecture and Demonstration	Thurs.	7.30–9.30	A 3	W. G. Paxton
	THIRD YEAR [First Term—Sept. to Dec.].				
	Intensive Practical Course	Mon., Tu., Wed.	7.30–9.30	A 3	W. G. Paxton
212 B	Lecture and Demonstration	Thurs.	7.30–9.30	A 3	W. G. Paxton
	MONOTYPE OPERATORS' COURSE.				
	FIRST YEAR.				
215 B	Monotype, Keyboard Mechanism	Fri.	7.30–9.30	A 3	J. Sullivan.
	Monotype, Keyboard Operating	Mon., Tues.	7.30–9.30	A 3	J. Sullivan.
	E, F or G (see Syllabus).				
	SECOND YEAR.				
216 B	Monotype, Keyboard Mechanism	Fri.	7.30–9.30	A 3	J. Sullivan.
	Monotype, Keyboard Operating	Mon., Tues.	7.30–9.30	A 3	J. Sullivan.
	E, F or G (see Syllabus).				
	THIRD YEAR.				
217 B	Monotype, Keyboard Mechanism	Fri.	7.30–9.30	A 3	J. Sullivan.
	Monotype, Keyboard Operating	Tues.	7.30–9.30	A 3	J. Sullivan.
	E, F or G (see Syllabus).				

Students may add a Class in Monotype Casting.

No. of Course	Subject	Day	Hour	Room	Teacher
	MONOTYPE CASTERS' COURSE.				
218 B	Practical Operating	Tues.	7.30–9.30	A 3	P. McManus.
	Caster Mechanism	Thurs.	7.30–9.30	A 3	P. McManus.
	E, F or G (see Syllabus).				
	LETTERPRESS MACHINE WORK.				
	THIRD YEAR.				
223 B	Machine Work, Lecture	Fri.	7.30–9.30	A 3	W. Quinn.
	Machine Work, Practical	Tues.	7.30–9.30	A 3	W. Quinn.
	E. F. or G. (see Syllabus)				
	FOURTH YEAR				
224 B	Machine Work, Lecture	Tues.	7.30–9.30	A 3	W. Quinn.
	Machine Work, Practical	Fri.	7.30–9.30	A 3	W. Quinn.
	E, F or G (see Syllabus).				
	BOOKBINDING.				
225 B	Stationery Binding and Marbling	Mon. & Fri.	7.30–9.30	A 9	P. Duffy.
	Letterpress Binding and Gilding	Mon. & Fri.	7.30–9.30	A 9	C. Chamberlaine.
	General Warehouse Work:				
	Men	Tues.	7.30–9.30	A 9	C. Chamberlaine.
	Women	Thur.	7.30–9.30	A 9	C. Chamberlaine.
	Drawing for Bookbinders	Wed		B 24	
	LITHOGRAPHY AND PHOTO-LITHO.				
226 B	Theory and Practice	Tue. & Thur.		A 2	——
	Drawing for Lithographers	Wed.		B 24	
	PHOTOGRAPHY				
	FIRST YEAR.				
227 B	Pure Photography	Tues.	7.30–9.30	A 11	——
	*Photographic Chemistry	Thurs.	7.30–9.30	25*	G. A. Watson.
	SECOND YEAR.				
228 B	Pure Photography		7.30–9.30	A 11	——
	THIRD YEAR.				
229 B	Pure Photography		7.30–9.30	A 11	——
	PROCESS PHOTOGRAPHY AND ETCHING.				
	FIRST YEAR.				
230 B	Line and Half-tone Camera Work	Mon.	7.30–9.30		——
	Etching and Finishing	Fri.	7.30–9.30		——
	*Photographic Chemistry	Thurs.	7.30–9.30	25*	G. A. Watson
	SECOND YEAR.				
231 B	Photo Lithography	Mon.	7.30–9.30		——
	Three-colour Process Work	Fri.	7.30–9.30		——
	SPECIAL COURSES.				
E	1 Junior Order Clerks, etc.	Tues.	7.30–9.30	A 1	J. Rooney.
	2 Costing and Estimating	Mon.	7.30–9.30	A 1	J. Rooney.
F	Book Crafts	Wed.	7.30–9.30	A 1	Colm O Lochlainn.
G	Printing Design and Layout; Lettering and Scribe Work	Fri.	7.30–9.30	B 24	
	Drawing for Bookbinders and Lithographers	Wed.	7.30–9.30	B 24	——
	SPECIAL CLASSES IN IRISH.				
	Irish—I.A.	Mon.	7.30–9.30	B 1	D. S. MacEoin.
	Irish—I.B.	Thurs.	7.30–9.30	B 1	D. S. MacEoin.

* Class held at Kevin Street Technical Institute.

SYLLABUS OF COURSES

The training of first and second year students in Compositors' work and Letterpress Machine work is provided under the Day Apprentice Training Scheme, for which see separate Prospectus.

THIRD YEAR COURSE IN

TYPOGRAPHY—COMPOSITORS' WORK

Subjects:

CASE WORK, LECTURE.

CASE WORK, PRACTICAL.

E, F OR G (see p. 7).

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.

FOURTH YEAR COURSE IN

TYPOGRAPHY—COMPOSITORS' WORK

Subjects:

CASE WORK, LECTURE.

CASE WORK, PRACTICAL.

or MECHANICAL COMPOSITION.

E, F OR G (see p. 7).

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 letter press 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 AND INTERTYPE WORK

Subjects:

LINOTYPE AND INTERTYPE MECHANISM.

LINOTYPE AND INTERTYPE KEYBOARD OPERATING.

E, F *or* G (see p. 7).

LINOTYPE AND INTERTYPE 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 AND INTERTYPE 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.

SECOND YEAR COURSE IN

LINOTYPE AND INTERTYPE WORK

Subjects:

Linotype and Intertype Mechanism.

Linotype and Intertype Keyboard Operating.

E, F *or* G (see p. 7).

LINOTYPE AND INTERTYPE 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 AND INTERTYPE 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. Instruction on the mechanism while the machine is in operation.

THIRD YEAR COURSE IN

LINOTYPE AND INTERTYPE WORK

Subjects:

Linotype and Intertype Mechanism.

Linotype and Intertype Keyboard Operating.

E, F *or* G (see p. 7).

LINOTYPE AND INTERTYPE 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 AND INTERTYPE 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. Instruction on the mechanism while the machine is in operation.

Day Linotype and Intertype 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.

FIRST YEAR COURSE IN

MONOTYPE OPERATING

Subjects:

KEYBOARD MECHANISM.

PRACTICAL OPERATING.

E, F OR G (see p. 7).

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.

SECOND YEAR COURSE IN

MONOTYPE OPERATING

Subjects:

KEYBOARD MECHANISM.

PRACTICAL OPERATING.

E, F OR G (see p. 7).

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.

THIRD YEAR COURSE IN

MONOTYPE OPERATING

Subjects:

KEYBOARD MECHANISM.

PRACTICAL OPERATING.

E, F OR G (see p. 7).

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.

MONOTYPE CASTER

Subjects:

CASTER MECHANISM.

CASTER OPERATING.

E, F OR G (see p. 7).

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, also Lead and Rule and Display Type Attachment.

PRACTICAL OPERATING.

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

The training of first and second year students in Compositors' Work and Letterpress Machine Work is provided under the Day Apprentice Training Scheme, for which see separate prospectus.

THIRD YEAR COURSE IN

TYPOGRAPHY—MACHINISTS' WORK

Subjects:

MACHINE WORK, LECTURE.

MACHINE WORK, PRACTICAL.

E, F OR G (see p. 7).

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.

FOURTH YEAR COURSE IN

TYPOGRAPHY—MACHINISTS' WORK

Subjects:

MACHINE WORK, LECTURE.

MACHINE WORK, PRACTICAL.

E, F OR G (see p. 7).

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.

LITHOGRAPHY

LITHOGRAPHY, THEORY AND PRACTICE.

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, nature 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—composition of transfer inks and papers—doctoring work—bronzing—transposing.

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—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.

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 damping, 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.

ART WORK FOR PRINTING TRADES

The work will consist of graduated lessons in Drawing and Art suitable for all students of the book-producing trades, including printing, lithography, bookbinding, and photo-mechanical processes.

Drawing and Designing for Compositors

Freehand 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.

Second Year.

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

Design and Composition for Bookbinders and Lithographers

Freehand drawing—use of instruments—geometrical patterns and designs—designing to fill given spaces, triangle, border, spandril, lunette, palister, panel—surface design and repeating patterns, composed of straight lines, geometric, interlacing, scroll work and floral ornament—designs in the Celtic style—designing simple arrangements of tools for backs of half-bound books—designing backs, sides and lettering panels for hand tooling.

Lettering and ornament, drawing of figure details in light and shade, drawing the human figure in black and white and colour, drapery and costume, the preparation of designs for posters, show-cards, catalogue covers, calendars, labels, etc., and the study of colour harmonies from the point of view of their effectiveness for advertisements.

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-PROCESS 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, bromide 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.

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, autochrome, Paget, etc.—the wet collection process—scientific and technical uses of photography—photo-micrography—telephotography—photography by flash-light 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.

PROCESS PHOTOGRAPHY AND ETCHING.

(A) LINE BLOCK-MAKING.

Types of suitable originals. Effect of Chinese and process whites. Lamps employed for illuminating the original. The process camera. Methods of making line negatives.

(a) Dry plate negatives.
(b) Paper negatives.
(c) Wet collodion negatives.

The wet collodion process treated in detail, including a knowledge of the various methods of reduction and intensification, the use of masks for duplicate exposures, stripping of negatives. Metal printing by the albumen method. Tint laying. Reversing. Line etching by rolling up and Dragon's Blood methods. Routing and mounting. Pulling the proof.

(B) HALF-TONE BLOCK-MAKING.

Suitability of various types of originals for reproduction. Necessity for "working-up." Effect of Chinese and other whites and sepias.

The half-tone screen, its properties, how it translates continuous tone to dots of varying sizes. The effect of flashing on graduation.

Lenses and prisms for process work and their optical properties. Methods of finding and controlling screen distance, lens aperture and exposure.

The making of screen negatives by dry plates and wet collodion plates. Metal printing by "fish glue" method and "cold top" enamel. Half-tone etching of zinc and copper plates.

Fine etching. Relations of tones of original and reproduction without fine etching. Deep etching for newspaper work. Combination line and tone work.

Mounting and proving.

(C) PHOTO-LITHOGRAPHY.

Line and high-light screen negative making by wet plate and dry plate. Indirect and direct methods. Use of "irregular grain" screens. Principles of step and repeat work.

Preparation of negatives for printing down, varnishing, lining up. Use of air brush. Use of shading "mediums" on screen negatives.

Zinc and aluminium plates, outline of manufacture and recognition of defects. Gauge of plates. Reason for graining and practical use of different graining materials. Grain required for different kinds of work. Storage of plates and use of "passing bath."

Coating and printing down. Relation between lamp distance and light distribution, and their effects on exposure. Duplicating work on the plate and securing register, including a knowledge of different types of printing frame. Developing the plate. Additions and alterations, including use of shading mediums. Rolling-up and the use and action of litho etches, gum, etc. Making additions after rolling-up.

Vandyke, "offset deep" and other positive reversal processes.

(D) THREE-COLOUR METHODS, INCLUDING THREE-COLOUR HALF-TONE BLOCK-MAKING.

The method of reproduction in three and four printings by the direct half-tone process.

Suitable types of original.

Characters of the light of electric lamps. Half-tone screens for three-colour work and the orientations of their rulings.

Lenses suitable for the process. Colour filters, their construction and optical properties, especially the coloured light transmitted and their effects on the definition of the image.

The operations of making the negatives, metal prints, and colour etching. Mounting and proving the blocks.

Relation of the light photographed to the light reflected by the inks.

Relation of actual inks to theoretical requirements. Fastness of inks.

Screen plate processes such as Autochrome and Paget. Colours used in these as primaries.

The application of the three-colour method to other photo-engraving processes.

Printing Art and Design

History and origin of lettering. Styles of Alphabets, their spacing and disposal in given sizes.

Elementary principles of ornament, elementary drawing and design.

Drawing for reproduction by different methods. Explanation of methods and the importance of good originals.

Colour and its uses. Harmony and contrast, black-and-white key-drawings and colour sketches.

Retouching of photos and making of composites and utilisation of camera work.

Commercial headings and stationery. Value of standard design. Trade marks and devices. Printers' marks. Humour.

Drawing for bookwork. Illustrations. Line and colour. Chapter heads. Initials. Running heads. Head and tail pieces. Zincos for cover blocking or printing.

Book jackets and show cards. Cut-outs for display. Utilization of jacket as poster or showcard.

Advertising: Importance to industry. Promoting of trade. Who pays for advertising? Co-operation between advertising and sales department.

Various kinds of advertising: News, direct mail, poster, show-card, folder, catalogue, leaflet, stamp, and their value.

Copy. Convincing English. How to discover selling points. Appeal to various minds. The buyer's point of view. Head line. Catch line. Spot of colour. General to particular.

What an advertising man must know of printing, type, blocks, and different processes, and those used by the papers or printers selected.

Design and layout. Fundamental principles. Contrast, proportion and balance, tone harmony, shape harmony, style harmony. Suiting style to class of goods and method of printing. First impressions.

Complete campaigns. Examples:—Guinness, Pears Soap, etc.

Lettering and Scribe Work

Alphabets and their origin; Roman, Gothic, Gaelic and Italic Script; proportion and balance in alphabet design; weight and colour of lettering; design of handlettered pages; use of initials, outline letters and special shapes; ornament and its relation to lettering; lettering as the basis of typographical design.

The scribe and his materials, ancient and modern; use of quill pen, reed pen and modern steel pens; ink and colour; harmony and contrast; paper, vellum and other fabrics; advertising alphabets; handwriting in advertisements; show cards and window bills; hand-written posters, etc.

(C) PHOTO-LITHOGRAPHY.

Line and high-light screen negative making by wet plate and dry plate. Indirect and direct methods. Use of "irregular grain" screens. Principles of step and repeat work.

Preparation of negatives for printing down, varnishing, lining up. Use of air brush. Use of shading "mediums" on screen negatives.

Zinc and aluminium plates, outline of manufacture and recognition of defects. Gauge of plates. Reason for graining and practical use of different graining materials. Grain required for different kinds of work. Storage of plates and use of "passing bath."

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Vandyke, "offset deep" and other positive reversal processes.

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The scribe and his materials, ancient and modern; use of quill pen, reed pen and modern steel pens; ink and colour; harmony and contrast; paper, vellum and other fabrics; advertising alphabets; handwriting in advertisements; show cards and window bills; hand-written posters, etc.

Bookbinding Department

STATIONERY BINDING AND MARBLING.

The description of tools; technical terms, materials and appliances used in stationery work; the weights, sizes, and wire gauges of millboards and strawboards; joint and end papers; styles of sewing; flush and turned-in binding; cloths and fabrics; account books; leaf skeleton guard books; portfolios; loose-leaf ledger binding; vowel and proportionate indices; tight and open back; lettering and finishing account books; lettering pieces; loose covers.

MARBLING.—Preparation and use of marbling trough. Colours, combs, rake, brushes, etc. Instruction in the various designs and patterns in general use. Edge and sheet marbling; theory and practice.

LETTERPRESS BINDING AND GILDING.

Sewing for various styles. Rounding and backing; boarding lacing in; forwarding and cloth case-making; cut sizes; book cutting; book-edge gilding; binding fancy leather work; banded work; library binding; repair work; vamping, etc.; the function and utility of the finisher's work; the character of the various leathers and preparatory treatment for tooling them; treatment of cloth, silk, etc., for tooling.

Gold leaf as a medium for book decoration, and its character and use. Gold leaf substitutes and imitations.

The various tools used for book finishing, and correct methods for handling them; the degree of moisture in the materials, in conjunction with the heat required for tooling; cleaning of the gold. The tooling of leather without the use of gold. Planning and spacing for hand lettering on back and sides of book. The method of using type on the backs. The handling and use of fillets, rolls, pyllets, gouges and other tools. The various methods of inlaying. The practical application and principles of design, as dealt with theoretically; the planning and building up of ornament, and limitations imposed by technicalities.

General Warehouse and Stationery Work

WOMEN'S SECTION.

Technical terms; section; endorse and simple sheet folding; paper sizes and sub-divisions of paper; styles of sewing; wire stitching; numbering; hand sewing; thread stitching; feeding ruling machines; gathering; interleaving; manifold work; perforating. Adjustment of Brehmer thread sewing machine.

Making up account and letterpress work; standard sizes of paper; qualities and weights; plating; imperfections in print; guard book work; holing and eyeletting; gumming; folding impositions; guarding plates; making up duplicate and triplicate work; other miscellaneous details of work; calendar and show card work, etc.

Die stamping, plain, colour and gold; leaf and skeleton post albums; pattern book making; method of obtaining the correct setting for folding to print; mechanism of numbering, sewing, thread and wire-stitching machines, and also methods of adjustments; French tape, string and sewing through mull by machine; magazine and catalogue work; paper-slitting by hand; folioing; paging; box, register, and sheet numbering; taping before and after sewing; flat and saddle thread and wire stitching machines; gold laying on.

Departmental management, inclusive of elementary costing and estimating, and all subjects incidental and relating thereto.

General Warehouse and Stationery Work

MEN'S SECTION.

Handling and care of paper; counting and tying up reams; holing, eyeletting and stringing; mill numbers; paper sizes; section and sheet folding by hand; wire stitching; perforating; paper terminology; water marks; sizes of cards; browns and wrappings; gathering and collating; packing and labelling; stringing of new year calendars, mottoes, etc.

Keeping stock, classes of papers; equivalent weights of paper; judging and testing paper; imperfections in print and how they affect the folder; giving paper out to the printer, ruler and binder, and what percentage of overs to allow; weights of paper suitable for book production; classes of papers; exercises on giving out paper; the position of the print for machine folding; cut sizes for bookwork; general knowledge of the various warehouse machines; magazine and catalogue work.

Construction of and setting the wire-stitching machine; flat paper cutting; fixing knives in self-clamp guillotine cutting machines; impositions; setting and adjusting folding machines, thread-sewing machines, eyeletting, round-cornering, and holing machines; perforating machines; board cutting; board bevelling, and miscellaneous practice.

Order Clerks and Junior Employees

TYPE.—Hand and mechanical composition; size, face and weight of type; "casting up" and "casting off," display work and proof correcting.

MACHINING.—What the operation involves; types of machines; average output and estimating information for different classes of work.

ILLUSTRATIONS.—Different methods of reproducing photographs, wash-drawings, pen and ink sketches and coloured originals to print upon different grades of paper; reduction and enlargement.

INK.—Selection; varieties; double-tone, copyable, dryers; gold, silver, aluminium and bronze printing.

COLOUR PRINTING.—Its principles and possibilities; how to take an order for three-colour work and put it through the departments.

PAPER.—Size; weight; numerous qualities; characteristics; defects; its special uses, etc.

BINDING.—How to order account books; trade terms; ledger papers; ruling; marbling; letterpress binding, including leathers.

LITHOGRAPHY.—Commercial offset, and chromo-lithography.

WAREHOUSEWORK.—In all details, approximate times for operations and general information as to what they entail; dispatch.

Costing and Estimating

Definition of cost—fallacy of using a "flat" percentage on wages, or on wages and material combined—the chief objects of correct costing—the essentials of a proper costing system—the value of the adoption of uniform methods of costing by the printing industry.

The main principles of the Federation Costing System—capital: its various forms and their bearing on cost—inventories of plant value and their relationship to "working" value—depreciation—the importance of keeping a plant record.

Preparation of the statement of expenses—the necessity for and the value of departmentalisation of expenses—sub-divisions of departments—allocation of expenses, the methods to be applied—multiple businesses; how treated—the method of recovering the indirect (overhead) expenses—the effect of the percentage method on the "direct departmental cost."

Handling charges on material and outwork—how found and applied—records of stock and of amounts charged to orders.

Why time expended, and not wages paid, is used as the basis of cost recovery—the meaning of the terms "chargeable" and "non-chargeable."

Hourly cost rates: how found and applied—reasons for using inclusive hourly rates—why some operations (*e.g., reading*) are recovered indirectly.

Explanations of the various forms and their place in the Federation Costing System—the importance of correct time-recording and the necessity for care by cost clerks in the transference of time to the various costing forms.

The individual cost sheet: responsibility of cost clerk for details of labour, materials, etc., and the question of economic cost.

Descriptions of essential books of accounts—analysis of expenses—analysis of sales.

The uses to which the management may apply the information provided by the statistics on Forms 3 and 4, and the cost sheet—the use of graphs.

The relationship between costing and estimating—the necessity for comparison by departments as well as by total of *estimated* cost with *actual* cost.

Office and factory organisation and terms in use.

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Office and factory organisation and terms in use.

SPECIAL CLASSES

IRISH LANGUAGE

FIRST YEAR.

ORAL: Conversation lessons on simple matters such as the following:—Name, home or residence, salutations, the clock, days of the week, months and seasons, the weather, money, easy counting, colours, etc. Location of objects in the classroom and neighbourhood, parts of the body and clothing, giving and carrying out simple orders. With the conversational lessons, the student will be familiarised with the use of *is* and *tá* and of verbal nouns.

WRITTEN WORK: Each student will keep a note-book to record the salutations, phrases, etc., in correct Irish.

CULTURAL: Memorising of simple songs, rhymes, stories, etc., so as to be able to repeat them with correct *blas*. Stories and recitations by Gaelic authors.

GENERAL CURRICULUM OF THE SCHOOLS

UNDER THE CONTROL OF

THE CITY OF DUBLIN VOCATIONAL EDUCATION COMMITTEE.

BOLTON STREET TECHNICAL SCHOOL

Mechanical Engineering.
Motor Car Engineering.
Gas Engineering.
Metal Plate Work.
Brass Finishing.
Building Science.
Building and Allied Trades.
Printing and Book Production.
Watchmaking.
Art and Art Crafts.

Day Apprentice and specialised Daytime Technical Courses.
Day Junior Technical School.

KEVIN STREET TECHNICAL INSTITUTE

Pure and Applied Mathematics.
Pure and Applied Physics.
Pure and Applied Chemistry.
Bacteriology.
Pharmacy.
Electrical Engineering and Allied Trades.
Radio-Telegraphy.
Art and Art Crafts.
Domestic Science and Housecraft.
Bootmaking.
Hairdressing.
Tailoring.

PARNELL SQUARE TECHNICAL INSTITUTE

General Commercial Subjects.
Accountancy and Allied Subjects.
Local Government.
Domestic Science and Housecraft.
Languages.
Retail Distribution.
Transport.
Day Trade Classes:—
Dressmaking.
Shirtmaking (Power).
Cloth Manufacture (Power).
Chefs' Training Course.

Day School of Commerce.

PEMBROKE TECHNICAL INSTITUTE (Ringsend and Ballsbridge)

General Commercial Subjects.
Retail Distribution.
Languages.
Domestic Science and Housecraft.
Art and Art Crafts.
Mechanical Engineering.
Motor Car Engineering.
Oxy-Acetylene Welding.
Building Trades.

Day School of Commerce.
Day Junior Technical School.

RATHMINES TECHNICAL INSTITUTE

General Commercial Subjects.
Accountancy, Auditing and Allied Subjects.
Insurance.
Advertising and Publicity.
Banking, Finance and Foreign Exchange.
Company Secretaries.
Government Accountancy & Finance.
Languages.
Domestic Science and Housecraft.

Day School of Commerce.

CHATHAM ROW SCHOOL OF MUSIC (Day and Evening Classes)

Pianoforte.
Violoncello.
Uileann and Irish War Pipes.
Elocution.
Violin.
Singing and Choir.
Wind Instruments (Wood & Brass).
Fifes.
Viola.
Orchestra.
Drums and Flute.
Traditional Music.

WM. WARREN & SON, PRINTERS, 15 LOWER ORMOND QUAY, DUBLIN.