

1940

## Printing and Book Production: Prospectus , 1940-41

City of Dublin Vocational Education committee

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City of Dublin Vocational Education Committee

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SCOILEANNA CEÁRD-OIDEACÁIS  
City of Dublin Technical Schools

Seirín 1940-41



BOLTON STREET

PROSPECTUS OF COURSES

PRINTING AND BOOK PRODUCTION

## CALENDAR—SESSION 1940-41

1940—SEPT 2, MONDAY	Whole-time Day Schools open for enrolment, and Day Apprentice School resumes work.
SEPT. 9, MONDAY	Part-time Day Classes open for enrolment, and Whole-time Day Schools commence work.
SEPT. 16, MONDAY	Evening classes open for enrolment and Part-time Day classes commence work.
SEPT. 23, MONDAY	Evening classes commence work.
NOV. 1, FRIDAY	<i>All Saints' Day.</i> Whole-time Day Schools—excepting Day Apprentice School and Special classes—closed.
DEC. 8, SUNDAY	<i>Feast of Immaculate Conception.</i>
DEC. 14, SATURDAY	Teaching work in Whole-time Day Schools ceases—excepting Day Apprentice School and Special classes.
DEC. 16, MONDAY	Term Examinations in Whole-time Day Schools commence.
DEC. 21, SATURDAY	Last meeting of classes before Christmas Vacation.
1941—JAN. 7, TUESDAY	All classes resume work after Christmas Vacation.
MAR. 17, MONDAY	<i>St. Patrick's Day.</i>
APR. 8, TUESDAY	Last meeting of Day and Evening classes before Easter Vacation.
APR. 16, WEDNESDAY	All classes resume work after Easter Vacation.
MAY 2, FRIDAY	Evening classes close—excepting where otherwise arranged.
MAY 22, THURSDAY	<i>Ascension Day.</i> Whole-time Day Schools—excepting Day Apprentice School and Special classes—closed.
JUNE 2, MONDAY	<i>Whit-Monday.</i> Schools closed.
JUNE 12, THURSDAY	<i>Feast of Corpus Christi.</i> Whole-time Day Schools—excepting Day Apprentice School and Special classes closed.
JUNE 21, SATURDAY	Teaching work ceases in Whole-time Day Schools excepting Day Apprentice School and Special classes.
JUNE 23, MONDAY	Sessional Examinations commence in Whole-time Day Schools excepting Day Apprentice School and Special classes.
JUNE 28, SATURDAY	Whole-time Day Schools and Part-time Domestic Economy classes close—excepting Day Apprentice School and Special classes.
JUNE 29, SUNDAY	<i>Feast of Saints Peter and Paul.</i>
JULY 12, SATURDAY	Day Apprentice School and other classes close excepting where otherwise arranged.

Schools closed on all Bank Holidays not specified in above Calendar.

## GENERAL NOTICES

### CITY OF DUBLIN

## VOCATIONAL EDUCATION COMMITTEE

#### Offices:

THE TECHNICAL INSTITUTE,  
BOLTON STREET, DUBLIN.

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*Chief Executive Officer.*

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The Rt. Hon. Councillor Mrs. K. CLARKE, Lord Mayor, Mansion House.  
Senator D. D. HEALY, T.C., P.C., 40 Usher's Quay.  
Councillor Mrs. M. COSGRAVE, LL.A., 17 Park Drive, Cowper Gardens.  
" P. BELTON, T.D. Bellevue Park, Killiney.  
" J. J. BYRNE, B.A., B.L., 60 Talbot Street.  
" FINTAN BURKE, 4 Wilfield Road, Ballsbridge.  
Miss HELENA MOLONY, 48 Fleet Street.  
MICHEAL O'FOGHLUDHA, 5 Cabra Road.  
Mr. M. P. ROWAN, 52 Capel Street.  
Dr. LORCAN G. SHERLOCK, 18 Kildare Street.  
Mr. W. J. WHELAN, 35 Lower Gardiner Street.  
Mr. M. COLGAN, 44 Lt. Gardiner Street

### LOCAL SUB-COMMITTEE, BOLTON STREET

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Mr. R. MURPHY, Messrs Hopkins and Hopkins, O'Connell Street.  
Mr. M. P. ROWAN, 52 Capel Street.  
Mr. W. J. WHELAN, 35 Lower Gardiner Street.  
Senator SEAN CAMPBELL, 35 Lower Gardiner Street.  
Mr. GERALD DOYLE, 32 East Essex Street.  
Mr. THOS. DARCY, 91 Ceannt Fort, Mount Brown.  
Mr. J. G. WILSON, 13 Sackville Place.  
Mr. T. A. CRAMPTON, Hammersmith Works, Ballsbridge.

### PRINTING TRADES ADVISORY SUB-COMMITTEE

Mr. F. LOWE.	Senator S. CAMPBELL.
Mr. I. ROBERTSON.	Mr. W. J. WHELAN.
Mr. J. WARREN.	Mr. M. COLGAN.
Mr. J. G. WILSON.	Mr. M. L. BRADY.
Mr. A. NOLAN.	Mr. E. HEALY.
Mr. A. J. WILSON.	Mr. T. LYNHAM.
	Mr. F. MCCANN.

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## GENERAL NOTICES

*Enrolment.*—The Evening Session opens on Monday, 16th September, 1940, when teachers will be present to advise applicants regarding suitable Courses of Study and to certify Entrance Forms.

The Linotype and Intertype students will be enrolled on Monday, Tuesday and Wednesday evenings, 9th, 10th and 11th September. They will be divided according to seniority and previous attendance into groups, each to be given a period of intensive training. The senior group will start work on Tuesday, 17th September, four evenings per week.

*Arrangement of Classes.*—Each student must present a *Class Ticket* before admission to a class. This ticket will be issued immediately on payment of fee.

The opening of a class will depend on the enrolment of a sufficient number of students. A class may be discontinued at any time should the attendance fall below the number necessary to justify its continuance, and the number of evenings allotted weekly to a class may be reduced if there be a falling away in the attendance.

The name of a student who has been absent from three successive class meetings may be removed from the Register unless a note of explanation has been sent.

Students are required to come provided with a note-book and pencil or with such drawing instruments or other requisites as may be necessary for the work of the class.

*Discipline.*—Strict order must be observed at all times in the precincts of the School. Students must make good any damage done by them to School property.

*Student's Property.*—The Vocational Education Committee do not accept responsibility for loss or damage to any property—bicycles, coats, hats, books, etc.—brought to the School by students.

*Damage to Person.*—The Committee do not accept responsibility for injury to a student resulting from the student's personal neglect or disregard of the Regulations laid down for the conduct of the operations in the workshops or laboratories.

# SCHOOL OF PRINTING

AND

## BOOK PRODUCTION

Technical School, Bolton Street

The trade classes are reserved for those engaged in the respective trades. A Trade class may only be taken in conjunction with an approved Lecture or Drawing class. A student will not be permitted to continue in a Trade class if his attendance at the Lecture or Drawing class is unsatisfactory.

The Courses as set forth are suitable for students desirous of presenting themselves for the official Public Examinations in Typography and kindred subjects.

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

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

### *Fees per Session.*

	s.	d.
'General Courses or' Single Subjects ...	7	6
Additional Subjects ...	2	6
Irish ...	No extra charge	

# LIST OF COURSES

## A.—TYPOGRAPHY\*

Compositors' Work	...	...	...	1—4
Linotype and Intertype Operating	...	...	...	5—7
Linotype and Intertype Mechanism	...	...	...	8
Monotype Keyboard	...	...	...	9—12
Monotype Caster	...	...	...	13—14
Press, Platen and Machine Work	...	...	...	15—18

## B.—BOOKBINDING\*

Stationery Binding and Marbling	...	...	...	19
Letterpress Binding and Gilding	...	...	...	20
Warehouse and Stationery Work	...	...	...	21—22

## C.—PHOTOGRAPHY AND BLOCKMAKING

Pure Photography	...	...	...	23—24
Photographic Chemistry	...	...	...	25
Line and half-tone blockmaking	...	...	...	26
Three-colour process work	...	...	...	27

## D.—LITHOGRAPHY\*

Lithography—Theory and Practice	...	...	...	28
Photo-Lithography	...	...	...	29

## E.—OFFICE WORK.

Junior Clerical and Warehouse work	...	...	...	30
Costing and Estimating	...	...	...	31

## F.—ART AND DESIGN.

Design for Bookbinders	...	...	...	32
Advertising Design, Lettering, &c.	...	...	...	33

## G.—BOOK CRAFTS.

Modern Typography : Bookwork and Display	...	...	...	34
Methods and Processes of Illustration	...	...	...	
Binding (Stationery, Publishers' and Library Work).	...	...	...	

## H.—IRISH

...	...	...	...	35
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\*NOTE.—With each of these "Practical" Classes a course in Irish *must* be taken by all Third and Fourth year students. Only one "Practical" Class may be attended by any one student, but a Special Course may also be chosen if desired from those lettered E to H. The lectures in G, Book Crafts will be supplemental to the Theory for Fourth and Fifth year Compositors and for Bookbinders.



## TEACHING STAFF

COLM O LOCHLAINN, M.A. ... .. *Head Master.*

W. J. FITZPATRICK

~~C. CHAMBERLAINE~~

W. R. QUINN

R. WILSON

C. J. TIMMINS

J. ROONEY

P. MAHER

W. L. WHELAN

*C. J. McCULLAGH*

~~W. J. KEIRAN~~

J. F. KEARNS

J. L. SULLIVAN

F. NOLAN, M.Sc.

P. MACMANUS

P. O RIAIN

## EQUIPMENT

LETTERPRESS SECTION; in addition to full range of modern type and up-to-date equipment for Compositors, there is installed a "Pony" Miehle Machine, Phœnix, Arab and Favourite Platen Machines, Heidelberg Automatic Platen; Dawson Payne S.W. Automatic Cylinder Machine, Demy Wharfedale, two Linotype Machines, one Intertype Machine (latest model), two Monotype Keyboards and Monotype Caster, with Lead and Rule and Display Type attachment.

LITHOGRAPHY SECTION; Royal Folio Waite Rotary Offset Machine, four transfer presses and copper-plate press.

PHOTOGRAPHY and PHOTO-MECHANICAL SECTION; four 12" x 10" Cameras for line, half-tone and colour work; Levy Acid Blast Etching Machine and three-bath power-rocking apparatus; Royle Routing Machine and Power Beveller, six powerful arc lamps, special plant for copying, enlarging, and photo-micrography.

BOOKBINDING SECTION; Camco Folding Machine, Brehmer Thread Sewing Machine, and the usual appliances for Forwarding and Finishing in both Stationery and Letterpress Binding, and a Treble Striker "Shaw" Ruling Machine.

COURSES AND TIME TABLES

PROGRAMME AND TIME TABLE

of the

SCHOOL OF PRINTING AND BOOK PRODUCTION

Technical School, Bolton Street

The Classes in Typography here listed are for advanced students and apprentices of third and subsequent years. For Syllabus of the Day Apprentice School for junior apprentices see page 23.

# COURSES AND TIME TABLES

No. of Course	SUBJECT	Day	Hour	Room	TEACHER	Syllabus No.
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## TYPOGRAPHY—CASE ROOM.

THIRD YEAR.						
205 B	Book and Magazine Work	Mon.	Tues 7.30-9.30	A 1	P. Maher.	1
	Book and Magazine Work	Thurs.	Fri. 7.30-9.30	A 1	P. Maher.	2
	Irish .. .. .	Wed.	7.30-9.30	A 2	P. O'Rlain.	36
FOURTH YEAR.						
206 B	Advanced Display .. .. .	Tues.	Mon 7.30-9.30	A 1	C. McCullagh	3
	Advanced Display .. .. .	Fri.	Thurs 7.30-9.30	A 1	C. McCullagh	4
	Irish .. .. .	Wed.	7.30-9.30	A 2	P. O'Rlain	36

## TYPOGRAPHY—MECHANICAL. *B24*

In Fifth Year, Linotype or Monotype Work may be taken instead of or in addition to Case Work, Practical, provided the pupil has an attendance of 75% at the evening classes for Third and Fourth Year Course.

Early application is essential. Certificate of attendance must be produced.

## LINOTYPE AND INTERTYPE OPERATORS' COURSE.

FIRST YEAR [First Term—Mar.—May].						
Intensive Course.						
210 B	Linotype and Intertype Operating—I. .. .. .	Tu., Wed., Th.	7.30-9.30	A 2	J. F. Kearns	5
	Lecture and Demonstration—I. ..	Fri. ..	7.30-9.30	A 2	J. F. Kearns	8
SECOND YEAR [Second Term—Dec.—Feb].						
Intensive Course.						
211 B	Linotype and Intertype Operating—II. .. .. .	Tu. W., Thu.	7.30-9.30	A 2	J. F. Kearns	6
	Lecture and Demonstration—II. ..	Fri. ..	7.30-9.30	A 2	J. F. Kearns	8
THIRD YEAR [First Term—Sept. to Dec.].						
	Intensive Practical Course—III. ..	Tu., Wed., Th.	7.30-9.30	A 2	J. F. Kearns	7
212 B	Lecture and Demonstration—III. ..	Fri. ..	7.30-9.30	A 2	J. F. Kearns	8

## MONOTYPE OPERATORS' COURSE.

FIRST YEAR.						
215 B	Monotype, Keyboard Operating—I. ..	Thurs., Fri.	7.30-9.30	A 2	J. Sullivan.	9
	Monotype, Keyboard Mechanism—I. ..	Mon., Tues.	7.30-9.30	A 2	J. Sullivan.	12
	Irish .. .. .	Wed. ..	<i>7.30-9.30 B24 P. O'Rlain</i>			
SECOND YEAR.						
216 B	Monotype, Keyboard Operating—II. ..	Thurs., Fri.	7.30-9.30	A 2	J. Sullivan.	10
	Monotype, Keyboard Mechanism—II. ..	Mon., Tues.	7.30-9.30	A 2	J. Sullivan.	12
	Irish .. .. .	Wed. ..	7.30-9.30	A 2	P. O'Rlain.	36
THIRD YEAR.						
217 B	Monotype, Keyboard Operating—III. ..	Thurs., Fri.	7.30-9.30	A 2	J. Sullivan.	11
	Monotype, Keyboard Mechanism—III. ..	Mon., Tues.	7.30-9.30	A 2	J. Sullivan.	12
	Irish .. .. .	Wed. ..	7.30-9.30	A 2	P. O'Rlain.	36

Students may add a Class in Monotype Casting. *B24*

No. of Course	SUBJECT	Day	Hour	Room	TEACHER	Syllabus No.
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### MONOTYPE CASTERS' COURSE.

218 B	Practical Operating	.. .. Mon., Tues.	7.30-9.30	A 2	P. McManus.	13
	Caster Mechanism	.. .. Thurs., Fri.	7.30-9.30	A 2	P. McManus.	14
	Irish	.. .. Wed.	7.30-9.30	A 2	P. O'Riain	36

### LETTERPRESS MACHINE WORK.

#### THIRD YEAR.

222 B	Machine Work, Lecture—III.	.. Fri.	7.30-9.30	A 3	<del>C. J. Timmins</del>	15
	Machine Work, Practical—III.	.. Thurs.	7.30-9.30	A 3	<del>C. J. Timmins</del>	16
	Irish	.. .. Wed.				

#### FOURTH YEAR

224 B	Machine Work, Lecture—IV.	.. Fri.	7.30-9.30	A 3	<del>C. J. Timmins</del>	17
	Machine Work, Practical—IV.	.. Thurs.	7.30-9.30	A 3	<del>C. J. Timmins</del>	18
	Irish	.. .. Wed.	7.30-9.30	A 2	P. O'Riain	36

### BOOKBINDING.

225 B	Stationery Binding and Marbling	Mon. & Fri.	7.30-9.30	A 9	R. Wilson	19
	Letterpress Binding and Gilding	Mon. & Fri.	7.30-9.30	A 9	C. Chamberlaine.	20
	General Warehouse Work					
	Men	.. .. Tues.	7.30-9.30	A 9	C. Chamberlaine.	21
	Women	.. .. Thurs.	7.30-9.30	A 9	C. Chamberlaine.	22
	Design for Bookbinders	(as arranged)		A 1	Colm O'Lochlainn	32

### PHOTOGRAPHY.

#### FIRST YEAR.

227 B	Pure Photography—I.	.. .. Tues.	7.30-9.30	A 11	—	23
	Photographic Chemistry	.. .. Thurs.	7.30-9.30	Kevin St.	F. Nolan.	25

#### SECOND YEAR.

228 B	Pure Photography—II	.. ..	7.30-9.30	A 11	—	24
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### PROCESS PHOTOGRAPHY AND ETCHING.

230 B	Line and Half-tone Block Making	Mon.	7.30-9.30			25
231 B	Three-colour Process Work	.. Fri.	7.30-9.30			27

### LITHOGRAPHY AND PHOTO-LITHO.

232 B	Litho Theory and Practice	.. Mon. & Thur.	7.30-9.30			28
233 B	Photo Lithography	.. .. Mon.	7.30-9.30			29

### SPECIAL COURSES.

234 B	Office Work, Junior Clerks, etc.	Tues.	7.30-9.30	A 12	J. Rooney.	30
	Costing and Estimating	.. Mon.	7.30-9.30	A 12	J. Rooney.	31
F	Book Crafts	.. ..	7.30-9.30	A 1	Colm O'Lochlainn.	34
235 B	Designing for Compositors	.. Fri.	7.30-9.30	A 1	W. J. Keiran.	33
236 B	Advertising Design	.. .. Fri.	7.30-9.30	A 1	W. J. Keiran.	33
237 B	Irish	.. .. Wed.	7.30-9.30	A 2	P. O'Riain	35

# COURSE SYLLABUSES TABLES

## SYLLABUSES

### 1—BOOKWORK. III OR IV YEAR—PRACTICAL.

Straight setting of solid matter for book and magazine by hand, Linotype and Monotype. Proofing and correcting galleys. Make up of pages, single, double and treble columns. Running heads, folios, side, shoulder and cut in headings. Insertion of initials and blocks in text. Make up of diagrams, illustrated pages, tables, etc. Three colour plates. Chapter and Section headings. Title pages, half title, Contents, Dedication, Preface and other preliminary matter. Proofing and correction of pages. Blanks, imprints, etc. Imposition and dressing of forme of eights, twelves, sixteens. Checking furniture for desired margins. Locking up and sending to machine. Corrections at press.

### 2—THEORY.

Design and layout of simple and decorative bookwork, Brochures and Magazines, single, double and treble columns. Choice of size and style of typefaces for various classes of work. Measure and gauge of pages and allocation of margins. Composite work with type and blocks. Headpieces, Tailpieces, Line and half tone blocks. Borders and initials and their proper use. Hand lettering and its use in conjunction with type. Paper sizes, qualities and weights. Technical terms, local usages and run of work. Blank books, ruled books, diaries, insurance books, etc.

### 3—ADVANCED DISPLAY AND JOBBING. III OR IV YEAR—PRACTICAL.

Composition and make up of more elaborate work than that of the second year Syllabus. Programmes, Catalogues, Brochures, Guide Books and Time Tables, Calendars and Almanacs and Diaries. Utilisation of resources of Modern Case Room in Commercial Work. Linotype and Monotype make up in Display Advertisement. Borders and Ornaments. Head and Tail pieces. Line and Half tone blocks and Stereos in Commercial jobbing. Cut in, run around and pierced blocks. Dressing and lock up of composite formes. Corrections at Press. Three and four colour work in Commercial jobs. Special make up for unusual folders.

#### 4—THEORY.

Design and layout of work mentioned above. Foresight in planning to prevent waste operations. Utilisation of Type setting machines for text and display. Style and selection of suitable type faces, ornaments, borders, etc., for various classes of work and various qualities of paper. Planning for unusual effects.

#### 5—LINOTYPE AND INTERTYPE OPERATING, I.

Practical work in keyboard operation. Instruction in fingering, touch and other practical points under the direct supervision of the instructor.

#### 6—LINOTYPE AND INTERTYPE OPERATING, II.

Practical work of a more advanced nature, including simple table work, with special attention to style and correctness. Instruction on the mechanism during operation.

#### 7—LINOTYPE AND INTERTYPE OPERATING, III.

Advanced work on Syllabuses of former Years such as twin-slug composition, tabular and advertisement work, introducing a two-line letter, headline work, etc. Instruction on the mechanism whilst in operation.

#### 8—LINOTYPE AND INTERTYPE MECHANISM.

*Keyboard*: Construction and operation, action of cams and rods. *Matrix*: care of and alignment. *Spaceband*: line justification, importance of cleanliness. *Assembler*: star wheel, guides, chute, brake, adjustments. *Line Delivery Carriage*: components, control adjustments. *Magazine*: single, multiple, split, auxiliary, entrance, escape-ments, changes. *Distributor*: distributor bar and box, controls, single and multiple mechanisms, adjustments. *Mould*: varieties and care of, making changes. *Metal Pot*: component parts and their functions. *Knives*: varieties and care of, adjustments. *Vice*: jaw and lock, adjustments. *Elevators*: first and second, adjustment. *Cams*: names, functions and adjustments. *Driving Mechanism*: Clutch and associated mechanism, adjustments. Care of general machine, oiling, cleaning, etc. Automatic stops.

### 9—MONOTYPE KEYBOARD OPERATING, I.

Operating the keyboard and method of correct fingering, the general principles governing practical work.

### 10—MONOTYPE KEYBOARD OPERATING, II.

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

### 11—MONOTYPE KEYBOARD OPERATING, III.

Instruction in advanced and difficult composition; speed tests, etc.

### 12—MONOTYPE KEYBOARD MECHANISM.

Action of key buttons and valves, operation of punches and recording units, driving of unit wheel and recording of units, 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.

### 13—MONOTYPE CASTER OPERATING.

Practical operation of caster, including care necessary while working. Explanation of running adjustments.

### 14—MONOTYPE CASTER MECHANISM.

Driving gear, cam levers, type carrier and adjustments, pump action, transfer wedges and adjustments. Die centreing lever, tong mechanism, locking racks, mould blade moving gear, type pusher, paper tower bridge and its adjustments. Line shifting and galley mechanism. Changing founts, centreing, sizing and aligning, justification. Care of matrices, system of locating derangements. The mould, care and upkeep, disassembly and re-assembly, adjustment. Compressor and air tank. Lead and rule and display type attachment.

### 15—MACHINE WORK, LECTURE, III.

Review of the work of the First and Second Years. Various classes of printing machines, construction and principles of make-

ready. Average runs per hour, power and transmission, shafting, lubrication. Paper; cockling and creasing, stretching, fluffing, etc. Boards; paste, pulp, art, strawboards and millboards. Inks: various qualities and colours, copyable, double tone, trichromatic, etc. Outline of method of reproduction of illustrations. Machine room costs, method of ascertaining and checking. Costs of production, percentages for handling, time and work sheets, general supervision.

#### 16—MACHINE WORK, PRACTICAL, III.

Practice in every class of work of a higher grade from laying-out of forme to completion of printed sheets. Use and adjustment of automatic feeders for Platen and Cylinder machines.

#### 17—MACHINE WORK, LECTURE, IV.

Advanced work, dealing mainly with the principles of costing, estimating, paper testing. Lectures on trades allied to letterpress printing.

#### 18—MACHINE WORK, PRACTICAL, IV.

The operation of two-revolution and automatic machines, make-ready of three- and four-colour work. Vignetted blocks. Colour mixing, etc.

#### 19—STATIONERY BINDING AND MARBLING.

Description of tools; technical terms, materials and appliances used in stationery work. 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, 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. Various designs and patterns in general use. Edge and sheet marbling.

#### 20—LETTERPRESS BINDING AND GILDING.

Sewing for various styles. Rounding, 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. Function and utility of the finisher's work. Character of various leathers and preparatory treatment for tooling them. Treatment of cloth, silk, etc., for tooling.

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

Various tools used for book finishing, methods for handling them. Degree of moisture in materials, in conjunction with heat required for tooling. Cleaning of the gold. The tooling of leather without gold. Planning and spacing for hand lettering on back and sides of book. Method of using type on the backs. Use of fillets, rolls, pallets, gouges and other tools. Various methods of inlaying. Practical application and principles of design, planning and building up of ornament, and limitations imposed by technicalities.

## 21—GENERAL WAREHOUSE AND STATIONERY WORK —MEN.

Technical terms; section, endorse and simple sheet folding. Paper sizes and sub-divisions. Styles of sewing, wire stitching, numbering, hand sewing, thread stitching. Feeding ruling machines; gathering, interleaving, manifold work, perforating.

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.

Setting and use of folding and sewing machines; method of obtaining the correct setting for folding to print. Mechanism of numbering, sewing, thread and wire-stitching machines, 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. Departmental management, elementary costing and estimating.

## 22—GENERAL WAREHOUSE AND STATIONERY WORK —WOMEN.

Handling and care of paper; counting and tying up reams, holing, eyeletting and stringing. Paper sizes; section and sheet folding by

hand, wirestitching, perforating. Paper terminology, water marks, sizes of cards, browns and wrappings. Gathering and collating, packing and labelling, stringing of calendars, mottoes, etc.

Keeping stock, classes of papers and equivalent weights, judging and testing. Imperfections in print and how they affect the folder. Giving paper out to the printer, ruler and binder. Percentage of overs to allow. Weights of paper suitable for book production. Position of the print for machine folding; cut sizes for bookwork. General knowledge of various warehouse machines. Magazine and catalogue work.

Construction of and setting wire-stitching machine. Impositions; setting and adjusting folding, thread-sewing, eyeletting, round-cornering, holing and perforating machines. Board cutting, board bevelling and miscellaneous practice.

#### 23—PURE PHOTOGRAPHY, I.

The use of cameras. Exposure and development of dry plates and films, after treatment of negatives, intensification, reduction, retouching, varnishing. Printing process, print-out and development papers, bromide and gaslight. Toning, trimming, mounting, spotting and finishing prints. Optical calculations, orthochromatic photography and printing in carbon. Copying and enlarging.

The practical work will include the application of the theory.

#### 24—PURE PHOTOGRAPHY, II.

Advanced and detailed instruction in subjects of Syllabus of First Year, including 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 collodion process, scientific and technical uses of photography, photo-micrography, photography by flash-light, etc.

Practical work of an advanced nature, including retouching.

#### 25—PHOTOGRAPHIC CHEMISTRY.

Instruction in chemistry and its general principles necessary for an understanding of the processes used in Photography, Photo-Process Work, Lithography, etc. *General Chemistry*: Physical and chemi-

cal changes, mixtures and compounds, elements, the atomic theory. The atmosphere, oxygen and nitrogen. The common acids. Alkalies: lime, caustic soda, sodium carbonate, ammonia. Salts; water of crystallisation. Water, natural waters. Sulphur; oxides, sulphites, sulphates, thiosulphates. The halogens. Oxidation and reduction; typical examples with reference to photographic operations. Metallic salts: silver, gold, copper, iron, uranium. *Applied Chemistry*: Photo-chemistry of certain metallic salts, 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, toning processes, platinotype. Chemistry of photo-mechanical and lithographic processes.

## 26—LINE AND HALF-TONE BLOCK MAKING.

*Line Block Making*; Types of suitable originals. Effects of Chinese and process whites. Lamps employed for illuminating the original. The process camera, methods of making line negatives on dry plate, paper or wet collodion. Wet collodion process in detail, various methods of reduction, exposure and intensification, the use of masks for duplicate exposures, stipping of negatives. Metal printing by the albumen method, tint laying, reversing. *Line Etching*; Line etching by rolling up and dragon's blood methods. Routing and mounting. Pulling the proof. *Half-tone Block Making*; the half-tone screen, properties. Translation of continuous tone to dots of varying sizes. Effect of flashing on graduation. Lenses and prisms, their optical properties. Methods of finding and controlling screen distances, lens aperture and exposure. The making of screen negatives by dry and wet plate processes. Metal printing by "fish glue" and "cold top" methods. Half-tone etching of zinc and copper plates. Fine etching, relations of tones of original and reproductions without fine etching. Deep etching for newspaper work. Combination line and tone work.

## 27—THREE-COLOUR PROCESS WORK.

Method of reproduction in three and four printings by the direct half-tone process. Character of light of electric lamps. Half-tone screens for three-colour work, orientations of their rulings. Lenses,

colour filters, construction and optical properties. Making the negatives. Metal prints and colour etching. Relation of light photographed to light reflected by inks. Relation of actual inks to light reflected by inks, fastness of inks. Screen plate processes such as Autochrome and Paget, colours used in these as primaries. Application of three-colour method to other photo-engraving processes.

## 28—LITHOGRAPHY, THEORY AND PRACTICE.

Litho stone, composition, physical nature, preparation, grinding, polishing and graining. Plates : re-cleaning, re-grinding, nature and use of materials employed. Hand litho press : construction and use. Copper plate press rollers : structure, covering and breaking in. Transferring : essential principles, commercial work for hand press and machine. Transfer inks and papers : composition. Doctoring work, bronzing, transposing. Zincography, alterations and corrections. Papers, various types and qualities. Cards, plain and glazed. Inks : source, nature of coloured pigments, mixing of tints. Creasing of paper and remedies. Machines : construction and management ; hand presses. Rollers : breaking in "nap" and "glazed," re-packing, re-covering. Transfer papers, inks and crayons, patching up. Treatment of drawings on grained stones, etching and proving. Chromo-lithography ; superimposing colours, registering, etc. Shading mediums, stippling film, splash work, aerography. Metal-leaf work, photo-lithography by various transfer methods ; transpositions and reverse image methods.

Primary colours, combinations, colour harmony. Off-set work on flat-bed and rotary machines. Rubber blankets, composition and treatment in working. Transferring, transposing and reversing. Rotary off-set machine, fixing the plate, adjustment of inking rollers, damping cylinder and plate adjustment, working mechanism of machine, fine register work. Paper : tests for printing properties and suitability for various classes of work. Estimating.

## 29—PHOTO-LITHOGRAPHY.

Line and high-light screen, negative making by wet and dry plates, direct and indirect methods, use of "irregular grain" screens. 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, recognition of defects. Gauge of plates, reason for graining, use of different graining materials. Grain required for different classes of work. Storage of plates. Use of "passing bath." Coating and printing down. Relation between lamp distance and light distribution, effects on exposure. Duplicating on plate and securing register, different types of printing frame. Developing, additions, alterations. Use of shading mediums. Rolling up, use and action of litho etches, gum, etc., additions after rolling up. Vandyke, "offset deep" and other positive reversal processes.

### 30—OFFICE WORK—JUNIOR CLERKS AND WAREHOUSEMEN.

*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, 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*: 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, special uses, etc. Storekeeping and stock-taking. *Binding*: How to order account books; trade terms; ledger papers. Ruling, marbling, letterpress binding, including leathers. *Lithography*: Commercial offset and chromo-lithography. *Warehouse Work*: Approximate times for operations and what they entail. Dispatch. Invoicing and checking. Journalising and posting.

### 31—OFFICE WORK—COSTING AND ESTIMATING.

Definition of cost: fallacy of using "flat" percentage on wages, or on wages and materials combined; objects of correct costing; essentials of a proper costing system; value of adoption of uniform methods of costing by the printing industry. Main principles of Federation Costing System. Capital: its various forms and their bearing on cost; inventories of plant value and their relationship to "working" value; depreciation; importance of keeping a plant record.

Preparation of statement of expenses; necessity for and value of departmentalisation of expenses; sub-divisions of departments; allocation of expenses, method to be applied; multiple businesses; how treated, method of recovering indirect (overhead) expenses, effect of the percentage method on "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 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 standard printed forms and their place in the Federation Costing System; the importance of correct time-recording and necessity for care by cost clerks in transference of time to costing forms. Individual cost sheet; responsibility of cost clerk for details of labour, materials, etc., and the question of economic cost. Descriptions of essential books of account; analysis of expenses, analysis of sales. Uses to which management may apply information provided by statistics on Forms 3 and 4, and the cost sheet: use of graphs. 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.

### 32—DESIGN FOR BOOKBINDERS.

Evolution of primitive patterns and designs, on wood, lead, stone, pottery, leatherwork. Book satchels and cured pigskin bindings. Square, triangle, lozenge, circle and semi-circle. Ornament developed from bands and clasps. Simple panelling. Diagonal treatment. Strap designs and foliated patterns. Outer and inner panels. Blind and gold tooling. Burnishing. Inlays: Lozenge, square, circle, strap. Treatment of panelled back and raised bands. Title pieces, volume and date pieces. Cut out designs. Edge and bevel rolls. Head cap tooling. Raised straps, crosses, etc., on sides. Modern pictorial work. Jewelled ornament clasps, title plates, etc. Blockings from brasses, blind and gold. Stereos, etc. Ireland's wonder books from 10th to 18th century. The work of Sir Ed. Sullivan, Eleanor Kelly, Pender, etc. Slides, specimens and designs.

### 33—ADVERTISING AND PRINTING DESIGN.

Explanation of reproduction methods. Colour and its uses, harmony and contrast. Key drawings for colour work. Retouching photos. Making of composites. Commercial and stationery headings, envelopes, labels, post cards, etc. Value of standard design. Trade marks and devices.

Drawing for bookwork, illustrations in line and colour, chapter heads, initials, running heads, head and tail pieces. Brasses and zincos for cover blocking or printing. Book jackets and show cards. Cut-outs for display. Advertising; its importance in the promotion of trade. Various kinds of advertising; their application and value. Copy writing, selling points, head line, catch line, slogans.

Design and lay-out, type characteristics, paper characteristics. Suiting type to class of goods and method of printing. Complete campaigns or advertisements in series.

Lettering and Scribe Work: Alphabets; their origin; Roman, Gothic, Gaelic and Italic script. Proportion and balance in alphabet design; weight and colour of lettering, design of hand-lettered pages. Use of initials, outline letters and special shapes. Ornament and its relation to lettering. Lettering as the basis of typographical design.

The scribe, ancient and modern, his materials, use of quill, reed and modern steel pens. Ink and colour, harmony and contrast. Papers, vellum and other fabrics. Advertising alphabets. Hand-writing in advertisements, show cards, window bills, posters, etc.

### 34—BOOKCRAFTS (Supplemental to Courses 1—4).

Modern typography, bookwork and display.

Methods of ornament and illustration, wood-cuts, lino-cuts, line blocks and stereos. Intaglio printing from copperplate, pewter, steel, etc. Photographic methods of preparing printing surfaces in line and half-tone. Three-colour process and its development. Lithography, its principles, offset and photo-litho. Photogravure and collogtype. Workshop demonstrations, line and half-tone processes, three-colour processes. Paper making by hand and machine.

Handling the printed sheets. Bookbinding technique, forwarding and finishing. Ancient methods. Ireland's wonder books. Styles of binding for various classes of work, pamphlet, quarter cloth, full

cloth, publishers' casing. Leather bindings, quarter, half and full. Vellum work. Binding for library use, flexible bindings. The perfect book and its component parts.

### 35—IRISH.

Conversation lessons on familiar everyday subjects, objects in the classroom and neighbourhood, the giving and carrying out of directions, etc. Study of *is*, *tá* and simple verb forms. Irish salutations, phrases and idioms. Repetition of simple rhymes, stories and songs as an aid to memorising and pronunciation.

Practice in intelligent reading from MS. and print. Accurate transcription from MS. and print. Accurate writing from dictation. Uniformity of spelling. Correction of MS. and typescript. Preparation and revision of copy for printers. Compilation of preliminary matter, contents, title pages, index, etc. Proof correction in Irish. Common errors in setting. Importance of cleanliness and accuracy in writing and clearness in proof correcting.



## DAY APPRENTICE SCHOOL OF PRINTING

In co-operation with the Dublin Master Printers' Association, Dublin Newspaper Managers' Committee and the Dublin Typographical Provident Society, the Vocational Education Committee have arranged for the technical instruction of all First and Second Year Apprentices in Compositors' Work and in Letterpress Printing to be carried out in Daytime Classes.

The classes, dealing with the theory and practice of the respective crafts in addition to cultural subjects, Irish, English, Arithmetic and Drawing, occupy some twenty-five hours each week. On completion of the Day Course, Apprentices continue their instruction in the Evening Classes.

Educational visits to supplement the general training are made to paper mills, newspaper offices, ink factories, etc.

Since the inception of this scheme in 1934 over 160 students have completed the two year course. The average attendance is 40, roughly three-fourths of the number being compositors.

### PRIZES.

Prizes are provided annually by the contribution of the Dublin Master Printers' Association and the Dublin Typographical Provident Society, the Young Master Printers' Group and the Irish Bookbinders' Union [See General Guide.]

The William Rooney Memorial Shield is awarded each year to the student of second year status who shows greatest proficiency in his craft and the most competent knowledge of Irish.

# SYLLABUS

OF THE

## DAY APPRENTICE SCHOOL OF PRINTING

Day Apprentice School opens, Monday, September 2nd, closes Friday, December 6th; re-opens Monday, January 6th, 1941.

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### COMPOSITORS' WORK

FIRST YEAR.

*History and development of the Art of Printing.*

*Composing Room Material and Equipment*—Descriptions and uses of materials and appliances used. Parts of a single type character. A fount of type and description of the various characters contained therein. The lay of the case.

*Work in the Composing Room.*

*Solid and Leaded matter*—Simple exercises in setting plain matter on approved methods. Habits to acquire and avoid to ensure rapid and clean composition. Exercises in spacing and justification. Distribution of type and materials. Pulling proofs and correcting. Exercises in punctuation, dividing and compounding words. Use of capitals, italics, figures, numerals, etc.

*The Point System*—Its application to everyday work.

*Locking-up*—Use of mechanical and timber quoins. Tying up and storing.

*Display Work*—Principles of display and study of modern type faces. Simple exercises in display work—how to draft a lay-out and set from it. General practice in setting all classes of commercial work—reprint and manuscript.

*Bookwork*—Signatures and their uses; style, chapter and page heads, preliminary matter, oddments, shoulder notes, footnotes, side-notes, cut-in-notes, etc.; suitable type faces—ratio of type page to paper—making margin—making up—correct position on paper. Imposition—sheet and half-sheet work—rules for imposition; dressing and locking-up formes, 4 pp., 8 pp., 16 pp. Reader's Marks. Technical Terms.

*Paper*—Paper-making. Sizes and sub-divisions of papers, boards and cards; standardization of paper. Printings and writings.

*Calculations*.—Sizes and quantities of paper; weights and quantities of type and leads.

# COMPOSITORS' WORK

## SECOND YEAR.

*Historical*—Study of the lives and work of eminent typographers, e.g., Morris and De Vinne, and their influence on the Art of Printing.

*Composing Room Material and Equipment*—Steel and labour saving; planning of composing room; lighting; new appliances.

### *Work in the Composing Room.*

*Solid and leaded matter*—Setting from difficult Manuscript; advanced exercises in spelling and punctuation.

*Table and Tabular Work*—Setting of table and tabular composition on approved methods.

*Display Work*—High-class commercial and artistic—use and manipulation of borders, rules and ornaments—pencil sketches and lay-outs—setting from lay-out.

*Proofreading*—Reader's marks and qualifications for a corrector of the press. Exercises in proofreading.

*Bookwork*—Casting up and casting off copy. Imposition schemes up to 32 pp., upright and oblong. Determining margins; stitched, stabbed and sewn work; folding machines and imposition.

*Paper*—Classification and definitions; qualities suitable for various classes of work (hand-made, machine-made, mould-made), printings, writings, coated, bank, plate, supercalendered, drawings, blottings, manilla, retree, broke, outsides, insides, watermarks.

*Type*—Outline of typesetting—alloys of type metal—essential qualities of good type—selection of type for various classes of work.

*Mechanical Composition*—Slug and single letter machines—advantages and disadvantages for various classes of work.

*Plates*—Making and uses of line and half-tone blocks; the three-colour process; making and uses of electrotypes and stereotypes.

*Calculations*—Equivalent paper weights; casting off MS. and TS.; casting up the number of ens per page, solid and leaded.

# LETTERPRESS MACHINE WORK

## FIRST YEAR.

*History and Development of the Art of Printing.*

*Machineroom Equipment*—Descriptions and uses of the various tools, machines and appliances used.

*Paper*—How manufactured; different classes, qualities, sizes and sub-divisions of printing, writing, cards and boards; equivalent weights and how to ascertain them; standardization.

*Inks*—Composition and manufacture; care and treatment, mixing and reducing.

*Printing Surfaces*—Type, stereotypes, electros, line, half-tone and three-colour blocks; their uses, differences and limitations.

*Work of the Machine Minder*—Care and management of the handpress, platens and wharfedales; habits to acquire to ensure clean and rapid working; preparing machines for printing; different classes of packing; results of overpacking and underpacking; setting rollers and duct; getting position, making ready and printing off formes in one and two colours; how to make all necessary adjustments.

*Calculations*—Quantities of paper required for different jobs; allowance for overs.

# LETTERPRESS MACHINE WORK

SECOND YEAR.

*Historical*—Study of the lives and work of eminent typographers, e.g., Morris and De Vinne, and their influence on the Art of Printing; the evolution of printing machinery.

*Paper*—Different properties and suitability for various classes of work; cockling, creasing, fluffing, etc.

*Inks*—Copyable, Security, Double-tone, Tri-chromatic and their uses; adapting ink to paper.

*Work of the Machine Minder*—Care and management of platens (jobbing and Heidelberg), wharfedales and Miehle machines; how to make all necessary adjustments; care and management of automatic feeders; how to make adjustments for different sizes and classes of stock; making ready and printing off more difficult formes, including stereos, electros, line, half-tone and three-colour blocks; underlaying, interlaying, making hand and mechanical chalk overlays. Cutting and creasing, embossing, bronzing.

*Impositions and Bookwork*—4pp., 8pp., 12pp., 16pp., 32pp.; sheet and half-sheet work, inset work, uses of signatures, order of preliminary matter, laying down plates, squaring up, getting register, stabbed and sewn work, folding machines and impositions.

# GENERAL CURRICULUM OF THE SCHOOLS

UNDER THE CONTROL OF

## THE CITY OF DUBLIN VOCATIONAL EDUCATION COMMITTEE.

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### BOLTON STREET TECHNICAL SCHOOL.

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

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

### KEVIN STREET TECHNICAL INSTITUTE.

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

### PARNELL SQUARE TECHNICAL INSTITUTE.

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

Day School of Commerce.  
Day Technical Course (Girls).



**GENERAL CURRICULUM OF THE SCHOOLS**  
UNDER THE CONTROL OF  
**THE CITY OF DUBLIN VOCATIONAL EDUCATION**  
**COMMITTEE.**

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**PEMBROKE TECHNICAL INSTITUTE (Ringsend and Ballsbridge)**

General Commercial Subjects.	Mechanical Engineering.
Retail Distribution.	Motor Car Engineering.
Languages.	Oxy-Acetylene and Electric
Domestic Science and Housecraft.	Welding.
Art and Art Crafts.	Woodworking Trades.
	Day School of Commerce.
	Day Junior Technical School (Boys)
	Day Technical Course (Girls).
	Special Apprentice Training Courses.

**RATHMINES TECHNICAL INSTITUTE.**

General Commercial Subjects.	Banking, Finance and Foreign Ex-
Accountancy, Auditing and Allied	change.
Subjects.	Company Secretaries.
Insurance.	Government Accountancy and
Advertising and Publicity.	Finance.
Physical Training.	Languages.
	Domestic Science and Housecraft.
	Day School of Commerce.
	Day Technical Course (Girls).

**MARINO TECHNICAL INSTITUTE.**

General Commercial Subjects.	Metalwork.
Languages.	Science.
Domestic Science and Housecraft.	Woodwork.
Physical Training.	
	Day Junior Technical School (Boys and Girls).
	Day School of Commerce.

**CHATHAM ROW SCHOOL OF MUSIC (Day and Evening Classes)**

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

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*Offices—*

TECHNICAL INSTITUTE,  
BOLTON STREET,  
DUBLIN.

L. E. O'CARROLL, B.A., B.L.,  
*Chief Executive Officer.*