In this booklet the Manitoba Technical Institute makes its first public announcement of a new educational service.

The Report of the Select Special Committee of the Manitoba Legislative Assembly on Education presented in March 1945 strongly recommended the development of the M.T.I. into an Institute of Technology and Art to meet the technical education requirements of our maturing economy. At that time the Institute was fully employed in carrying out the War Emergency Training Programme and in meeting the demands of the various training undertakings in the armed services. Since the close of the war, C.V.T. (Canadian Vocational Training), a vital part of the immense rehabilitation programme, has involved the full use of all its resources and facilities. As this programme is drawing to a close, it is now possible for the Institute to assume its permanent function in our educational system. It is confidently anticipated that within a few years it will develop into the type of institution recommended by the Select Committee.

Education in the technical field is an enterprise carried out jointly with the Dominion Government. The costs are shared on an equal basis. Responsibility for direction and administration, however, rests solely with the province and the Institute falls within the jurisdiction of the provincial Department of Education. The Registrar of the Department will ensure that credit for
courses successfully completed in technical education will be recognized with appropriate certification.

The Manitoba Technical Institute will undoubt-
edly form an increasingly important part of our educational structure. It is our hope that parents, students, employers and the public at large will recognize the vital role that it will play in the development of our land.

J. C. Dryden
Minister of Education.
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FOREWORD

This bulletin, prepared by the Department of Education, presents, for the guidance of prospective students, specific information concerning courses of study organized in the Technical Institute. On pages 8 and 9 courses are listed under the following major headings: Metal Trades, Building Trades, Electrical Trades, Commercial Education, Automotive Trades and Miscellaneous Courses.

Those desiring more detailed information concerning specific courses listed should turn to pages 10 to 29, which provide a description of the courses. Information regarding steps leading to registration for any course is provided on page 33.

This bulletin also provides certain information dealing with apprenticeship training, pre-apprenticeship training, interpretation of training under Schedule "M" Agreement, and Guidance.
Technical Institute programmes are essentially technological in nature, and intermediate between the high-school and the university. The Manitoba Technical Institute will offer certain courses on the purely Technical Institute level of learning. The purpose of these courses will be to prepare individuals for positions auxiliary to, but not in the field of professional engineering. In addition to courses of this character, the Institute will offer apprenticeship training, pre-apprenticeship training, teacher training, vocational training, and training under Schedule "M" Agreement.

The Department of Education, in organizing such a diversified programme in vocational education, aims to meet the occupational needs of post-high school youth and adults in Manitoba. The programme is flexible enough to meet the differences in educational standing of applicants for registration purposes, and also to meet individual differences in employment experiences.

While the courses listed in this bulletin constitute the basic studies offered in the Institute, the Department of Education is ready to organize additional courses should there be a genuine need for different types of training to meet the educational needs of Manitoba citizens. The Department of Education considers the Technical Institute with its programme of useful arts to be an indispensable educational centre for both men and women who are eager to prepare themselves for industrial and commercial positions.
INFORMATION FOR PROSPECTIVE STUDENTS

In the regular elementary, junior and senior high schools students usually know the reasons why they are following the specific studies of every grade — they pass from one grade to the next as a regular routine of school life. In the Technical Institute, the goal or objective towards which each course assists a student is not so clearly defined. When enrolling for a vocational course, a prospective student usually wants to know if he or she will receive at the conclusion of the course a diploma or certification for proficiency which will be recognized by industry or business. The aim of each applicant for training in a Technical Institute is acceptable employment on graduation. The aim of the Institute is to offer courses so well organized and taught that students making profitable use of them will acquire marketable skills, useful knowledge and appropriate employment attitudes. Additional experiences having exceptional qualities in terms of good citizenship will also be gained — the major aim, however, is vocational and technical training as a preparation for successful employment in the work-a-day world.

To reach this standard of training and general fitness to enter upon a successful work career there are certain qualifications that are indispensable for everyone. Some of these factors constituting good qualifications are:

(1) Marketable skills in a specialized occupational field.
(2) Technical knowledge related intimately to a chosen occupational field.
(3) Appropriate work attitudes and habits.
(4) Adaptability in human relations.
The Institute is providing training in the experiences which will enable eager students to acquire proficiency in the exercise of the above factors.

Courses listed provide opportunity for students as follows:

(1) A six months' course unless otherwise specified offers experiences in basic skills and related knowledge in a particular occupational field — The General Shop is one notable exception to this plan — see page 26.

(2) A six months' basic course can be taken as a pre-apprenticeship course at the conclusion of which students may arrange to have their work examined in terms of an admission standard to indentured apprenticeship — The Department of Labour, Apprenticeship Branch, co-operates in this part of the programme.

(3) A six months' basic course may constitute a sound entrance to additional training in the Institute — students may elect to follow a 12 months' course after successfully completing a six months' course. Each student will be free to make a choice in this respect.

(4) Courses of study will be organized specifically for apprentices who take their annual training in the Institute.

(5) Trainees other than apprentices will follow the same basic course of six months, but will have opportunity to study a curriculum which will be more flexible to meet the individual occupational or craft objectives of each student.
(6) Courses to assist students in the field of up-grading for industrial advancement will be offered.

(7) Courses that help learners to prepare for supervisory positions will also be offered.

(8) A course marked thus (*) in this Bulletin indicates that the course is designated under apprenticeship.

On the following page a chart is presented showing a student's path from registration until he is ready to accept gainful employment.
Transcript of Training

A transcript of standing after the successful completion of any course will be issued by the Registrar of the Department of Education.
## COURSES AVAILABLE

<table>
<thead>
<tr>
<th>Course</th>
<th>Length of Course</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. METAL TRADES</strong></td>
<td></td>
</tr>
<tr>
<td>1. Machine-Shop Practice</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td>2. Tool and Die Making</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td>3. Blacksmithing I</td>
<td>6, or 12 mos.</td>
</tr>
<tr>
<td>4. Blacksmithing II</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td>5. Welding I (Oxy-Acetylene)</td>
<td>6 mos.</td>
</tr>
<tr>
<td>6. Welding II (Arc)</td>
<td>6 mos.</td>
</tr>
<tr>
<td>7. Sheet Metal</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td><strong>B. BUILDING TRADES</strong></td>
<td></td>
</tr>
<tr>
<td>1. Plumbing</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td>2. Painting and Decorating</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td>3. Plastering</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td>4. Bricklaying</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td>5. Carpentry</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td>6. Factory Woodwork</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td><strong>C. ELECTRICAL TRADES</strong></td>
<td></td>
</tr>
<tr>
<td>1. Radio Servicing</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td>2. Electrical Construction</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
<tr>
<td>3. Electric Motor Winding</td>
<td>6, 12, 18 or 24 mos.</td>
</tr>
</tbody>
</table>
D. COMMERCIAL EDUCATION

1. Secretarial I 6 mos.
2. Secretarial II 12 mos.
3. Junior Accountancy 6 or 12 mos.
4. Stenographic I 6 mos.
5. Stenographic II 12 mos.

E. AUTOMOTIVE TRADES

1. Automobile Body Mechanics 6, 12, 18 or 24 mos.
2. Automobile Repair Mechanics 6, 12, 18 or 24 mos.
3. Diesel Mechanics 6 mos.

F. MISCELLANEOUS COURSES

1. Drafting I (Basic) 6 mos.
2. Drafting II (Machine) 6, 12, 18 or 24 mos.
3. Drafting III (Architectural) 6, 12, 18 or 24 mos.
4. General Shop 6 or 12 mos.
5. Cabinet Making 6, 12, 18 or 24 mos.
6. Custom Tailoring 6, 12, 18 or 24 mos.
7. Upholstery 6, 12, 18 or 24 mos.
8. Shoe Repairing 6, 12, 18 or 24 mos.
9. Electrical Refrigeration 6, 12, 18 or 24 mos.
CONTENT OF COURSES

METAL TRADES

MACHINE SHOP PRACTICE:


Related Subjects for this Course are: Mathematics; Draughting; Science; Shop Sketching; Estimating; Job Analysis; Materials of Construction; Report Writing; and Welding.
TOOL AND DIE MAKING:


Related Subjects for this Course are: Mathematics; Science; Draughting; Shop Sketching; Job Analysis; Materials of Construction; Machine and Tool Design; Report Writing; and Welding.

*BLACKSMITHING I:


Related Subjects for this Course are: Mathematics; Science; Draughting; Shop Sketching; Job Analysis; Materials of Construction; and Report Writing.

*BLACKSMITHING II:

This Course contains the skills listed in Blacksmithing I and, in addition, experiences in Machine Shop Practice, Sheet Metal and Welding.
WELDING I (Oxy-Acetylene):


Related Subjects for this Course are: Mathematics; Science; Blue Print Reading; Shop Sketching; Job Analysis; Materials of Construction; and Report Writing.

WELDING II (Arc):


Related Subjects for this Course are: Mathematics; Science; Blue Print Reading; Shop Sketching; Job Analysis; Materials of Construction; and Report Writing.

Related Subjects for this Course are: Mathematics; Science; Welding; Draughting; Shop Sketching; Estimating; Job Analysis; Human Relations; Materials of Construction; and Report Writing.
**PLUMBING:**


Related Subjects for this Course are: Mathematics; Science; Blue Print Reading; Estimating; Human Relations; Report Writing; and Welding.

**PAINTING AND DECORATING:**


Related Subjects for this Course are: Mathematics; Science; Blue Print Reading; Estimating; Human Relations; and Report Writing.
*PLASTERING:


Related Subjects for this Course are; Mathematics; Science; Blue Print Reading; Shop Sketching; Estimating; Human Relations; Materials of Construction; and Report Writing.

*BRICKLAYING:

*BRICKLAYING (Cont'd.):

Related Subjects for this Course are: Mathematics; Science; Blue Print Reading; Estimating; Human Relations; Materials of Construction; and Report Writing.

*CARPENTRY:


Related Subjects for this Course are: Mathematics; Science; Draughting; Estimating; Job Analysis; Human Relations; Materials of Construction; and Report Writing.

*FACTORY WOODWORK:


Related Subjects for this Course are: Mathematics; Draughting; Science; Shop Sketching; Estimating; Job Analysis; Materials of Construction; and Report Writing.
ELECTRICAL TRADES

RADIO SERVICING:

Electron Theory - Circuits and Ohm's Law -
Electro Magnetism - Measuring Instruments -
Alternating Current - Power Supplies - Vacuum
 Tubes and R.F. Signals - Detectors - Audio
 Amplification - Radio Frequency Amplification -
Super-Heterodyne Circuits - Frequency Modulation -
Power Supplies - T.R.F. Receivers -
Super-Heterodyne Receivers - Audio Systems -
Automobile Radios - Repairing Radio Components -
Volt-Ohm-Milliammeters - Signal Generators -
Tube Checkers - Set Testers and Analyzers -
The Oscilloscope - Signal Tracers - Microphones
and Phono Pick-ups - Class A. Amplifiers -
Phase Inverters - Inverse Feedback Compression
Expansion - Audio Transmission Lines and
Devices - Safety Habits and Knowledge.

Related Subjects for this Course are:
Mathematics; Science; Shop Sketching; Human
Relations; Report Writing; and Bench Metal
Work.

* ELECTRICAL CONSTRUCTION;

Conductors and Insulators - Ohm's Law - Elementary
Circuits & Magnetism - Inductance and Capacity -
Batteries - Generators and Motors - A.C. Resistive
Circuits - Transformers - Power Factor - Joints
and splices - Soldering Methods - Knob and Tube
Wiring - Armoured Cable, Non-metallic Sheathed
Cable - Conduit Wiring - Bonding and Grounding -
Surface Raceway Wiring - Pouring and Wiping
Splices - Fuses - Single and Double Pole
Switches - Double Throw Switches - Manual Motor
Switches - Three-heat Switches - Four-way Switches
- Magnetic Switches - Thermostats and Pressure
 Switches - Time Switches - Elementary Bell Circuit -
Annunciators - Alarms - Simple Telephone
Circuits - Electric Clocks - Automatic Fire
Alarms - D.C. Meters - A.C. Instruments - A.C.
Watt Meters - Meter Transformers -
ELECTRICAL CONSTRUCTION (Cont'd.):

Resonance Relays — Artificial Lighting (Gen.) —
Incandescent Lighting — Fluorescent Lighting —
Installation of Fixtures — Cords and Plugs —
Portable Thermal Appliances — Electric Ranges —
Small Motor Driven Appliances — Washing
Machines, etc. — Series Motors — Split Phase
Motors — Shaded Pole Motors — Repulsion Motors —
3-Phase Squirrel Cage — Synchronous Motors —
Applications and Maintenance — Wound Rotor
Motors — Delta and Star Connections — 3-Phase
E.M.F. and Current — Reduced Voltage Starting —
3-Phase Calculations — Rectification — Safety
Habits and Knowledge.

Related Subjects for this Course are:
Mathematics; Science; Draughting; Shop
Sketching; Estimating; Job Analysis; Human
Relations; Materials of Construction; and
Report Writing.

* ELECTRIC MOTOR WINDING:

Basic Electricity — Ohm's Law — D.C. Calculations —
Motors — D.C. Motors — D.C. Generators — Single
Phase A.C. Motors — Polyphase A.C. Motors —
A.C. Generators — Transformers — Appliances —
Portable Thermal Appliances — Fixed Thermal
Appliances — Vibratory Appliances — Motor
Operated Appliances — Lighting Appliances —
Safety Habits and Knowledge.

Related Subjects for this Course are:
Mathematics; Science; Draughting, Shop
Sketching; Estimating; Human Relations;
Materials of Construction; Report Writing;
and Machine Shop.
COMMERCIAL EDUCATION

In deciding to offer courses in commercial training the Department of Education aims to meet this challenge realistically. Training for successful employment after graduation is one of the major aims of this course. The modern business world needs stenographers, clerks, machine operators, and secretaries! In the Institute students will have opportunity according to their interests, aptitudes and needs to practice the skills and knowledge associated with a specific division of the commercial course.

SECRETARIAL I:

This course includes the following subjects:
Typewriting — Shorthand — English (Grammar and Correspondence) — Office Practice.

SECRETARIAL II:

This course includes the following subjects:
Shorthand — Typewriting — Bookkeeping (Elementary) — Rapid Calculation — Business Arithmetic — English (Grammar and Correspondence) — Spelling — Penmanship — Office Practice — Dictaphone.

JUNIOR ACCOUNTANCY:

This course includes the following subjects:
Accountancy — Business Arithmetic — Rapid Calculation — English (Grammar and Correspondence) — Spelling — Commercial Law — Typewriting.

STENOGRAPHIC I:

This course includes the following subjects:
Typewriting — Shorthand — English (Grammar and Correspondence) — Office Practice.
STENOGRAPHIC II:

This course includes the following subjects:
Shorthand - Typewriting - English (Grammar and Correspondence) - Spelling - Penmanship - Office Practice - Dictaphone.

STENOGRAPHIC III:

This course includes the following subjects:
English (Grammar and Correspondence) - Spelling - Penmanship - Office Practice - Dictaphone - Shorthand - Typewriting - Comptometer - Bookkeeping Machine.
AUTOMOTIVE TRADES

AUTOMOBILE BODY REPAIR MECHANICS:


Related Subjects for this Course are: Mathematics; Science; Blue Print Reading; Estimating; Job Analysis; Human Relations; Report Writing; and Welding.

AUTOMOBILE REPAIR MECHANICS:


Related Subjects for this Course are: Mathematics; Science; Blue Print Reading; Estimating; Job Analysis; Human Relations; Report Writing; and Machine Shop.
DIESEL MECHANICS:


Related Subjects for this Course are: Mathematics; Science; Blue Print Reading; Estimating; Job Analysis; Human Relations; and Report Writing.

NOTE: The following constitutes the minimum pre-requisites for admission to the Diesel Course:

1. A working knowledge of Internal Combustion
2. Some engine rebuilding experience
3. A working knowledge of Ignition and Carburetion.
DRAFTING I (Basic):


Related Subjects for this Course are: Mathematics; Science; Human Relations; Materials of Construction; and Report Writing.
DRAFTING II (Machine):


Related Subjects for this Course are: Science; Mathematics; Job Analysis; Human Relations, Materials of Construction; Machine Design; Report Writing; Machine Shop; Sheet Metal; Welding; and Forging.

NOTE: Drafting I is the minimum pre-requisite for this Course.
DRAFTING III (Architectural):


Related Subjects for this Course are: Mathematics; Science; Estimating; Job Analysis; Human Relations; Materials of Construction; Report Writing; Plumbing; Painting and Decorating; Plastering; Bricklaying; Carpentry; and Sheet Metal.

NOTE: Drafting I is the minimum pre-requisite for this course.
GENERAL SHOP:

In the Technical Institute the major purpose of the General Shop is trade exploratory. Due to the flexibility of doing experiences gained in this Department learners discover for themselves their particular interests and aptitudes for definite craft work. This organization will provide a unique opportunity for many to enter at an early age the most suitable trade field for which they have natural talents. The General Shop prevents specialization at a time when the learner is not ready educationally to select wisely and profitably the field of work for which he is gifted. Learning to do by doing is a routine procedure in the General Shop and in this craft environment in which learning is characterized by doing, thinking and feeling, students purposefully employed will not fail to discover their natural aptitudes, interests and needs. The basic craft experiences offered are: Woodworking — Woodturning — Machine Shop — Sheet Metal — Forging — Moulding — Bench Metal Work — Electricity — and Safety Habits and Knowledge.

Related Subjects for this Course are: Mathematics; Science; Drafting; Shop Sketching; Estimating; Job Analysis; Human Relations; Materials of Construction; and Report Writing.
CABINET MAKING:


Related Subjects for this course are: Drafting; Mathematics; Science; Shop Sketching; Estimating; Job Analysis; Human Relations; Materials of Construction; and Report Writing.

* CUSTOM TAILORING:


Related Subjects for this Course are: Mathematics; Science; Estimating; Job Analysis; Human Relations; and Report Writing.
UPHOLSTERY:


Related Subjects for this Course are: Mathematics; Science; Shop Sketching; Estimating; Job Analysis; Human Relations; and Report Writing.

SHOE REPAIRING:


Related Subjects for this Course are: Mathematics; Science; Estimating; Human Relations; and Report Writing.
* ELECTRICAL REFRIGERATION


Related Subjects for this Course are; Mathematics; Science; Shop Sketching; Estimating; Job Analysis; Human Relations; Materials of Construction; Report Writing; and Welding.
TRAINING OF APPRENTICES

According to Section "1\(\frac{1}{2}\)" of the Regulations under "The Apprenticeship Act" the Department of Education is responsible for the organization of Technical classes, trade tests and final trade examinations for all indentured apprentices in designated trades. The Technical Institute is organized to serve apprentices in this way. At present the following trades are designated under the Apprenticeship Act and apprentices of each of these trades are eligible for annual attendance in Technical Institute classes: Automotive Body Repair Mechanics - Automotive Repair Mechanics - Blacksmiths - Electrical Refrigeration - Carpentry - Factory Woodworking - Custom Tailoring - Bricklaying - Plastering - Plumbing - Painting and Decorating - Tile Setting - Steam Fitting.
PRE-APPRENTICESHIP TRAINING

Applicants may apply for pre-apprenticeship training. Information regarding apprenticeship training can be secured on request either from the Institute or from the Director of Apprenticeship, Department of Labour, Legislative Building, Winnipeg.
VOCATIONAL TRAINING OF UNEMPLOYED PERSONS

Under Schedule "M" Agreement between the Dominion and the Provincial Governments unemployed persons with previous work experience may be eligible for vocational training. The Unemployment Insurance Commission of the National Employment Service determines the eligibility of prospective trainees under this agreement. Consequently, unemployed persons desiring vocational training should visit local offices of the N. E. S. concerning the steps to be taken to be admitted to the Technical Institute for courses that will prepare them with new skills and knowledge to meet the changing conditions of employment.
REGISTRATION

Applicants for registration should contact the appropriate person on the 2nd floor of the Manitoba Technical Institute. If registration is desired by correspondence the applicant should write directly to the Director of the Manitoba Technical Institute, Portage Ave. at Wall St., Winnipeg, Manitoba. An application form is available for the use of all applicants and may be secured on request from the Institute.

GUIDANCE

All applicants may receive the service of Guidance. Personal interviews can be arranged with the Director or other appropriate officials who will be able to assist applicants to register for a course in harmony with their occupational aims and needs. Call at the Institute or write to its Director to benefit from this service.
REGISTRATION FEES

Fees for all courses are confined to that of registration. They are as follows:

<table>
<thead>
<tr>
<th>LENGTH OF COURSE</th>
<th>MANITOBA RESIDENT</th>
<th>NON-RESIDENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Months</td>
<td>$ 25.00</td>
<td>$ 50.00</td>
</tr>
<tr>
<td>12 Months</td>
<td>50.00</td>
<td>100.00</td>
</tr>
<tr>
<td>18 Months</td>
<td>75.00</td>
<td>150.00</td>
</tr>
<tr>
<td>2 Years</td>
<td>100.00</td>
<td>200.00</td>
</tr>
</tbody>
</table>

ARE FEES REFUNDABLE?

Applicants are urged to make sure that they are enrolling for a course in which they seek instruction. These small registration fees are not refundable.
LOOKING FORWARD

Plans are underway to increase the number of courses in the Technical Institute. This extension of courses will be possible when the reorganization of certain interior spaces have been completed and when the construction of the Annex is ready for establishing training facilities. Courses for which preliminary plans have been made are: Teacher Training — Hairdressing and Beauty Culture — Furniture Construction and Design — Farm Mechanics — Needle Trades — Watch Repair — Employer-Employee Relations — Human Relations — Labour Relations — Foremanship Training — Industrial Chemistry — Industrial Sociology — Metallurgy — Job Analyses — Steam Engineering — Industrial Electronics — Fashion Design — Interior Decorating — Machine Design — Moulding — Pattern Making — Estimating for the Building Trades — Speech Training — Salesmanship — Cooking — Cafeteria and Tea Room Training — Time and Motion Study — Production Technique — Scientific Management — Blue Print Reading — Fashion Psychology of the Potential Consumer.