Ontario

Electrical Techniques Program Standard

The approved standard for the Electrical Techniques (45613) program of instruction leading to an Ontario College Certificate delivered by Ontario Colleges of Applied Arts and Technology (CAATs).

Ministry of Colleges, Universities, Research Excellence and Security
January 2026

Acknowledgements

The Ministry of Colleges, Universities, Research Excellence and Security acknowledges with thanks the significant contribution of the many individuals and organizations which participated in the development of this standard. In particular, the Ministry of Colleges, Universities, Research Excellence and Security would like to acknowledge the important roles of:

- all individuals and organizations which participated in the consultations
- Vertha Coligan, the Project Officer who led the English review
- Isabel Bellon, the Project Officer who led the French review

Contents

Introduction

This document is the Standard for the Electrical Techniques program of instruction leading to an Ontario College Certificate delivered by Ontario Colleges of Applied Arts and Technology (CAATs).

Development of system-wide program standards[1]

In 1993, the Government of Ontario initiated program standards development with the objectives of bringing a greater degree of consistency to college programming offered across the province, broadening the focus of college programs to ensure graduates have the skills to be flexible and to continue to learn and adapt, and providing public accountability for the quality and relevance of college programs.

The Program Standards Unit of the Ministry of Colleges, Universities, Research Excellence and Security has responsibility for the development, review and approval of system-wide standards for post-secondary programs of instruction at Ontario Colleges of Applied Arts and Technology.

Program standards[2]

The Electrical Techniques standard applies to all similar programs of instruction offered by Ontario Colleges of Applied Arts and Technology. It includes the following elements:

- **Vocational standard** (the vocationally specific learning outcomes which apply to the program of instruction in question),
- **Essential employability skills** (the essential employability skills learning outcomes which apply to all programs of instruction); and
- **General education requirement** (the requirement for general education in postsecondary programs of instruction)[3].

Collectively, these elements outline the essential skills and knowledge that a student

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[1] In 1993 the initiation of program standard development was for CAAT programs and therefore the term “program standard” was used to describe these standards.
[2] See Footnote 2 above.
[3] Within the Minister's Binding Policy Directive (2009), it is stated on Page 14 that General Education Requirements at the certificate level are "locally determined, however it is desirable that graduates at this level will have been engaged in learning that incorporates some breadth beyond the vocational field of study, especially in programs of Instruction intended to lead to further postsecondary study in a related field”. Given this statement, education providers may include some breadth beyond the vocational field within the themes of arts in society, civic life, social and cultural understanding, personal understating, and science and technology. For further information, please refer to the section within this document on General Education Requirements.

must reliably demonstrate in order to graduate from the program.

Individual Colleges of Applied Arts and Technology offering the program of instruction determine the specific program structure, delivery methods and other curriculum matters to be used in assisting students to achieve the outcomes articulated in the standard. They also determine whether additional local learning outcomes will be required to reflect specific local needs and/or interests.

The expression of program standards as vocational learning outcomes

Vocational learning outcomes represent culminating demonstrations of learning and achievement. They are not simply a listing of discrete skills, nor broad statements of knowledge and comprehension. In addition, vocational learning outcomes are interrelated and cannot be viewed in isolation from one another. As such, they should be viewed as a comprehensive whole. They describe performances that demonstrate that significant integrated learning by graduates of the program has been achieved and verified.

Expressing standards as vocational learning outcomes ensures consistency in the outcomes for program graduates, while leaving to the discretion of individual colleges of applied arts and technology matters related to curriculum such as the specific program structure and delivery methods.

The presentation of the vocational learning outcomes

The **vocational learning outcome** statements set out the culminating demonstration of learning and achievement that the student must reliably demonstrate before graduation.

The **elements of the performance** for each outcome define and clarify the level and quality of performance necessary to meet the requirements of the vocational learning outcome. However, it is the performance of the vocational learning outcome itself on which students are evaluated. The elements of performance are indicators of the means by which the student may proceed to satisfactory performance of the vocational learning outcome. The elements of performance do not stand alone but rather in reference to the vocational learning outcome of which they form a part.

The **performance objectives** describe specific and discrete knowledge, skills and values that contribute to the accomplishment and demonstration of the learning outcomes. The performance objectives are aligned with an individual element of performance which in turn is aligned with a vocational outcome.

All three aligned components are expressed as outcome-based learning expectations for entry level graduates of Electrical Techniques programs.

The development of a program standard

In establishing the standards development initiative, the Government determined that all postsecondary programs of instruction should include vocational skills coupled with a broader set of essential skills. This combination is considered critical to ensure that college graduates have the skills required to be successful both upon graduation from the college program and throughout their working and personal lives.

The Electrical Techniques standard was developed through a broad consultation process involving a range of stakeholders with a direct interest in the program area, including employers, professional associations, and program graduates working in the field, in addition to students, faculty, teachers and administrators and others at the Colleges of Applied Arts and Technology. It represents a consensus of participating stakeholders on the essential learning that all program graduates should need to acquire.

Updating the program standard

The Ministry of Colleges, Universities, Research Excellence and Security will undertake periodic reviews of the vocational learning outcomes for this program to ensure that the Electrical Techniques Standard remains appropriate and relevant to the needs of students and employers across the Province of Ontario. To confirm that this document is the most up-to-date version, please contact the Ministry of Colleges, Universities, Research Excellence and Security.

Vocational standard

All graduates of Electrical Techniques programs have achieved the 11 vocational learning outcomes (VLOs), in addition to achieving the essential employability outcomes, and meeting the general education (GE) requirement.

Preamble

The Electrical Techniques program provides graduates with a foundational understanding of electrical principles, systems, and practices in controlled electrical environments. This program equips students with basic skills, knowledge, and safety awareness necessary to assist in a range of electrical functions under the supervision of a qualified person.

Graduates of this program will have demonstrated achievement of the vocational learning outcomes, which are designed to reflect current industry practices and align with workplace expectations and safety regulations. The vocational learning outcomes and their respective elements of performance define the essential competencies required for graduates to engage in electrical-related tasks at an entry level.

Throughout the program, students gain practical experience and exposure to various electrical tasks, including assisting with the installation, testing, **troubleshooting**, maintenance, and repair of electrical circuits, components, and systems. Emphasis is placed on workplace safety, regulatory compliance, **quality assurance**, and environmental responsibility to ensure that graduates are prepared to contribute effectively in electrical workplaces.

Upon completion, graduates may pursue entry-level employment in industries such as manufacturing, assembly, electrical testing, or electrical parts supply and sales. Those interested in further advancing their careers in the electrical field, including roles in power distribution, electrical maintenance, installation, automation, and control systems, may choose to pursue additional education, apprenticeship training, or certification pathways.

This program standard establishes a common framework of skills, knowledge, and professional attitudes that are essential for entry-level employment in the electrical field. While this standard provides a broad foundation, individual colleges may offer specialized courses or pathways to support various career aspirations. Graduates may also be eligible for credit recognition or advanced standing in apprenticeship training programs. Prospective students should contact individual colleges for details regarding articulation agreements, apprenticeship pathways, and industry certifications.

See Glossary

Note: The Ontario Council on Articulation and Transfer (ONCAT) maintains the provincial postsecondary credit transfer portal, ONTransfer.

Synopsis of the vocational learning outcomes

Electrical Techniques

The graduate has reliably demonstrated the ability to:

1. Perform duties under supervision in accordance with workplace regulations.
2. Assist in the preparation, maintenance and storage of electrical drawings and records to ensure the integrity of the information and workflow control.
3. Assist in the identification and **troubleshooting** of basic electrical issues to support reliable system operation in compliance with industry standards.
4. Use and maintain **instrumentation** equipment in accordance with manufacturer's recommendations.
5. Assist in the assembly and maintenance of electrical and electronic, circuits and components according to project specifications.
6. Assist in the installation and **troubleshooting** of basic electrical machines and power systems to maintain operational integrity and safety.
7. Assist in conducting **quality assurance** or control procedures for electrical systems and components to ensure reliability and compliance.
8. Apply basic electrical cabling requirements, install and test system **grounding** and **bonding**, and assist in the selection of electrical equipment to support safe and compliant system operation.
9. Comply with workplace best practices, health and safety standards to maintain efficient, safe and secure operations.
10. Assist in the installation and **troubleshooting** of communication systems to maintain operational integrity and safety.
11. Perform tasks in compliance with relevant legislation, industry standards, and ethical principles to support safety, efficiency, and sustainability in the electrical workplace.

See Glossary

Note: The learning outcomes have been numbered as a point of reference; numbering does not imply prioritization, sequencing, nor weighting of significance.

The vocational learning outcomes

Vocational learning outcome

1. The graduate has consistently demonstrated the ability to: perform duties under supervision in accordance with workplace regulations.

Elements of the performance

a. Follow supervisor instructions to complete assigned tasks safely and effectively.
b. Apply basic workplace health, safety, and regulatory guidelines when performing tasks.
c. Demonstrate an understanding of fundamental workplace policies and procedures.
d. Communicate clearly with supervisors and colleagues to ensure task completion.
e. Use tools, equipment, and materials safely under direct supervision.
f. Report workplace incidents, hazards, or issues to a supervisor as required.

See Glossary

Vocational learning outcome

2. The graduate has consistently demonstrated the ability to: assist in the preparation, maintenance and storage of electrical drawings and records to ensure the integrity of the information and workflow control.

Elements of the performance

a. Interpret electrical codes, standard symbols, and notations used in electrical drawings.
b. Read and interpret simple electrical schematics, single-line diagrams, and assembly drawings.
c. Use basic tools and software to assist in preparing and modifying electrical drawings.
d. Assist in the preparation of electrical specifications and project-related documentation.
e. Help generate equipment lists and bills of materials for electrical projects.
f. Store, retrieve, and organize documentation using electronic and/or paper-based systems.
g. Assist in maintaining accurate and up-to-date records for electrical projects.
h. Document testing, modifications, and **troubleshooting** activities related to electrical systems.
i. Ensure compliance with industry standards and regulatory documentation requirements.
j. Follow established protocols for version control, updates, and archival of electrical documentation.

See Glossary

Vocational learning outcome

3. The graduate has consistently demonstrated the ability to: assist in the identification and **troubleshooting** of basic electrical issues to support reliable system operation in compliance with industry standards.

Elements of the performance

a. Use basic mathematical and scientific applications, including algebra, trigonometry, and physics, to solve simple technical problems related to electrical systems.
b. Assist in **troubleshooting** and testing electrical circuits and equipment by applying fundamental mathematical and scientific concepts.
c. Identify simple technical problems in basic electrical systems and propose alternative solutions under supervision.
d. Support the interpretation of results from calculations and assist in validating their accuracy.
e. Use appropriate software tools for calculations, analysis, and **troubleshooting** of electrical systems.
f. Assist in documenting electrical and electronic circuits using computational tools and software.
g. Research and utilize information from online resources, such as manuals, handbooks, knowledge bases, and technical databases, to support problem-solving.
h. Apply software tools to organize, store, and retrieve information related to electrical systems and solutions.
i. Assist in performing conversions among number systems such as binary, decimal, octal, hexadecimal, Boolean, and binary-coded decimal, as required for basic electrical problem-solving.

See Glossary

Vocational learning outcome

4. The graduate has consistently demonstrated the ability to: use and maintain equipment in accordance with manufacturer's recommendations.

Elements of the performance

a. Select and safely use a variety of **instrumentation** equipment, such as multimeters, to perform measurements and tests.
b. Identify and mitigate potential hazards while using and maintaining test and **instrumentation** equipment by adhering to applicable safety standards.
c. Conduct basic measurements, including power, voltage, resistance, and current, using appropriate **instrumentation** equipment.
d. Use test equipment to monitor, analyze, and troubleshoot basic electrical and electronic circuits.
e. Assist in testing and **troubleshooting** control systems, including Programmable Logic Controllers (PLC), semiconductor circuits, and electromechanical switching circuits.
f. Contribute to analyzing open and closed-loop control systems to identify potential issues and assist in resolving them.
g. Support the maintenance and calibration of test and **instrumentation** equipment to ensure accuracy and reliability during operation.
h. Use test equipment to troubleshoot motor speed control systems, servo systems, and other control applications under supervision.
i. Assist in the installation, testing, and **troubleshooting** of control systems and components.
j. Contribute to testing and analyzing control system performance to ensure functionality and compliance with specifications.

See Glossary

Vocational learning outcome

5. The graduate has consistently demonstrated the ability to: assist in the assembly and maintenance of electrical and electronic, circuits and components according to project specifications.

Elements of the performance

a. Assemble electrical circuits, components, and equipment based on technical specifications and requirements.
b. Identify and implement wiring requirements for basic electrical installations, ensuring compliance with standards.
c. Install protective devices such as fuses, circuit breakers, relays, and instrument transformers under supervision.
d. Follow Electrostatic Discharge (ESD) procedures when handling sensitive electrical components.
e. Use standard test equipment to identify problems and test electrical circuits, components, and systems.
f. Assist in **troubleshooting** analog, digital, power electronic, and electromechanical devices by applying established procedures.
g. Apply knowledge of voltage and current relationships to analyze and resolve issues in electrical systems.
h. Perform basic maintenance, repairs, and replacements for electrical and electronic equipment.
i. Follow service and preventative maintenance schedules to ensure the operational integrity of electrical systems.
j. Assist in upgrading and modifying equipment to meet updated specifications or operational needs.
k. Support the modification of electrical circuits and components to meet revised specifications.
l. Document assembly, testing, and **troubleshooting** procedures accurately to maintain clear records.
m. Assist in the installation, testing, and maintenance of automation and control systems to meet operational criteria such as voltage, current, impedance, and environmental requirements.
n. Operate and test systems in accordance with manufacturer specifications to verify functionality and safety.

See Glossary

Vocational learning outcome

6. The graduate has consistently demonstrated the ability to: assist in the installation and **troubleshooting** of basic electrical machines and power systems to maintain operational integrity and safety.

Elements of the performance

a. Assist in the installation of alternating current (AC) and direct current (DC) machines and their control systems based on design specifications, regulatory standards, and industrial requirements.
b. Support the installation of AC and DC motor drives and control systems, ensuring compliance with safety and operational standards.
c. Apply knowledge of frame size, torque class, and other specifications to assist in the installation process.
d. Assist in testing electrical machines, motor drives, and power systems for functionality and compliance with operational criteria.
e. Contribute to **troubleshooting** system faults and instabilities in electrical machines, microcontrollers and power systems under supervision.
f. Interpret basic electrical drawings related to cabling and system **grounding**.
g. Apply electrical cabling and wiring practices that adhere to safety codes and standards, including the Electrical Code of the applicable province or country.
h. Assist in preparing wire and cable lists and assemblies for specific applications based on operational and regulatory requirements.
i. Apply principles of electrical safety when installing and operating basic electrical machines and power systems.
j. Support the testing of system **grounding** to ensure proper operation and adherence to safety standards.
k. Assist in maintaining accurate records of installation and **troubleshooting** activities for electrical machines and power systems.
l. Contribute to the preparation of documentation for system components, including cabling, **grounding**, and control system configurations.

See Glossary

Vocational learning outcome

7. The graduate has consistently demonstrated the ability to: assist in conducting **quality assurance** or control procedures for electrical systems and components to ensure reliability and compliance.

Elements of the performance

a. Record specifications for electrical circuits, equipment, and systems to support **quality assurance** or control activities.
b. Assist in performing **quality assurance** or control testing using appropriate tools and techniques, ensuring adherence to organizational standards and procedures.
c. Monitor, analyze, and report test results in alignment with **quality assurance** or control requirements.
d. Support the application of standards from relevant **quality assurance** or control programs, including organizational, provincial, and national guidelines.
e. Ensure that **quality assurance** or control processes align with technical and operational specifications.
f. Maintain accurate documentation of **quality assurance** or control activities, test results, and findings to support compliance and reporting.
g. Assist in preparing **quality assurance** or control reports to support compliance, decision-making, and continuous improvement efforts.

See Glossary

Vocational learning outcome

8. The graduate has consistently demonstrated the ability to: apply basic electrical cabling requirements, install and test system **grounding** and **bonding**, and assist in the selection of electrical equipment to support safe and compliant system operation.

Elements of the performance

a. Interpret basic electrical drawings to determine cabling and system **grounding** and **bonding** requirements.
b. Apply electrical cabling and wiring practices in compliance with applicable electrical and safety codes.
c. Assist in the preparation of wire and cable lists and assemblies, ensuring adherence to provincial or national Electrical Code standards.
d. Follow basic codes, procedures, and processes to assist in the installation and testing of system **grounding**.
e. Identify system faults and instabilities in **grounding** systems under supervision.
f. Locate user guides and data sheets to obtain technical information about appropriate electrical equipment, systems, and components.
g. Interpret specifications and requirements to assist in selecting equipment that meets project needs and complies with standards.
h. Identify and recommend suitable substitutes, when necessary, by consulting manufacturers' specifications, catalogs, and online resources.
i. Ensure all installations, testing, and equipment selections comply with relevant codes, regulations, and project specifications.
j. Maintain accurate documentation of cabling, **grounding**, and equipment selection processes for reporting and compliance purposes.

See Glossary

Vocational learning outcome

9. The graduate has consistently demonstrated the ability to: comply with workplace best practices, health and safety standards to maintain efficient, safe and secure operations.

Elements of the performance

a. Select and use appropriate personal protective equipment (PPE), including arc flash protection, to ensure personal safety in electrical workplaces.
b. Maintain PPE and ensure it complies with safety standards and regulations.
c. Select, operate, and maintain hand and power tools following safe practices and manufacturer guidelines.
d. Inspect tools regularly to identify and address potential safety concerns.
e. Interpret and adhere to workplace safety codes, including Lock-out/Tag-out, policies, and practices, including accident prevention procedures.
f. Recognize and report hazardous working conditions or unsafe practices to appropriate personnel.
g. Apply regulatory and licensing requirements when performing installations, maintenance, and repairs of electrical equipment.
h. Follow procedures for the safe handling, storage, and disposal of hazardous materials in accordance with Workplace Hazardous Materials Information System (WHMIS) and Transporting of Dangerous Goods (TDG) standards.
i. Ensure workplaces are kept clean, organized, and secure by following established best practices.
j. Assist in monitoring compliance with health and safety standards to promote a safe and efficient work environment.
k. Maintain accurate records of safety inspections, incidents, and preventative actions.
l. Communicate safety standards and practices effectively to team members under supervision.

Vocational learning outcome

10. The graduate has consistently demonstrated the ability to: assist in the installation and **troubleshooting** of communication systems to maintain operational integrity and safety.

Elements of the performance

a. Assist in the installation of wiring and components for communication systems and data systems.
b. Install and configure wiring for Local Area Networks (LANs) and Wide Area Networks (WANs) using appropriate devices and techniques.
c. Support the installation of communication systems such as emergency, fire alarm, and other security systems in compliance with industry standards.
d. Assist in testing the functionality and reliability of communication systems and data systems.
e. Test network wiring for LANs, WANs, and other communication systems to ensure performance meets specifications.
f. Verify the proper operation of emergency, fire alarm, and security systems following installation and testing procedures.
g. Identify and assist in resolving wiring and connectivity issues in communication systems.
h. Use appropriate tools and techniques to diagnose and troubleshoot issues in network and communication system components.
i. Support corrective actions and modifications to ensure systems meet operational requirements.
j. Follow relevant safety protocols and industry standards during the installation, testing, and **troubleshooting** of communication systems.
k. Adhere to manufacturer guidelines and specifications for communication devices and wiring installations.
l. Maintain accurate records of installation, testing, and **troubleshooting** activities for communication systems.
m. Report results of tests and **troubleshooting** activities to supervisors for further review and action.

See Glossary

Vocational learning outcome

11. The graduate has consistently demonstrated the ability to: perform tasks in compliance with relevant legislation, industry standards, and ethical principles to support safety, efficiency and sustainability in the electrical workplace.

Elements of the performance

a. Interpret and adhere to project specifications, drawings, and applicable legislation, including occupational health and safety regulations and labor laws.
b. Use equipment, materials, and tools in compliance with industry standards, legislative requirements, and organizational policies.
c. Follow professional ethical principles as established by governing associations and industry standards.
d. Apply environmental, ecological, and social considerations when completing tasks to promote sustainability and minimize negative impacts.
e. Monitor and ensure compliance with relevant codes, policies, and safety practices during installations, testing, and maintenance activities.
f. and activities accurately to ensure compliance with legal and organizational standards.
g. Participate in the review of workplace practices to identify opportunities for enhancing safety, compliance, and sustainability.

Glossary

Bonding: A low-impedance connection between conductive parts to ensure electrical continuity and equalize potential. Often confused with **grounding**.

Grounding: The connection of an electrical system to the earth to prevent electric shock hazards and stabilize voltage.

Instrumentation: Devices and systems used to measure, monitor, or control physical and electrical parameters (e.g., voltage, current, pressure, temperature).

Quality assurance: Planned and systematic activities within a quality system that provide confidence a product or service will meet specified requirements.

Troubleshooting: The process of diagnosing and resolving faults or malfunctions in electrical systems, equipment, or circuits.

Essential employability skills

All graduates of the Electrical Techniques program of instruction must have reliably demonstrated the essential employability skills learning outcomes listed below, in addition to achieving the vocational learning outcomes and meeting the general education requirement.

Context

Essential Employability Skills (EES) are skills that, regardless of a student's program or discipline, are critical for success in the workplace, in day-to-day living and for lifelong learning.

The teaching and attainment of these EES for students in, and graduates from, Ontario's Colleges of Applied Arts and Technology are anchored in a set of three fundamental assumptions:

- these skills are important for every adult to function successfully in society today;
- our colleges are well equipped and well positioned to prepare graduates with these skills; and
- these skills are equally valuable for all graduates, regardless of the level of their credential, whether they pursue a career path, or they pursue further education.

Skill categories

To capture these skills, the following six categories define the essential areas where graduates must demonstrate skills and knowledge.

- Communication
- Numeracy
- Critical thinking & problem solving
- Information management
- Interpersonal
- Personal

Application and implementation

In each of the six skill categories, there are a number of defining skills, or sub skills, identified to further articulate the requisite skills identified in the main skill categories. The following chart illustrates the relationship between the skill categories, the defining skills within the categories and learning outcomes to be achieved by graduates from all postsecondary programs of instruction.

EES may be embedded in General Education or vocational courses, or developed through discrete courses. However these skills are developed, all graduates must be able to reliably demonstrate the essential skills required in each of the six categories.

Skill category: communication

Defining skills

Skill areas to be demonstrated by graduates:

- reading
- writing
- speaking
- listening
- presenting
- visual literacy

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience.
2. respond to written, spoken or visual messages in a manner that ensures effective communication.

Skill category: numeracy

Defining skills

Skill areas to be demonstrated by graduates:

- understanding and applying mathematical concepts and reasoning
- analyzing and using numerical data
- conceptualizing

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. execute mathematical operations accurately

Skill category: critical thinking and problem solving

Defining skills

Skill areas to be demonstrated by graduates:

- analyzing
- synthesizing
- evaluating
- decision making
- creative and innovative thinking

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. apply a systematic approach to solve problems.
2. use a variety of thinking skills to anticipate and solve problems.

Skill category: information management

Defining skills

Skill areas to be demonstrated by graduates:

- Gathering and managing information
- Selecting and using appropriate tools and technology for a task or a project
- Computer literacy
- Internet skills

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. locate, select, organize and document information using appropriate technology and information systems.
2. analyze, evaluate and apply relevant information from a variety of sources.

Skill category: interpersonal

Defining skills

Skill areas to be demonstrated by graduates:

- Teamwork
- Relationship management
- Conflict resolution
- Leadership
- Networking

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. show respect for the diverse opinions, values, belief systems and contributions of others.
2. interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.

Skill category: personal

Defining skills

Skill areas to be demonstrated by graduates:

- Managing self
- Managing change and being flexible and adaptable
- Engaging in reflective practices
- Demonstrating personal responsibility

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. manage the use of time and other resources to complete projects.
2. take responsibility for one's own actions, decisions and their consequences.

General education requirement

Requirement

Within the Minister's Binding Policy Directive (2009), it is stated on Page 14 that General Education Requirements at the certificate level are "locally determined, however it is desirable that graduates at this level will have been engaged in learning that incorporates some breadth beyond the vocational field of study, especially in programs of Instruction intended to lead to further postsecondary study in a related field".

Given this statement, education providers may include some breadth beyond the vocational field, e.g. themes of arts in society, civic life, social and cultural understanding, personal understating, and science and technology.

Purpose

The purpose of General Education in the curriculum is to contribute to the development of citizens who are conscious of the diversity, complexity and richness of the human experience; who are able to establish meaning through this consciousness; and who, as a result, are able to contribute thoughtfully, creatively and positively to the society in which they live and work.

General Education strengthens students' essential employability skills, such as critical analysis, problem solving and communication, in the context of an exploration of topics with broad-based personal and/or societal importance.

Themes

The themes listed below may be used to provide direction to the education providers in the development and identification of courses that relate to the General Education Requirement for programs of instructions.

Each theme provides a statement of Rationale and offers suggestions related to more specific topic areas that could be explored within each area. These suggestions are neither prescriptive nor exhaustive. They are included to provide guidance regarding the nature and scope of content that would be judged as meeting the intent and overall goals of General Education.

Arts in society:

Rationale:

The capacity of a person to recognize and evaluate artistic and creative achievements

is useful in many aspects of his/her life. Since artistic expression is a fundamentally human activity, which both reflects and anticipates developments in the larger culture, its study will enhance the student's cultural and self-awareness.

Content:

Courses in this area should provide students with an understanding of the importance of visual and creative arts in human affairs, of the artist's and writer's perceptions of the world and the means by which those perceptions are translated into the language of literature and artistic expression. They will also provide an appreciation of the aesthetic values used in examining works of art and possibly, a direct experience in expressing perceptions in an artistic medium.

Civic Life:

Rationale:

In order for individuals to live responsibly and to reach their potential as individuals and as citizens of society, they need to understand the patterns of human relationships that underlie the orderly interactions of a society's various structural units. Informed people will have knowledge of the meaning of civic life in relation to diverse communities at the local, national and global level and an awareness of international issues and the effects of these on Canada, as well as Canada's place in the international community.

Content:

Courses in this area should provide students with an understanding of the meaning of freedoms, rights and participation in community and public life, in addition to a working knowledge of the structure and function of various levels of government (municipal, provincial, national) in a Canadian and/or in an international context. They may also provide an historical understanding of major political issues affecting relations between the various levels of government in Canada and their constituents.

Social and cultural understanding:

Rationale:

Knowledge of the patterns and precedents of the past provide the means for a person to gain an awareness of his or her place in contemporary culture and society. In addition to this awareness, students will acquire a sense of the main currents of their culture and that of other cultures over an extended period of time in order to link personal history to the broader study of culture.

Content:

Courses in this area are those that deal broadly with major social and cultural themes.

These courses may also stress the nature and validity of historical evidence and the variety of historical interpretation of events. Courses will provide the students with a view and understanding of the impact of cultural, social, ethnic or linguistic characteristics.

Personal understanding:

Rationale:

Educated people are equipped for life-long understanding and development of themselves as integrated physiological and psychological entities. They are aware of the ideal need to be fully functioning persons: mentally, physically, emotionally, socially, spiritually and vocationally.

Content:

Courses in this area will focus on understanding the individual: his or her evolution; situation; relationship with others; place in the environment and universe; achievements and problems; and his or her meaning and purpose. They will also allow students the opportunity to study institutionalized human social behaviour in a systematic way. Courses fulfilling this requirement may be oriented to the study of the individual within a variety of contexts.

Science and technology:

Rationale:

Matter and energy are universal concepts in science, forming a basis for understanding the interactions that occur in living and non-living systems in our universe. Study in this area provides an understanding of the behaviour of matter that provides a foundation for further scientific study and the creation of broader understanding about natural phenomena.

Similarly, the various applications and developments in the area of technology have an increasing impact on all aspects of human endeavour and have numerous social, economic and philosophical implications. For example, the operation of computers to process data at high speed has invoked an interaction between machines and the

human mind that is unique in human history. This and other technological developments have a powerful impact on how we deal with many of the complex questions in our society.

Content:

Courses in this area should stress scientific inquiry and deal with basic or fundamental questions of science rather than applied ones. They may be formulated from traditional basic courses in such areas of study as biology, chemistry, physics, astronomy, geology or agriculture. As well, courses related to understanding the role and functions of computers (e.g., data management and information processing) and assorted computer-related technologies should be offered in a non-applied manner to provide students with an opportunity to explore the impact of these concepts and practices on their lives.

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978-1-4868-9377-5 PDF