

Profile of a Certified Engineering/Applied Science Technician

A Certified Engineering Technician or Certified Applied Science Technician (hereinafter referred to as the Technician) is an individual who, through academic training and experience in the application of mathematics and engineering or scientific principles, is capable of accepting responsibility and of exercising judgment in the specialized portion of the field of engineering or applied science technology in which training has been achieved. By virtue of this training and experience, a Technician is often delegated responsibility for aspects of work within this specialized portion of the field of training.

Career Opportunities

A Technician may carry out a variety of technical work processes in the area of specialization in which certification was granted. Employment or career opportunities exist in many phases of industry, consulting, business, governmental and public organizations. Typical areas would include design, marketing, sales, estimating, research and development, production control, purchasing, operations and production, testing, quality control, maintenance, customer and field service, supervision of projects and people, instruction and training. Such work is usually in association with other professionals as part of a team.

Education and Training

The academic training for a Technician is based upon a core of applied mathematics and engineering science fundamentals. The mathematics core would include topics such as algebra, geometry, trigonometry, descriptive statistics, computer applications and introductory calculus, to the extent required for the explanation of technical components of the specialized area of training. The Technician will use mathematics as a tool in the solution of the technical problems of his/her specialized field. The engineering and science fundamentals provide a firm base along with mathematics for specialized training which normally invokes empirical rather than analytical solutions to technical problems. The academic and theoretical portion of a program of training is suitably reinforced by laboratory and project experience amounting to approximately one half of the total program.

Certification

An individual who successfully completes the examinations of a provincial association or who graduates from an accredited technician level program, or who otherwise meets the academic standards established by the certifying body, may on completion of at least two years of acceptable practical experience in an area of work directly related to the area of specialized academic achievement, be registered as a Certified Engineering Technician or Certified Applied Science Technician.

Duties and Responsibilities

The Technician generally uses a practical approach based upon a detailed understanding of the field of technology in which certification was granted. The Technician examines his/her assignments, objectives and instructions to select procedures and actions to resolve the assigned problem.

The Technician may:

- Assist in the design of equipment or systems; assist in the interpretation and preparation or modification of specifications, technical drawings or instructions; prepare estimates and supervise phases of major projects.
- Conduct tests; build prototypes or models; operate pilot plants, trouble-shoot equipment; resolve production or construction problems; compile data and reports.
- Supervise phases of construction projects; inspect construction projects; conduct tests, surveys or prepare estimates for construction activities.
- Trouble-shoot, service, calibrate or supervise the repair or installation of equipment processes or products.
- Provide support for operations activities including supervision of operations or operation-related activities such as quality assurance, production control and maintenance.
- Provide support in laboratory environments by conducting experiments, conducting tests or servicing complex equipment in support of research and development, quality control or academic activities.
- Supervise, train and coordinate the activities of others.

While some duties of the Technician may be similar to skilled craftsmen or tradesmen, these would not normally be of a routine nature and would normally apply on sophisticated equipment or processes. Many of the duties of the Technician will be similar to the duties of technologists and other professionals but these will normally be in a very selective area of specialization.

The Certified Engineering Technician or Certified Applied Science Technician may, through long experience in the field, become recognized as a technical expert in a defined specialty and will assume responsibility for his/her work and at all times be bound by a professional code of ethics. He/she will be identified by the certification mark of C.Tech.