



Operating Engineers/Operator Training Provider Accreditation Policy



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1. Background

This policy describes and sets out policies and procedures related to:

- the accreditation of Operating Engineers/Operator training providers
- the approval of Operating Engineers/Operator training programs
- mandatory requirements for maintaining accreditation
- TSSA auditing of training providers and training programs
- sanctions for non-compliance with this policy.

Pursuant to the *Technical Standards and Safety Act, 2000* (the “Act”), the objects of the Technical Standards and Safety Authority (“TSSA”) include to undertake public safety services, including training, in relation to the matters assigned to TSSA under the Act and its regulations.¹ The director, operating engineers (the “Director”) is authorized to establish the qualifications, training and experience that are required for regulated persons, and establish their duties and responsibilities.² For operating engineers, these certification and training requirements are set out in Ontario Regulation 219/01 (Operating Engineers).

Any person applying for a reduction in qualifying experience requirements, toward an operating engineer certificate, that has successfully completed an approved course of training, such portion of the time spent by the applicant in completing the course of training that the chief officer approves may be included in the calculation of qualifying experience under Table 8.³

2. Definitions

In this policy:

- **“training program”** means an educational curriculum intended to satisfy the training requirements of an operating engineer certificate under O. Reg. 219/01.
- **“training provider”** means a person who provides or offers to provide a training program to any person.
- **“accredited training provider”** means a training provider accredited by TSSA in accordance with this policy to provide an approved training program to the public.
- **“approved training program”** means a training program approved by TSSA in accordance with this policy for delivery by an accredited training provider to the public.

¹ Section 3.6 of the Act.

² Section 32(1) of the Act.

³ O. Reg. 219/01, s. 21.



3. Practical Experience Time Reduction

TSSA approves training programs for the following Operating Engineers/Operator classifications:

- 1st Class
 - 9 months reduction from the required 30 months practical experience by successfully completing a minimum 6-month training program.
- 2nd Class
 - 5 months reduction from the required 18 months practical experience by successfully completing a minimum 3-month training program.
- 3rd Class
 - 11 months reduction from the required 12 months practical experience by successfully completing a minimum 8-month training program.
- 4th Class
 - 9 months reduction from the required 12 months practical experience by successfully completing a minimum 6-month training program.
- Compressor Operator
 - 1-month reduction from the required 9 months practical experience by successfully completing a minimum 1-month training program.
 - A further 6 month time reduction is allowed if the candidate has had a minimum of 6 months Chief Officer approved experience in the servicing and/or repair of registered and operator attended compressor plants.
- Refrigeration Operator “A”
 - 1-month reduction from the required 12 months practical experience by successfully completing a minimum 1-month training program.
- Refrigeration Operator “B”
 - 1-month reduction from the required 9 months practical experience by successfully completing a minimum 1-month training program.
 - A further 6-month time reduction is allowed if the candidate has had at minimum of 6 months Chief Officer approved experience in the servicing and/or repair of registered and operator attended refrigeration plants.
- Steam Traction Operator:
 - 40 hour reduction from the required 160 hours practical experience by successfully completing a minimum 24-hour training program.

To be eligible for the practical time reduction allowance, an applicant must successfully complete the full time training program, including the practical field/co-op training, meeting the prescribed attendance requirements outlined in section 4 of this policy. A partial time reduction allowance will not be permitted.

Note: it is the responsibility of the certification candidate (student) to attain the practical field/co-op training for the classification being sought; however, a training provider should recognize its obligation to take all reasonable steps to assist a student to meet this requirement.



4. Training Program Requirements

Program Requirements

A full-time training program for Operating (Power) Engineering, Compressor and Refrigeration Operators is deemed to consist of a minimum of 20 hours of instruction per week, classes to be held a minimum of 3 days/week.

In approved training programs that are provided on a progression basis, i.e. 4th to 3rd, 3rd to 2nd, 2nd to 1st, it is required that the student must successfully complete and pass each approved training program before progressing to the next certification level program.

No portion of the required practical field/co-op training component can be used to reduce the minimum specified academic component, and conversely, no portion of the required academic component can be used to reduce the minimum specified practical field/co-op training component. If a student obtains any, or all, of the practical field/co-op training during the academic component, the academic duration shall be extended accordingly. For example: total academic and practical field/co-op training for a 4th Class candidate cannot be less than nine months.

The 4th & 3rd Class programs shall have approximately 60% classroom theory and 40% practical (lab, shop, and training plant).

The 2nd & 1st Class, Compressor & Refrigeration Operator programs can have up to 90% theory, the remainder shall be practical and is to involve: start-up/shutdown, operation, disassemble/assemble of related power plant equipment and components.

Steam Traction programs must have sufficient practical steam traction technology equipment and components to support the theory presentations.

Student Attendance Requirements

Students are required to attend classes regularly and on time, and must maintain a minimum of:

- 80% attendance in theoretical/in-class components; and,
- 90% attendance in practical/lab components of the training program.

Failure to meet the attendance requirements, outlined above, will result in the loss of eligibility to for practical time reduction allowance.

Areas of Training

The training program is to include all aspects of the required TSSA syllabus. The Operating Engineers training program shall be comprised of the following four (4) distinct types of technologies as listed in the Operating Engineers Regulation:

- Steam/Power plant;
- Steam prime mover plant (steam turbine, steam engine);
- Refrigeration plant;
- Compressor plant.



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Consequently, any approved training program will require students to have operating and maintenance experience on these items and their respective related auxiliary equipment.

It is strongly recommended that training providers provide their students with the opportunity to obtain 'field/co-op operating experience' in more than one plant. Exposure to several industrial and/or large commercial registered attended plants compliments the in-school learning component.

Instructors and Teaching Staff

Course and program teaching staff are to be fully conversant and familiar with the Power Engineering profession and have Operating (Power) Engineering and/or Operator Certification that is equal to or higher than the level being taught. It is recognized that teaching staff with related expertise such as, but not limited to, mathematics, electrical, welding, pipefitting, etc. may be utilized to assist in the teaching process.

Training programs must be delivered by instructors designated in the application materials (unless otherwise approved by TSSA in writing).

Training Plant

The training provider shall have access to a fully operational TSSA registered attended plant (minimum 4th Class) used for training purposes. The plant would have a fire tube and/or a water tube steam boiler, water treatment and testing equipment, an air compression system, a refrigeration system, a steam prime mover and all related auxiliary plant equipment. Each site must be pre-approved for use by TSSA (which may necessitate a field inspection).

In the absence of a school based operational training plant, an industrial host plant may be acceptable and shall be reasonably and timely accessible for the students to be given equivalent operating and maintenance training. Such host plant must be able to accept the total student interface engagement and provide independent equal and safe access and experience functions, as would be required in a school based training plant.

All laboratory/shop/skills training/training plant projects and practical field co-op training projects shall be marked and be a component of the students final grade.

It is expected that there will be sufficient practical and physical resources to allow single student engagement and related projects marking.

Other Resources

The following resources must be made available to effectively carry out the training program:

- Classroom: room or rooms in which theoretical training is normally provided. Has resources including black / white boards, flip charts, overheads, projection equipment, etc.



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- Library: selection of text books and audio/visual presentations covering all subjects relating to the Operating/Power Engineering syllabus and profession and also a selection of Power Engineering periodical publications.
- Computer Class Space: for general computer instruction and general simulator presentation.
- Drafting/Drawing Class Space: for instruction and application of drafting/drawing experience.
- Laboratory: rooms / spaces containing (small scale) operational power plant equipment, mock-ups of components and systems, trainers, simulators, displays, etc., that can be either started and operated, used for experimentation and doing analysis and troubleshooting. These components are to reinforce power plant equipment theory and the training plant learning.
- Shop: rooms / spaces containing a broad range of power plant equipment and related auxiliaries, parts / components, safety devices and control items that can be assembled / disassembled, repaired, dead weight tested, etc. and contains sufficient workbenches and appropriate tools to allow single student engagement.
- Skills Training: Skills training will be necessary for Power Engineering students to be given practical project marked skills training and to perform actual work projects in specific technical shops on the following items:
- Millwright and tools shop
 - Bench work projects (use of tools on specific projects)
 - Safe use and application of hand and power tools with related projects
 - Use and application of precision measurement devices
 - Basic millwright fitting, shaft alignment, pump packing, valve repair, gauge glass repair, gasket fitting and general dismantling, maintenance and assembly of typical power plant equipment
- Electrical shop/lab
 - Electric wiring, switchgear training, motor and generator connections and electrical systems repair and maintenance with related projects
- Pipe fitting shop
 - Basic pipe layout, cutting, threading, fitting and hydrostatic pressure testing (steel and copper pipe projects)
- Welding shop
 - Basic gas and electric welding, brazing, soldering and oxy-acetylene gas cutting

Curriculum Revisions/Enhancements

To accommodate changes and developments in technology and equipment, TSSA will review, revise and enhance the training standard/syllabus content as necessary. Upon the issuance of a revised/enhanced syllabus, training providers are required to update their training programs to ensure that it accords with the revised syllabus. TSSA will verify that training programs are in alignment with the established standard during the audit process.

5. Application Contents and Assessment

In order to become accredited, training providers must submit an [“Application for Accreditation as an Operating Engineer Training Provider”](#) in the prescribed form, together with all required supporting materials. Once received, TSSA will review and assess the application and notify the applicant of any missing or deficient information.



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In preparing applications, applicants should bear in mind that theory instruction must be treated as an integral part of each program and must be properly supported. Audio/visual equipment, flip charts, and other training materials and props such as parts and tools that assist in the training should be used. Laboratory/workshop requirements must also be highlighted in application.

Applications shall be complete, submitted in hard copy or electronic format, and the syllabus for each classification applied for must be sequentially ordered. Applications not meeting these requirements will be returned to the applicant and/or may be subject to delay in processing.

Proposed training programs submitted by a training provider will be assessed by TSSA against the training program standards and syllabus established in the applicable Certification and Examination Guides, which are available at www.tssa.org.

Training providers must be accredited before providing or offering to provide (advertising) a training program to any member of the public. TSSA does not accept applications or declarations for certification submitted on behalf of students by training providers who are not accredited.

A request for a program approval must be submitted in a formal indexed 3-ring binder, and shall contain the following information:

1. The names of all instructors who will deliver training programs, including, for each:
 - a. a resume or CV;
 - b. photocopies of all relevant and current/valid trade or occupational certificates;
 - c. a description of teaching or training delivery experience;
 - d. identification of all modules for which they will be conducting training; and
 - e. a description of industry experience not contained in the above.
2. Program outline(s), including both theoretical and practical training aspects for the relevant class.
 - a. Course/Program name, duration, course layout and description, syllabus, and related curriculum timetable indicating days/week, hours/day, theory, laboratory, shop and training plant practical hours.
 - b. Copies of the various laboratories, shops, training plant and field/co-op assignments/projects student is required to successfully complete.
 - c. A description/layout/photographs of the class facilities, library, laboratories, shop and training plant. Submission to include components, texts, resources, equipment, tools available for instruction purposes; a copy of the training plant registration certificate.
3. A copy of the written agreement between the training provider and the Company, if the training provider is using an off-site lab, shop, and/or registered training plant (including a copy of the plant registration) spelling out the formal and legal availability and use of the facility for the purpose of training students.
4. Copies of the Record Keeping Requirements, including but not limited to:
 - a. Sign-in/attendance records; and



- b. the training program certificate of completion.

TSSA reserves the right to request additional information from applicants, and will work cooperatively with the applicant to expedite the approval process.

TSSA may require that an applicant submit to one or more consultations and/or inspections of the facility where the training is intended to take place. In some circumstances the applicant may also be required to perform a mock training session for TSSA staff, which will be reviewed for content, conformity to the standards, training provider and instructor competence and the examination/assessment processes.

6. Accreditation and Renewal – Rights, Privileges and Obligations

Once accredited, training providers receive and are entitled to the following:

- Formal accreditation by TSSA to deliver approved training programs. Accreditation confirms that the program(s), as submitted to TSSA, have met all of the required standards and criteria, which will also be documented in the formal “approved-course-for-practical-experience- time-reduction” letter issued by TSSA.
- The right to use of the phrase “TSSA Accredited” in any advertising and promotion materials, but only where such use is specifically associated with the accredited training provider and at least one approved training program. This does not include the right to reproduce or use the TSSA logo in any fashion.
- Access to syllabus documents (including future revisions and/or enhancements), which will be available online at www.tssa.org.

Accreditation Renewal

Training provider accreditations are time-limited and will expire on the date indicated at the time the accreditation is issued. In order to renew an Operating Engineer Training Provider Accreditation, the training provider must submit to TSSA a completed “Application for Accreditation as an Operating Engineer Training Provider”. Accredited training providers must monitor the date of expiration on their accreditation, and shall submit their renewal application no later than 30 days prior to the date of expiry. In addition to these requirements the accredited training provider must complete and pass an annual training provider audit, while providing a full-time training program to an annual intake of students for each approved training program. An accreditation will not be renewed until the time the renewal application materials have been received and accepted by TSSA. In addition, an accreditation may be revoked at any time depending on the severity of the non-compliance and the potential risk to public safety.

Training providers shall ensure that all instructors have access to the latest edition and revision of the code(s) applicable to the classification on which they are assigned to provide training, and that they will have full working knowledge of such codes, the Act and the Operating Engineers regulation.

Organizations/Individuals shall not represent themselves as training providers or offer to provide the services of a training provider unless and until they have been formally accredited by TSSA for those activities.



7. Record Keeping and Reporting

The training provider shall keep the following information and records, and must provide same, upon request, to TSSA:

- All students of the training program, whether registered, current, or past.
- Sign-in/attendance records, including but not limited to: course dates, course name, students' names, instructor's name, instructor's signature, and date (as applicable).
- Records of completion for each program module (as applicable).
- Copies of Certificates of Completion issued, which must include the student's name, program name, program date, and signature of the program signing authority.

All the above records shall be maintained for a five-year period.

The training provider shall report to TSSA within 15 days any known breach of its obligations under this policy, including but not limited to:

- Issuance of a certificate/diploma, etc. to an individual who did not attend and complete the required program material.
- Instructors acting in contravention to this policy.

8. Auditing of Training Providers and Training Programs

TSSA may audit any training provider or training program, in order to ensure that the terms and conditions of accreditation and approval are being met and that public safety is not being compromised. TSSA will review the program content against the applicable training standard/syllabus, assess the instructor(s), training equipment and presentation aids and laboratory/content.

Specific auditing activities may include, but are not limited to:

- Evaluation of in-class training programs
- Evaluation of training material
- Evaluation of training records and logs
- Evaluation of instructors
- Student interviews (in camera)
- Evaluation of laboratory content

After a training provider audit, TSSA will prepare a written report to the training provider describing the findings of the audit and providing recommended and mandatory improvements. The report may also provide formal notification of any deficiencies found, and require that such deficiencies be addressed, including associated deadlines. As required, inspection orders will be issued to the training provider where public safety may be compromised.



TSSA may perform follow-up audits or require follow-up action by the training provider to determine whether any deficiencies found in an audit have been adequately addressed.

Frequency: audits will take place annually or at an extended frequency if deemed necessary by TSSA.

TSSA will endeavour to minimize any disruption to training providers or training programs. Training providers must cooperate with all auditing activities and shall allow unhindered access to the TSSA representative to the training program.

Audit activities that entail attendance by TSSA inspector constitute inspections under s. 17 of the Act. As such, training providers are reminded that they must fully cooperate during such inspections, and that it is an offence to provide false or misleading information to a TSSA inspector or to obstruct him or her during an inspection.

9. Sanctions for Non-Compliance

TSSA will take progressive action against any training provider found to not be complying with any part of this policy, depending on the severity of the non-compliance and the potential risk to public safety.

Upon discovering a non-compliance, TSSA may:

- Issue an order relating to the non-compliance to the training provider, including directions on any corrective action that must be taken and the deadline for completing such action.
- Impose conditions (including restrictions and limitations) on the training provider's accreditation.
- Suspend the training provider's accreditation.
- Revoke the training provider's accreditation.

TSSA is not obliged to take progressive action in all circumstances. TSSA may immediately carry out any of the above actions where a serious public safety concern exists or where TSSA has reason to believe the non-compliance will not be addressed by less severe action.

A training provider is prohibited from providing training programs at any time when its accreditation has been suspended (whether provisionally or not) or revoked, and no refund will be issued for any fees paid by the training provider to TSSA for any such time period.

Individuals who have been trained by a training provider found in contravention of the standards will not have their applications processed and will be required to re-train in order to qualify for the practical time reduction.

10. Administrative Cancellation of Accreditation

TSSA may cancel a training provider's accreditation or a training program's approval if:

- a training provider has not delivered any part of a complete training program in the previous year;
- non-payment of any amount payable by a training provider to TSSA for over 90 days;



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- a training provider lacks or no longer employs certified and/or qualified instructors.

Re-accreditation of a training provider by TSSA requires the training provider to submit a new application, including all requirements established in [Section 5: Application Contents and Assessment](#).

A training provider may cancel its accreditation or withdraw an approved training program by notifying TSSA in writing.

11. Legal Disclaimers

By applying for accreditation, the applicant agrees to indemnify and hold harmless TSSA and its employees, agents, successors and assigns from any and all damages, actions, suits, claims or loss for any act or omission related to the accreditation of the applicant as a training provider or the approval of any of its training programs.

TSSA shall not be liable for any damage, injury, loss of life or property resulting from training delivered by a training provider. The training provider accepts full liability to individual trainees, to the entire exclusion of TSSA, in the event that a trainee's accreditation is revoked by TSSA owing to deficient training.

The accreditation provided by TSSA is exclusively for purposes of delivering training programs. Under no circumstances does TSSA hold itself or represent that the accreditation constitutes an endorsement of the training provider or its business for any other purpose, nor will the accreditation necessarily result in certification of trainees. Responsibility for obtaining such certification is exclusively that of the trainee.

Notwithstanding accreditation, TSSA expressly reserves the right to review, approve or not approve a trainee's application for such certification. Under no circumstances will TSSA review a trainee's application or examination or enter into discussion with a training provider regarding the personal application for certification of a trainee.

12. Amendments to this Policy

TSSA may amend this policy from time to time, and the amended policy will then become applicable and mandatory to all accredited training providers. TSSA will endeavour to provide all training providers and the public at large with at least 30 days notice of any major change to this policy.