MEDICAL DEVICE REPROCESSING
Seneca College Certificate
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Thank you for your interest in the Seneca College Medical Device Reprocessing Program.

This program will introduce you to the theory and practice of specialists working in health care medical device reprocessing departments.

The purpose of the Medical Device Reprocessing certificate program is to provide learners with the knowledge and skills to be able to reprocess reusable medical devices appropriate to an entry-level medical device reprocessing technician (MDRT) position. Graduates will be eligible to apply for MDR positions in hospitals, veterinary clinics, dental clinics and private clinics throughout Canada.

The Canadian Standards Association (CSA) recognizes Seneca College as a training provider and graduates of this program are eligible to take the CSA Canadian certification exam to become a Certified Medical Device Reprocessing Technician (CMDRT).

The program focuses on the principles of microbiology, infection prevention and control, reprocessing of reusable instruments and equipment, and sterilizing, packaging, and storing surgical and medical instruments. Graduates can look forward to rewarding careers working in medical device reprocessing, operating rooms, health care clinics and similar health care or medical settings.

This program consists of five classroom courses followed by an optional 140 hour clinical placement that is scheduled over four weeks on a full-time basis in a reprocessing department. In each of the five courses, classes are held over 14 weeks, three hours per week for a total of 210 hours. Clinical placements take place in a hospital setting or medical supply reprocessing center. The program can be completed in approximately ten months, excluding the optional placement.
MEDICAL DEVICE REPROCESSING

PROGRAM DESCRIPTION

This 210-hour certificate program prepares graduates to enter the workforce to perform the critical work of sterilizing, packaging, and storing surgical and medical instruments. Students will learn the procedures necessary for work as a medical device reprocessing technician.

CURRICULUM

<table>
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<tr>
<th>CODE</th>
<th>COURSE NAME</th>
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<tbody>
<tr>
<td>MDR108</td>
<td>Microbiology and Infection Control</td>
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<td>MDR109</td>
<td>Identification and Care of Surgical Instrumentation</td>
</tr>
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<td>Decontamination Practices</td>
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<td>MDR111</td>
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<tr>
<td>MDR112</td>
<td>Assembly, Packaging &amp; Sterile Storage of Medical Devices</td>
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REQUIREMENTS

ADMISSION REQUIREMENTS

• Ontario Secondary School Diploma (OSSD) or equivalent, with:
  » grade 12 English: ENG4(C) or ENG4(U)
  OR
  » mature student status (age 19 years or older) with the above prerequisite course
• The following Seneca College courses will be acceptable for admission purposes:
  » ESL079 and ESL933

ENGLISH PROFICIENCY

In addition to completing a grade 12 English credit, applicants must demonstrate an acceptable level of English language proficiency. You meet our language proficiency requirements if you have completed:

• three full years of study in Canada in English (or in a country where English is the primary language) at the secondary school level; OR
• the equivalent of two years of full-time studies at the postsecondary level in English in a country where English is the primary language; OR
• ESL079 AND ESL933

Applicants who have successfully completed a pre-health program at an Ontario college will be considered.

All applicants must demonstrate an acceptable level of English language proficiency. To determine whether you meet the entry requirements, please complete the ELL100 English Assessment. You must be assessed at or above levels ESL079 and ESL933 to be considered for the program.
PROGRAM SCHEDULE

The program consists of five classroom courses, each course running three hours per week over 14 weeks.

Courses must be taken according to the fixed schedule on Saturdays, beginning in September.

It will take approximately 10 months to complete all courses in the program.

There is only one (1) intake per year, starting in September.

SUBMITTING YOUR APPLICATION

To apply, please complete the following steps:

1. Fill in the MDR application form available online.
2. Submit:
   • An official Ontario high school transcript showing a minimum score of 70% in English
     OR
   • A postsecondary transcript indicating at least two years of study (primary instruction in English)
     OR
   • A transcript indicating the ELL100 English Assessment was completed at the level of ESL079 and ESL933
SUBMITTING YOUR APPLICATION (continued)

Applications can be mailed or dropped off in-person to the following addresses:

<table>
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<tr>
<th>MAIL</th>
<th>IN-PERSON</th>
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<tbody>
<tr>
<td>Seneca College</td>
<td>Seneca Faculty of Continuing Education</td>
</tr>
<tr>
<td>1750 Finch Ave. East</td>
<td>Newnham Campus</td>
</tr>
<tr>
<td>Toronto, ON M2J 2X5</td>
<td>Room D2200</td>
</tr>
<tr>
<td><strong>Attention:</strong> Faculty of Continuing Education, MDR Admissions</td>
<td><strong>Attention:</strong> Faculty of Continuing Education, MDR Admissions</td>
</tr>
</tbody>
</table>

If you have been accepted into the program, you will receive an email and a letter of acceptance, which will provide you with instructions on how to enroll in your courses.

All applications are processed on a first-received and completed basis. Please ensure that you follow all application instructions and include all information necessary for us to ensure your application can be processed. Incomplete applications cannot be considered.

**Please note:** We are unable to respond to telephone enquiries about your application process or your eligibility to be considered. All questions must be submitted by email to: cecontact@senecacollege.ca.
MDR108 - MICROBIOLOGY AND INFECTION CONTROL

This course introduces the student to the sterile processing role in a health care environment, microbiology concepts, infection control, aseptic techniques and workplace environmental hazards. Students will learn basic anatomy, medical terminology and microbiology with special emphasis on infection control practices for employees in the sterile supply processing area.

Prerequisite: Permission to enrol from the Academic Program Manager.

COURSE LEARNING OUTCOMES:
Upon successful completion of this subject, the student will be able to:

1. Describe cell structures, cell life and classification of micro-organisms as it applies to the care and handling of instruments and environmental risks.
2. Classify and interpret the principles of infection control.
3. Identify methods of transmission of pathogens and sources of contamination.
4. Identify situations requiring asepsis in the work environment.
5. Explain potential workplace risk as related to infection control.
6. Identify concepts related to the use of personal protective equipment.
7. Describe and apply knowledge of microbiology and infection control to the four main functions within the sterile processing department.
MDR109 - IDENTIFICATION AND CARE OF SURGICAL INSTRUMENTATION

This course introduces the student to surgical instrument classification, the specifics of proper handling techniques, the assembly of specific surgical trays for a variety of surgical services and the recognition of common problems related to care, handling and reprocessing of instrument usage.
Prerequisite: MDR108, MDR110

COURSE LEARNING OUTCOMES:
Upon successful completion of this subject, the student will be able to:

1. Properly identify and classify surgical instruments, powered surgical equipment and patient care equipment.
2. Apply the principles and demonstrate knowledge of the care, handling and checking for the functionality of instrumentation.
3. Identify predictable problems in the handling and care of instrumentation (eg. check functionality, insulation and proper grade instrumentation).
4. Determine which surgical instrumentation is needed for surgical procedures.
5. Demonstrate proper instrumentation handling.
MDR110 - DECONTAMINATION PRACTICES

In this course, students are introduced to the principles of decontamination and quality control including instrument/equipment disassembly, cleaning/disinfection methods, (automated) decontamination equipment use, proper workflow, standard workplace precautions and the safe handling of sharp and medical bio-hazardous waste material. Prerequisite: Permission to enrol from the Academic Program Manager.

COURSE LEARNING OUTCOMES:
Upon successful completion of this subject, the student will be able to:

1. Describe and apply the principles of infection control and demonstrate the use of personal protective equipment in decontamination.
2. Demonstrate the safe handling of contaminated sharps and bio-medical waste materials.
3. Apply principles and demonstrate steps in instrument and equipment disassembly in the decontamination processes.
4. Describe manual and automated cleaning processes.
5. Describe various methods of cleaning (manual, automated).
MDR111 - DISINFECTION AND STERILIZATION

This course introduces students to the key scientific principles and methods of disinfection and sterilization utilized in today’s health care settings. This course builds on the principles and activities covered in decontamination practices, building on the packaging and sterilization processes. Common type of sterilization processes will be explored including mechanical, biological and chemical monitoring of products and procedures.
Prerequisite: MDR108, MDR110

COURSE LEARNING OUTCOMES:

Upon successful completion of this subject, the student will be able to:

1. Describe the different methods of sterilization and identify the criteria for choosing the appropriate method sterilization and/or high-level disinfection.
2. Demonstrate knowledge and understanding of the proper operation of the following methods of sterilization: steam (low gravity, pre-vac, flash autoclave), sterrad, steris, and ethylene oxide.
3. Demonstrate knowledge and understanding of high-level disinfection and proper operation and use of the pasteurmatic units.
4. Describe and demonstrate the mechanical parameters required for effective sterilization.
5. Describe the monitoring practices (integrator/indicators, Bowie-Disk test, biological tests) and describe the recall procedure for failed loads.
6. Identify the hazards and safety precautions required when handling sterilizer equipment.
7. Identify the risks involved in improper sterilization and describe the impact for the patient and organization.
8. Describe alternate methods of sterilization and/or high-level disinfection in the sterile processing department.
MDR112 - ASSEMBLY, PACKAGING & STERILE STORAGE OF MEDICAL DEVICES

This course introduces students to the proper techniques for the assembly, wrapping and/or packaging of surgical instruments, supplies and patient care equipment. Students will be introduced to sterile storage and inventory control distribution systems including the case care system, portering, and stock rotation. Material management and professionalism will also be covered.
Prerequisite: MDR109, MDR111

COURSE LEARNING OUTCOMES:

Upon successful completion of this subject, the student will be able to:

1. Demonstrate and apply the principles of wrapping and packaging techniques.
2. Demonstrate the different techniques used to wrap and pack surgical instruments, supplies and patient care equipment.
3. Identify correct sealing and labelling techniques.
4. Apply principles and demonstrate knowledge and understanding of the correct technique for assembly of surgical instruments.
5. Demonstrate the correct use of internal/external sterilization indicators.
6. Describe and demonstrate the principles of sterile storage, inventory control, distribution and storage of sterilized items.
7. Describe the demonstrate principles of stock rotation and acceptable transportation of sterile and unsterile supplies.
Prior to the start of the clinical or field placement, students must demonstrate that they have met the placement requirements which will minimally include, but may not be limited to:

- a cleared Vulnerable Sector Police Check
- Standard First Aid and CPR at a Level C
- N95 Mask fitting
- an up-to-date Immunization/Medical Review Screening

Students who have not completed all placement requirements by the deadline given cannot be assigned a clinical placement.

Certifications for the above requirements must be valid for your entire clinical placement.

**FPL201 - FIELD PLACEMENT (OPTIONAL)**

Students spend approximately 140 hours in a work experience setting, applying the skills they have learned in the MDR program. Students must be approved by the Field Placement Co-ordinator before registering for this course. Placements must be arranged and approved by the Field Placement Co-ordinator.

Prerequisite: MDR112

**COURSE LEARNING OUTCOMES:**

Upon successful completion of this subject, the student will be able to:

1. Demonstrate professionalism and good work behaviour patterns.
2. Gain a better understanding of the operations and functions of a sterile processing lab.
3. Gain greater familiarity with the field of medical devices reprocessing and the roles of individuals in the work environment.
4. Obtain a working knowledge of various health care settings, including: hospitals, clinics, labs and devices manufacturing or service companies.
PROGRAM OUTCOMES

1. Communicate effectively using medical terminology and follow written department policies in a professional manner.
2. Apply principles of microbiology and infection prevention and control in the reprocessing of patient care equipment, medical devices and instrumentation.
3. Use principles of decontamination and environmental safety control to select and calculate appropriate disinfecting and sterilizing agents used in common reprocessing machines.
4. Prepare, package and sterilize multi-use medical devices and surgical equipment and supplies for specific surgical operations.
5. Store, inventory, transport and distribute medical devices, instruments and endoscopic equipment to maintain sterile integrity.
6. Sort, inspect and test patient care equipment, medical devices, instruments and endoscopic equipment for cleanliness and function ensuring they are in good working order.
CONTACT CONTINUING EDUCATION

If you have questions about Seneca Faculty of Continuing Education's Medical Device Reprocessing program, please connect with us:

Email: cecontact@senecacollege.ca
Phone: 416-491-5050 ext.22529