

Viewbook 2018–2019

MRS

MEDICAL RADIATION SCIENCES

NUCLEAR MEDICINE
& MOLECULAR
IMAGING TECHNOLOGY

RADIATION THERAPY

RADIOLOGICAL
TECHNOLOGY



UNIVERSITY OF
TORONTO



THE
Michener
INSTITUTE
of Education at UHN®

MEDICALRADIATIONSCIENCES.CA

YOUR CAREER STARTS HERE

The Medical Radiation Sciences (MRS) Program is a second-entry professional undergraduate program jointly developed and administered by The Michener Institute of Education at UHN (Michener) and the Department of Radiation Oncology in the Faculty of Medicine at the University of Toronto.

MEDICALRADIATIONSCIENCES.CA



Janet Maggio

uoft.me/JanetMaggio

My advice: Get involved! It will help you to enjoy every moment along the way and to learn all that you can while in school, so that you are prepared and confident as you enter the work force!

PROGRAM

NMMIT Class of 2003

HOMETOWN

Barrie, Ontario

EMPLOYED WITH

Ontario Association of
Medical Radiation Sciences

About MRS

ESTABLISHED IN 1999 THIS SPECIAL PARTNERSHIP COMBINES THE STRENGTHS OF THE TWO INSTITUTIONS AND MAKES FULL USE OF THEIR COMPLEMENTARY RESOURCES AND EXPERTISE TO OFFER BOTH A BSc DEGREE (U OF T) AND AN ADVANCED DIPLOMA IN HEALTH SCIENCES (MICHENER).

This collaboration has contributed to the exceptional level of program integration for the education of all three medical radiation science disciplines: radiological technology, nuclear medicine and molecular imaging technology and radiation therapy.

STRUCTURE OF THE PROGRAM

The integrated three-year curriculum (offered in an intensive 32 consecutive month format) is comprised of didactic, simulated and clinical courses. The MRS Program provides students in each of the three disciplines with a core curriculum of broadly based theoretical and analytical foundation along with discipline-specific courses and clinical practice activities for their professional responsibilities. The clinical practicum components of the program, delivered at affiliated clinical sites, integrate and apply the material taught in the didactic curriculum.

Additionally, students have the option to customize their curriculum, through our specialized elective courses in complimentary topics that enable students to broaden their skill set to meet the evolving practice of the MRT.

ABOUT MRT CAREERS

A medical radiation technologist (MRT) is a caring and compassionate healthcare professional and an essential member of the interprofessional healthcare team. Working in a dynamic environment with emerging technologies, MRTs are regulated health professionals who use sophisticated radiation or electromagnetic equipment to produce diagnostic images of a patient's body or who administers radiation to treat patients for certain medical conditions. As a primary point of contact for patients on their healthcare journey, MRTs are committed to a collaborative patient- and family-centred approach to care.

Future career opportunities include (but are not limited to): advanced roles such as Computed Tomography (CT), management, education and sales/marketing, other specialties such as Magnetic Resonance Imaging (MRI), research activities, medical equipment sales, government policy, as well as pursuing higher education opportunities at a Masters level.

PROFESSIONAL CERTIFICATION

The Medical Radiation Sciences program is an accredited program and prepares graduates for the Canadian Association of Medical Radiation Technologists (CAMRT) national certification examination. The CAMRT is the national professional association and certifying body for radiation therapists, radiological, nuclear medicine and magnetic resonance imaging technologists. Established in 1942, the CAMRT today represents over 12,000 members. Learn more about the CAMRT and the MRT profession, visit www.camrt.ca.

In Ontario, as well as other Provinces in Canada, MRT's are regulated healthcare professionals. For more information on becoming a regulated MRT in the province of Ontario visit the College of Medical Radiation Technologists of Ontario website at www.cmrt.org.



Diana Lee
uoft.me/dianalee

One of the main reasons Radiation Therapy appealed to me as a profession was the many opportunities for professional development – namely, research and education.

PROGRAM
Radiation Therapy
Class of 2015

HOMETOWN
Toronto, Ontario

EMPLOYED WITH
Princess Margaret
Cancer Centre

U of T / Michener

UNIVERSITY OF TORONTO



The University of Toronto is the largest, and one of the most prestigious, universities in Canada with approximately 700 undergraduate programs and 280 Master's and Doctoral level graduate programs. With academic and research strengths ranked among the world's best, and over 70,000 students on three campuses, U of T offers unmatched services, facilities and experiences for students.

THE MICHENER INSTITUTE OF EDUCATION AT UHN



For nearly 60 years, The Michener Institute of Education at UHN has been a leading provider of education in healthcare technologies. Michener, home to more than 800 students pursuing advanced or graduate diplomas and 5,100 in continuing education, is proud to be affiliated with more than 100 clinical sites across Canada.

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Eric Lindsay
uoft.me/ericlindsay

I chose to study with U of T and The Michener Institute because I have the resources of both campuses at my disposal.

PROGRAM
Radiation Therapy
Class of 2018

HOMETOWN
St Marys, Ontario



Nuclear Medicine & Molecular Imaging Technology (NMMIT)

NUCLEAR MEDICINE IS AN IMAGING METHOD USED TO SAFELY DETECT DISEASE IN ITS EARLY STAGES.

Nuclear Medicine includes positron emission tomography (PET) and involves the use of radioactive tracers administered by injection, orally, or inhalation. Special cameras, computers and radioactive tracers are used to non-invasively image how disease or treatments alter organ system function, such as the amount of urine the kidneys produce per minute or the extent of damage to the heart muscle due to a heart attack.



Radiation Therapy

RADIATION THERAPY IS THE PLANNING AND APPLICATION OF IONIZING RADIATION TO DESTROY TUMOURS IN PATIENTS WITH CANCER.

Radiation therapy is commonly delivered to a patient by using large sophisticated machines called linear accelerators (external beam radiation therapy) or by use of radioactive sources that are placed internally within or on the surface of a patient (brachytherapy). Radiation therapy is one of three main modalities used to treat cancer – it may be used alone or in conjunction with surgery and/or chemotherapy. For many patients with cancer, radiation therapy will play a very important role in their overall treatment.



Radiological Technology

RADIOLOGICAL TECHNOLOGY USES MEDICAL IMAGING EQUIPMENT AND ADVANCED COMPUTER SYSTEMS TO PRODUCE AND ENHANCE RADIOGRAPHIC IMAGES.

Radiological Technology uses small, highly controlled amounts of radiation (“X-rays”) to produce medical images of internal organs and structures for the detection, diagnosis and treatment of injuries and diseases using imaging technologies (general radiography, fluoroscopy, interventional radiology, computed tomography (CT), angiography, mammography and more).



Andrea Schmidt
uoft.me/AndreaSchmidt

There is so much to learn and to gain from this career. If you are constantly setting new goals for yourself to meet, you will see just how rewarding this profession can be.

PROGRAM
Radiological Technology
Class of 2016

HOMETOWN
Burlington, Ontario

EMPLOYED WITH
St. Michael's Hospital

As a Nuclear Medicine Technologist you will become part of an interdisciplinary diagnostic imaging team, and will be employed in a variety of clinical environments: community or teaching hospitals, private clinics, research institutes and public health institutions.

WHAT NUCLEAR MEDICINE TECHNOLOGISTS DO?

- Prepares and administers radiopharmaceuticals to patients.
- Interacts closely with patients, physicians and other members of the health care team to obtain the best diagnostic information possible.
- Acquires and analyzes diagnostic images using the latest in gamma camera, Positron Emission Tomography (PET) and hybrid technologies.

As a Radiation Therapist, you will work within an interprofessional oncology team consisting of physicians, medical physicists, nursing and other healthcare providers in cancer centres. Radiation Therapists can take on different roles in several areas within a cancer centre: simulation utilizing computed tomography (CT), treatment planning/dosimetry and front-line treatment delivery.

WHAT DOES A RADIATION THERAPIST DO?

- Accurately positions patients for cancer treatment, performs imaging procedures for verification and delivers ionizing radiation to treat patients using advanced radiation therapy equipment.
- Performs dosimetry planning (e.g. physics and dose calculations) using specialized computer software to optimize a patient's radiation treatment plan.
- Monitors, educates and counsels patients on possible side effects from treatment, often developing a supportive relationship with patients as they come in for daily treatment over a period of several weeks.

As a Radiological Technologist you may specialize in a particular area of diagnostic imaging, and can be employed in a variety of clinical environments: community or teaching hospitals, private clinics, research institutes and public health institutions.

WHAT DOES A RADIOLOGICAL TECHNOLOGIST DO?

- Plays an integral role in detecting injury and disease by performing diagnostic imaging examinations, including mammography and computerized tomography.
- Accurately positions patients and ensures that a quality diagnostic image is produced, by applying knowledge of anatomy, physiology and mathematics.
- Assesses the needs and capabilities of patients while working in a fast-paced environment.



Christian Raharja
uoft.me/ChristianRaharja

The practical skills I learn directly transfer to the clinical setting which is extremely useful when I'm working at the hospital.

PROGRAM
NMMIT Class of 2018

HOMETOWN
Jakarta, Indonesia

WHY STUDY WITH US?

As the only program in Ontario, the comprehensively redesigned Nuclear Medicine and Molecular Imaging Technology curriculum introduces a hybrid learning experience to meet the needs of different learners by allowing students to participate in both online and face-to-face components.

Theory is put into practice by examining increasingly complex case studies and applying knowledge in both simulated and clinical environments.

Students will work both independently and in teams to develop problem solving and clinical reasoning skills to support application to clinical practice.



WHY STUDY WITH US?

Many of our lectures are delivered by expert faculty from the University of Toronto's Department of Radiation Oncology who are actively involved in advancing clinical practice and world-class research.

Clinical placements are offered at sites across Ontario representing a variety of cancer services and programs.

In addition, a longitudinal and integrated Interprofessional Education curriculum provides essential learning opportunities for students to practice communication,

critical thinking, and conflict management with students from other healthcare disciplines; essential skills for collaborating in the interprofessional team.

WHY STUDY WITH US?

Hands-on learning combined with small class sizes allows for personalized learning and a sense of community between fellow classmates and the professors.

Access to dedicated and innovative simulated clinical equipment and curriculum prepares students in a safe learning environment for the dynamic health care setting. These measures ensure our students succeed in their studies and transition into the clinical setting.



Amal Ibrahim
uoft.me/AmalIbrahim

I love the small classes and lab groups which is advantageous because it allows for more interaction with the equipment and instructors.

PROGRAM
Radiological Technology
Class of 2017

HOMETOWN
Hamilton, Ontario

Admissions Requirements

MRS IS A SECOND-ENTRY PROGRAM DESIGNED FOR STUDENTS WITH AT LEAST ONE YEAR OF UNIVERSITY EXPERIENCE INCLUDING COURSES IN BIOLOGY, MATH AND PHYSICS. IN ADDITION TO SATISFYING ACADEMIC REQUIREMENTS, ACADEMICALLY COMPETITIVE APPLICANTS MUST PARTICIPATE IN AN ADMISSIONS INTERVIEW AND SUBMIT PROOF OF ENGLISH FACILITY (IF APPLICABLE).

ACADEMIC REQUIREMENTS

To be eligible for admission to the MRS Program, applicants must present:

- 1 A minimum of one year (5.0 credits) of university education, with successful completion of one single-semester (0.5 credit) course in each of the following prerequisite subjects:
 - Biology
 - Mathematics
 - Physics
 - a Social Science
- 2 A minimum cumulative Grade Point Average (cGPA) of B-
- 3 Grade 12 U-level Chemistry or equivalent (Nuclear Medicine & Molecular Imaging Technology applicants only)

NOTE: Admission is competitive and satisfying these requirements does not guarantee admission. Please consult with the MRS Office to confirm that prerequisite subject courses are appropriate for admission purposes.

ADMISSIONS INTERVIEWS

Academically competitive applicants will be invited to participate in an Admissions Interview. The interview process is designed to assess non-academic qualities and abilities which cannot be ascertained from an academic record. Factual knowledge in any subject will not be tested. Instead, the ability to comprehend, reason and communicate is assessed. Interviews are conducted on-campus at the end of April/ beginning of May.

ENGLISH FACILITY REQUIREMENT

Applicants for whom English is a second language may be required to provide proof of an English language assessment. Visit medicalradiationsciences.ca for more information.

Important Dates

OCTOBER, 2017

Applications open for fall admission
(Apply online at www.ouac.on.ca)

FEBRUARY 1, 2018

Deadline to apply for Fall 2018
Admission to MRS programs.

FEBRUARY 15, 2018

Deadline to submit final or
in-progress academic transcripts
and proof of English Facility
(if required).

APRIL 30, 2018

Recommended Deadline to submit
final academic transcripts
for Winter term courses.

If a conditional offer is issued
pending results from spring courses,
the final deadline to submit results
will be July 15.

MID MAY, 2018

Admission decisions issued

Main Events

AS AN MRS STUDENT YOU'LL BE A PART OF
TWO CAMPUS COMMUNITIES: THE SMALLER
HEALTHCARE-FOCUSED COMMUNITY
AT MICHENER AS WELL AS THE LARGER
U OF T COMMUNITY WHICH OFFERS
AN IMPRESSIVE RANGE OF ACADEMIC
AND SOCIAL OPPORTUNITIES.

OCTOBER 21, 2017

U of T Fall Campus Day

NOVEMBER 18, 2017

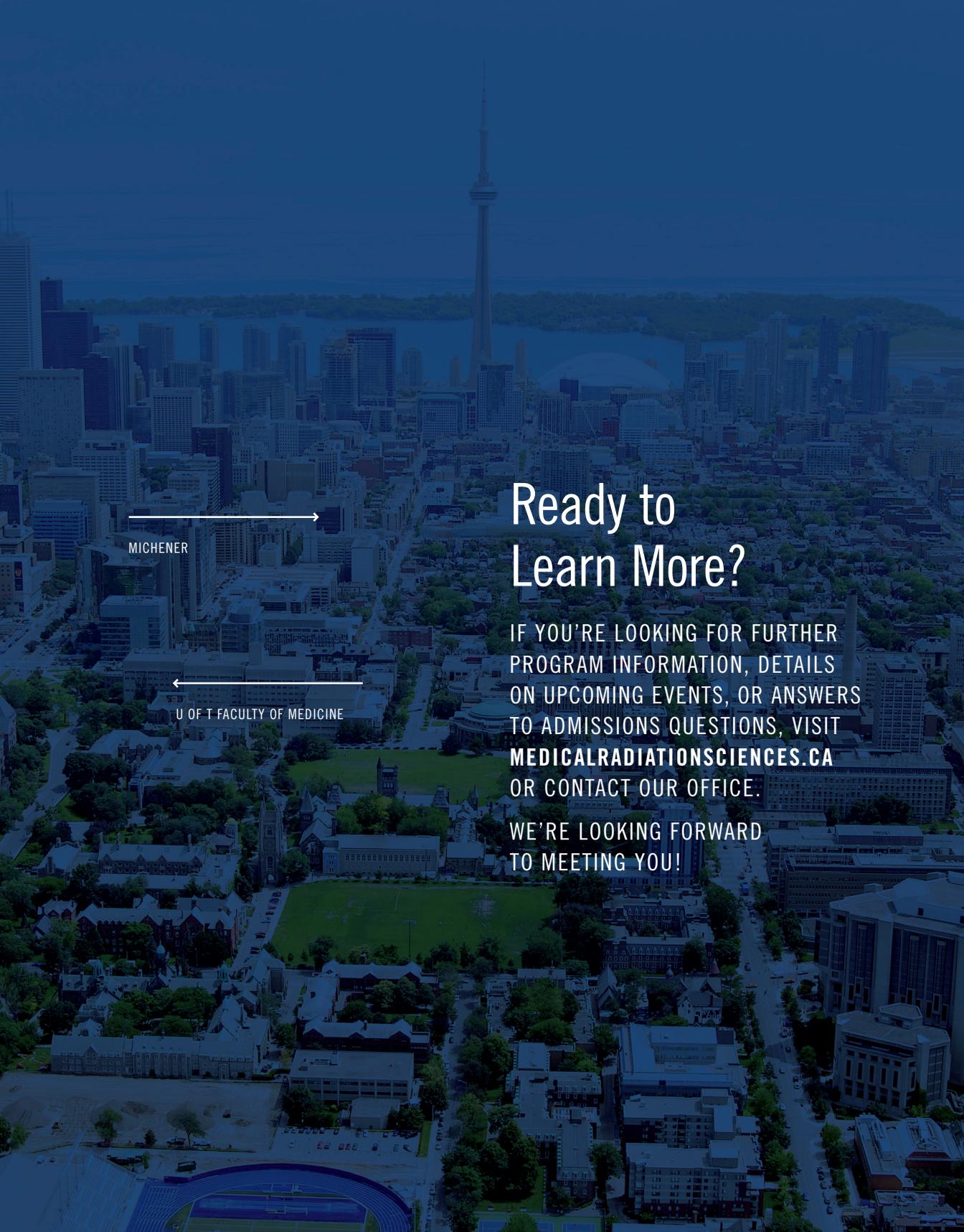
Michener Campus Day

For more information, call, email or visit us online.

☎ 416-978-7837

✉ mrs.admissions@utoronto.ca

medicalradiationsciences.ca



Ready to Learn More?

IF YOU'RE LOOKING FOR FURTHER PROGRAM INFORMATION, DETAILS ON UPCOMING EVENTS, OR ANSWERS TO ADMISSIONS QUESTIONS, VISIT [MEDICALRADIATIONSCIENCES.CA](https://www.medicalradiationsciences.ca) OR CONTACT OUR OFFICE. WE'RE LOOKING FORWARD TO MEETING YOU!

MICHENER

U OF T FACULTY OF MEDICINE

MEDICAL RADIATION SCIENCES

Department of Radiation Oncology
University of Toronto, Faculty of Medicine

149 College Street, Suite 504
Toronto, ON M5T 1P5

☎ 416-978-7837

✉ mrs.admissions@utoronto.ca

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