

Michael G. DeGroot School of Medicine **MEDICINE AT McMASTER** 2010-2011



Problem Based Learning | Compass Curriculum | Innovative Programs | Multiple Campuses | www.fhs.mcmaster.ca/mdprog

The School of Medicine, established in 1965 and renamed the Michael G. DeGroot School of Medicine in 2004, offers major programs in undergraduate, postgraduate and graduate medical education. The clinical programs use not only the teaching hospitals and ambulatory care and research facilities, but also the clinical teaching units

at several of the major hospitals and community health-care centres.

The Undergraduate Medical Program for the MD degree was initiated in 1969, graduating its first students in May 1972. At present, 203 students are admitted to the program each year.

The three-year program in Medicine uses a problem-based approach to

learning that should apply throughout the physician's career. The components have been organized in sequential blocks with early exposure to patients and case management. The academic program operates on an 11 months-a-year basis and students qualify for the MD degree at the end of the third academic year.



Learning at McMaster – Problem Based Learning (PBL)

To achieve the objectives of the Medical Program, students are introduced to patients within the first Foundation of the curriculum. In this way, students understand the relevance of what they are learning, maintain a high degree of motivation and begin to understand the importance of responsible professional attitudes. Students are presented with a series of tutorial problems, requiring for their explanation, the understanding of underlying biological, population and behavioural principles, the appropriate collection of data and the critical appraisal of evidence. The faculty function as learning resources or guides. Learning by a process of inquiry is stressed.

The central focus of the program is the tutorial. The class is divided into small groups, each with the tutor. In the tutorial session students develop a series of learning objectives from each health-care problem and negotiate how they will approach their learning tasks. They then acquire the knowledge and skills to meet the objectives of the Foundation in which they are working. They also learn to work as a team, helping and learning from peers. The study habits and sense of responsibility to self and others provides a basis for life long working the learning habits.

Some of the advantages of PBL are: early exposure to clinical settings and patients; motivation to learn is self-imposed, because students can see the practical application of the knowledge they are acquiring during their studies; and the acquisition of various learning skills, which will assist them to become lifelong learners.



The Michael G. DeGroote School of Medicine fosters a cooperative, supportive and respectful environment. The curriculum evolves continuously, responsible to the challenging needs of Ontario society, nurturing the development of the following competencies at the time of graduation:

1. **Medical Expert** – students will be able to apply scientific principles from human biology, behaviour and population health to the solution of health problems; they will have the ability to seek out new information and evaluate this information critically.
2. **Communicator/Collaborator** – students will demonstrate effective communication skills, sensitive to the needs of patients and cognizant of the roles of other members of the health care team in delivery patient care.
3. **Advocate/Resource Manager** – graduating students will be knowledgeable about the determinants of health and be proactive advocates for their individual patients for healthy public policy within the context of the health care system.
4. **Scholar/Learner** – students will be self-directed lifelong learners, whose exposure at McMaster to role models in research and clinical care will encourage them to apply innovative approaches to solving health care problems.
5. **Self-Reflective Practitioner** – graduating students will be expected to have developed an awareness of the influence of their attitudes, values and assumptions, how these affect their practice of medicine and the impact of the practice of medicine on themselves as individuals.

The COMPASS Curriculum

In September 2005, the Michael G. DeGroote School of Medicine at McMaster University introduced a completely new curriculum called The COMPASS curriculum. The curriculum focuses on the mastery of fundamental concepts of in medicine. The COMPASS curriculum aims to ensure that our graduates have a good working understanding of biological, psychological and social mechanisms and processes, as well as their impact on health and disease, based on principles of learning drawn from cognitive psychology. The COMPASS curriculum is structured to allow the integration of critically important fundamental concepts in medicine and affords an opportunity for students to have the time to practice applying these concepts to multiple different clinical problems.

The pre-clerkship is divided into five Medical Foundations. A novel feature of the new curriculum is a horizontal Professional Competencies curriculum which runs throughout the three years of the program. As in the Foundations tutorial-based curriculum, students will work in small groups throughout the Professional Competencies curriculum which interdigitates and remains connected to the Foundations curriculum throughout the pre-clerkship and into the clerkship.

Medical Foundation 1 addresses the first of the major concept themes in the curriculum, that of oxygen supply and exchange. In addressing problems that arise from inspired air right through to oxygen at the cellular level, students will learn much related to the respiratory, hematologic and cardiovascular systems.

Medical Foundation 2 is the first of the two Foundations that addresses aspects of homeostasis, particularly that of energy balance, including issues related to the GI tract, endocrine system and nutrition.

Medical Foundation 3 covers the second part of homeostasis, including the balance of acid and base, blood pressure and renal function and then goes on to address reproduction and pregnancy and a number of issues in genetics related to reproduction.

Medical Foundation 4 addresses host defence, which includes immunology and infectious disease, and then moves on to look at neoplasia and the genetics of neoplasia.

Medical Foundation 5 covers the concepts of movement control and interacting and communicating, which includes the locomotor system, the nervous system and behaviour. Aspects of human development will run through all of the five Medical Foundations.

The Clerkship program consists of rotations in medicine, surgery, family medicine, anesthesia, psychiatry, pediatrics, obstetrics and gynecology, emergency medicine and electives. Teaching is carried out in teaching practices and in all the teaching hospitals in the Hamilton, Waterloo and Niagara Regions. Students are expected to travel outside of their home campus area for clerkship rotations and are responsible for transportation and associated costs in order to complete rotation requirements.

The Admissions Process

The official admissions policy and deadlines for the Michael G. DeGroot School of Medicine are published in the Ontario Medical School Information Booklet found at www.ouac.on.ca/omsas. Application to the medical school is completed on-line at www.ouac.on.ca/omsas. The application cycle opens annually in early July for entry the following fall. Applicants must begin their application by September 15th and submit their completed application in early October. The intention of the Michael G. DeGroot School of Medicine is to prepare students to become physicians who have the capacity and flexibility to select any area in the broad field of medicine. The applicant is selected with this goal in mind. Faculty, medical students and members of the community are normally involved in the review of applications.

There are four absolute academic requirements for eligibility to apply to the program:

- By May of the year of entry, applicants must have completed a minimum of three years of undergraduate degree level work (30 half year credits or 15 full year credits or a combination).
- By the application deadline applicants must have achieved an overall OMSAS converted average of 3.00 on the 4.00 point scale.
- By the application deadline, all applicants to the MD Program are required to write the Medical College Admission Test (MCAT). McMaster will use only the Verbal Reasoning score in the selection process. A minimum score of six (6) on the MCAT Verbal Reasoning is required.
- In October of the application year, all applicants are required to complete a 90 minute computer-based test, called CASPer, as part of the selection process. CASPer, the Computer-based Assessment for Sampling Personal characteristics, is a web-based assessment of interpersonal skills and decision-making, to be completed at a computer.

The Selection Process

The Undergraduate Medical Program uses two formulae to rank applicants - the first provides a rank order list for invitation to interview, and the second provides a rank order list for advancement to Collation (full file review). The overall weightings reflect our commitment to consider the cognitive and professional qualities of applicants equally.

In selecting applicants for interview, geographical consideration is applied as follows: 90% of interview positions will be given to those who qualify as Ontario residents. The remaining 10% will be given to all others. To qualify for Ontario resident status, an applicant must be a Canadian citizen or Permanent Resident of Canada at the application deadline, and must have resided in the Province of Ontario for at least three years since age 14 by the possible date of entry to the program.

To view the current formulae, please visit our website at: www.fhs.mcmaster.ca/mdprog.



Campuses

The Hamilton Campus which is restricted to pedestrian traffic is adjacent to the Royal Botanical Gardens at the western end of Lake Ontario. The University is minutes from downtown Hamilton, and the activities that a major city has to offer.

In 2007, the Michael G. DeGroot School of Medicine at McMaster University introduced the first of two Regional Campuses in the Waterloo Region and in 2008, opened the second in the Niagara Region. Currently 28 are admitted to each Regional Campus.

The curriculum at all three campuses is identical and takes full advantage of videoconferencing technology to ensure parallel experiences at each of our campuses. With state of the art technology, friendships and alliances will remain intact and interactive teaching experiences will be completely analogous.

To learn more about the Regional Campuses please visit our website at www.fhs.mcmaster.ca/mdprog.

Aboriginal Applicants

Applicants who wish to be considered under the Aboriginal (First Nation, Inuit or Metis, as recognized by the Constitution Act, 1982) application process are encouraged to contact the Aboriginal Students Health Sciences Office (www.mcmaster.ca/ashs) for additional information.

MD/PhD Combined Program

The Faculty of Health Sciences introduced a new MD/PhD Program with its first students admitted in August 2007. The aim of the Program is to train clinician-scientists who will pursue research as a major priority.

Applicants must be acceptable to both the McMaster MD Program and to the PhD Program either in Medical Sciences or Biochemistry and Biomedical Sciences. Applicants will apply to the MD Program through the Ontario Medical School Application Service (OMSAS) in the early Fall and submit a separate PhD application to the School of Graduate Studies in late fall.

Further information on the MD/PhD Program is provided on the Health Sciences Graduate Programs website at <http://www.fhs.mcmaster.ca/grad> or by contacting the admissions coordinator at (905) 525-9140 ext. 22983.



Hamilton Campus

Michael G. DeGroot School of Medicine
Faculty of Health Sciences, McMaster University
Michael G. DeGroot Centre for
Learning and Discovery, Rm 3115
1200 Main Street West,
Hamilton, ON Canada L8N 3Z5

- Phone: 905-525-9140 ext. 22235
- Web: www.fhs.mcmaster.ca/mdprog

Niagara Regional Campus

Michael G. DeGroot School of Medicine
Faculty of Health Sciences, McMaster University
Niagara Regional Campus
142 Queenston Street,
St. Catharines, ON Canada L2R 7C6

- Phone: 905-397-1908 ext. 43875
- Web: http://www.fhs.mcmaster.ca/mdprog/niagara_regional_campus.html

Waterloo Regional Campus

Michael G. DeGroot School of Medicine
Faculty of Health Sciences, McMaster University
Waterloo Regional Campus
10 Victoria Street
Kitchener, ON Canada N2G 1C5

- Phone: 519-885-5426 ext. 21104
- Web: http://www.fhs.mcmaster.ca/mdprog/waterloo_regional_campus.html

Ontario Medical School Application Service (OMSAS)

170 Research Lane
Guelph, ON N1G 5E2

- Phone: 519-823-1940
- Web: <http://www.ouac.on.on/omsas>