

# Undergraduate Medical Education Program



UNIVERSITY OF  
**ALBERTA**

FACULTY OF MEDICINE  
AND DENTISTRY



If you want to acquire the skills you will need to practice Medicine or Dentistry in a friendly progressive environment where education, research and patient care are integrated into your curriculum, then this is the place for you. Our goal is to provide you with not only the technical skills and scientific knowledge which will allow you to become a competent doctor, we also want you to be a kind, caring and empathetic physician.

## Dean Dr Thomas J. Marrie

Dr. Tinsley R. Harrison, the first editor of *Harrison's Textbook of Medicine* wrote this on the importance of being a physician:

"No greater opportunity or obligation can fall to the lot of a human being than to be a physician. In the care of the suffering he needs technical skill, scientific knowledge, and human understanding. He who uses these with courage, humility, and wisdom will provide a unique service to his fellow man and will build an enduring edifice of character within himself. The physician should ask of his destiny no more than this and he should be content with no less".

Now that you are considering a career in Medicine or Dentistry, why should you apply to the Faculty of Medicine and Dentistry at the University of Alberta? If you want to acquire the skills you will need to practice Medicine or Dentistry in a friendly, progressive environment where education, research and patient care are integrated into your curriculum, then this is the place for you. Our goal is to provide you with not only the technical skills and scientific knowledge which will allow you to become a competent doctor, we also want you to be a kind, caring and empathetic physician. Our curriculum is designed to allow you to achieve these goals.

This is a very exciting time at U of A Faculty of Medicine and Dentistry. We are building two new research buildings, a Heart Institute (in collaboration with Capital Health), a learning centre (most important for you) and the Zeidler Gastrointestinal Centre. We will have new equipment in the learning institute. You will be able to work in a simulation environment to learn physical examination skills and we are working towards an interdisciplinary learning environment – the goal of which is to allow you to function optimally as a member of the health care team when you graduate.

I look forward to welcoming you during the Dean's address to the first year class in the not too distant future.

Sincerely Yours,

Thomas J. Marrie MD

## History of U of A Medicine

Since its inception in 1913, the Faculty of Medicine and Dentistry at the University of Alberta has emerged as one of the top medical schools in Canada. When it was established several years after the birth of the province, the medical program remained primarily a teaching program.

Today, however, those early days have given way to a 21st century model of health care education. The U of A's medical school has come of age within a tremendously rich academic environment. The Faculty of Medicine and Dentistry now has one of Canada's most innovative medical education programs, conducted in one of the country's most research-intensive universities.

The Faculty of Medicine and Dentistry now educates the country's top clinicians, researchers, educators, physicians and dentists. Its alumni are making contributions worldwide in a variety of areas. Dr. John Bell (Class of '74), for example, is a Rhodes Scholar who holds the Regius Professor of Medicine chair at Oxford University. Dr. Lorne Tyrrell (Class of '68), one of the world's foremost infectious diseases researchers, is pioneering new treatments for Hepatitis B. Dr. Joseph Martin (Class of '62) went on to become Dean of one of the world's finest medical schools, the Harvard University Medical School.



Perhaps the greatest contribution of the Faculty of Medicine and Dentistry at the University of Alberta is measured in the quality of health care Albertans and Canadians enjoy. Graduates are known across the continent for their outstanding skills and compassionate care.

## Curriculum

The curriculum at the University of Alberta's Faculty of Medicine and Dentistry is a product of nearly a century of refinement. A balance of didactic teaching and clinical skills equips our graduates with the tools to be outstanding physicians.

Teaching methods include:

- Lectures and laboratory
- Small group case studies and problem-based learning
- Internet-based tutorials
- Preceptor guided clinical skills

The study of medicine for years one and two is divided into organ system blocks:

- Endocrinology
- Gastroenterology
- Cardio-pulmonary-renal
- Musculoskeletal
- Obstetrics/Gynecology/Urology
- Neurology/Organs of Sense
- Oncology
- Infection/Inflammation

Study of the human systems integrates histology, pathology, pathophysiology, pharmacology, embryology, and gross anatomy. The science of medicine is complemented by our patient-centred care courses, which focus on medical humanities, medicolegal and ethical issues.

The practice of evidence-based medicine is emphasized throughout the curriculum. Students are expected to engage in self-directed study to ensure that they can expertly maintain a lifelong career of learning in medicine. Evaluation is based on a pass-fail grading system with the top 15 percent of the students receiving the Dean's honour list recognition.

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## Research Opportunities

### MD/PhD Program

Our MD/PhD program prepares students for a career as a clinician-scientist. With this program, students obtain both a medical and postgraduate degree. Typically, students complete their PhD program after their pre-clinical years, then return to finish years three and four of their MD.

### MD with Special Training in Research (STIR)

Through STIR, students gain valuable research exposure and are introduced to the possibilities of a career in academic medicine. Following acceptance into the program, students complete a minimum of 24 weeks in either basic or clinical research under faculty supervision.



The primary role of student interns is to understand and apply basic knowledge of medical science in a clinical setting.

## Clinical Training Years

Although University of Alberta medical students work with patients from the outset of their training, the core “hands-on” teaching is completed in their final two years of medical school. As integral members of a team, student interns care for patients under the supervision of supportive faculty in some of the finest medical facilities in Canada.

Generally, a team consists of a cohort of student interns and residents under the direction of a preceptor (a staff physician). Other health care professionals involved in patient care complete the team: nurses, pharmacists, physiotherapists, and dieticians among others.

The primary role of student interns is to understand and apply basic knowledge of medical science in a clinical setting. Clinical teaching is interwoven with informal teaching sessions from experienced residents and preceptors, many of whom have won awards for their teaching and research.

As part of the team, student interns are required to be on call, so that they are available in the hospital overnight. The challenges of call offer student interns an in-depth exposure to all aspects of patient care and a more “hands-on” experience than they would receive otherwise. Student interns follow the same call regime as do residents, which consists of the 28 hour rule and call frequency regulations. Thus, student interns are permitted to return home after 12:00 pm the day post-call. As well, the maximum number of call is one night every four days.

### Clinical training years, rotations:

In third year, student interns are placed in rotations through which they experience a general variety of specialties. This includes:

- General Surgery
- Internal Medicine (includes sub-specialty ambulatory clinics, Coronary Care Unit)
- Obstetrics and Gynecology
- Pediatrics
- Rural Family Medicine
- Psychiatry
- Anesthesia

These basic rotations are followed in fourth year by rotations that provide opportunities to develop a deeper understanding of sub-specialties:

- Surgery: orthopedics, urology, cardiac, ENT, neurosurgery, etc.
- Pediatrics: general pediatric clinics, cardiology, nephrology, neurology, pulmonology, hematology and oncology
- Urban Family Medicine
- Emergency Medicine
- Geriatrics

### Electives:

Between rotations, student interns pursue their personal educational interests and goals. In each of the two clinical years, student interns complete a minimum of five weeks of electives in an area of their own choosing.

Electives can be completed anywhere in Canada, the United States or internationally. The University of Alberta also offers opportunities for students who are interested in research, who can use their elective time to pursue basic or clinical research. Students can also pursue basic science electives to reinforce or develop an in-depth comprehension of areas that apply to their career goals.



Clinicians from the medical community play a huge role in teaching the curriculum. Many have received provincial recognition from the Professional Association of Residents of Alberta.

## Studying with great teachers:

Medical education at the University of Alberta is among the best in Canada, principally because of the quality of the instructors. Students study with some of Canada’s best teachers—basic scientists, clinicians and educators, all of whom are dedicated to providing the best medical education anywhere.

Clinicians from the medical community play a huge role in teaching the curriculum. Many have received provincial recognition from the Professional Association of Residents of Alberta. Past recipients have included physicians from a vast array of departments, including Ian MacDonald (Ophthalmology), Hadi Seikaly (Otolaryngology) and Andrew Travers (Emergency Medicine). Within the University, several professors have also received the U of A’s top teaching award, the Rutherford Award for Excellence in Undergraduate Teaching.

Nationally, the University of Alberta’s Faculty of Medicine and Dentistry has two recipients of the national 3M Teaching Fellowships, Canada’s top award for undergraduate university teaching excellence. They are Anatomy professor Anil Walji and Pharmacology professor David Cook.

## 3M Fellowships awarded since 1986

University of Alberta	24
University of Western Ontario	18
University of Guelph	12
University of British Columbia	8
McMaster University	8
University of Toronto	8

## Awards and Tuition:

The Faculty of Medicine offers several entrance scholarships and awards based on academic achievement, humanism, and financial need. Some of these include:

- Kenneth W. Moodie Bursary: one at \$1,750
- Dr. A J Pauly Bursary: three at \$1,000
- Dr. & Mrs Hazen Hankinson (Dean’s Citation): five at \$12,500
- Queena M Esdale Memorial: one at \$25,000
- Dr. Peter Ayleen Memorial Prize: one at \$3,000
- Dr. J W Young Memorial: one at \$2,000
- The Differential Bursary: \$6,000

Over four years, almost \$900,000 is awarded annually to students on the basis of financial need and nearly \$100,000 is awarded for research, academics and graduation.

The Gold Humanism Honors Society was initiated in 2004. This Society recognizes the top 15% of peer-nominated students who exemplify integrity, compassion, clinical acumen and kindness.



The University and the regional health authority are ambitiously building new facilities that will support patient care and research and maintain the Capital Health region and the University as leaders in Canada.

### Tuition

The University of Alberta has one of the lowest deregulated medical school tuitions in Canada. Estimated costs for each year of the MD program can be found at our website: <http://www.uofaweb.ualberta.ca/prospective/>

### A resident's experience at the U of A:

**M**y undergraduate training at the U of A provided me with an excellent foundation for both my residency and future career. The strongest component of the U of A program is its balanced approach to teaching. Didactic teaching is interwoven with problem-based learning, a strong grasp of evidence-based medicine forms a prelude to an early introduction to clinical skills, and foundations of knowledge are reinforced with a comprehensive review prior to licensing examinations.

The Class of 2004 was the third class to be taught with the new problem-based learning system; I appreciated this style of learning. The curriculum introduced small group sessions in which groups were given clinical scenarios relevant to recent lectures. The group's goal was to research the clinical problem and brainstorm possible diagnoses and treatment plans. That process enabled me to develop problem-solving skills that were not only reflected in my strong performance on the national examinations, but were also essential to my daily work as a resident.

While problem-based learning is not unique to the U of A, the program has achieved an exceptional balance between didactic teaching and problem-based learning. Without the solid knowledge base gleaned from traditional didactic lectures, there would not be a framework to allow for clinical problem solving. The U of A provided me with both a good knowledge base as well as the ability to apply this knowledge in my everyday work.

Clinical skills, both in physical examination and in communication, were introduced very early, through seminars, through one-on-one teaching, with residents and through clinical rotations. The early introduction of physical examination gave me the time I needed to develop these skills. However, throughout my years as a medical student, emphasis was also placed on communication skills and the methods by which to develop a good doctor-patient relationship. There were small group tutorials and discussions with physicians and other health care professionals that allowed me to develop and practice my communication skills. The emphasis on communication has certainly helped me as a professional, but it has also helped me to reach out to my patients on a personal level. For example, I recently had to inform a patient that a mass found on her kidney was malignant. This was difficult, but as a new resident I was very glad to have had some preparation to allow me to share the news with compassion and care.

I enjoyed my time in medical school at the U of A not only for its excellent teaching and skill building, but also for the relationships that I built with my classmates, teachers and other residents. They are the kind of relationships that I will be able to draw from and depend on throughout my residency and future career.

**Lori Wik, University of Alberta medical resident  
Graduated with the medical class of 2004 and began her  
residency in internal medicine the spring of that same year**

### World Class Facilities

The University of Alberta's medical students train in some of the best medical facilities in Canada. The majority of pre-clinical education is conducted at the University of Alberta Hospital (UAH). As one of Canada's leading clinical, research and teaching hospitals, the UAH treats more

than 700,000 patients annually from across western and northern Canada. The UAH is recognized as a national leader in organ and tissue transplant, both in success rates and in transplant volumes.

During their clinical education years, students train at the UAH and other major health care facilities within the Capital Health district, such as:

- Royal Alexandra Hospital
- Stollery Children's Hospital
- Misericordia Community Hospital
- Grey Nuns Community Hospital
- Glenrose Rehabilitation Hospital
- Cross Cancer Institute
- Sturgeon Community Hospital

Students are also placed in various family clinics within Edmonton, and have the opportunity to train in community hospitals throughout rural Alberta.

### Future Facilities

It's an exciting time to pursue medical studies at the University of Alberta. In order to meet the increasing demands of health care in the 21st century, a number of facilities are under development. The University and the regional health authority are ambitiously building new facilities that will support patient care and research and maintain the Capital Health region and the University as leaders in Canada. New facilities underway include:

- Ledcor Clinical Training Centre and Zeidler Family Gastrointestinal Health and Research Centre
- Alberta Heart Institute: Will solidify Edmonton's places as a cardiac centre of excellence
- Health Research Innovation Facility: Will create additional teaching and research space; a new state of the art auditorium will be built within HRIF for medical education
- A \$210 million redevelopment project at the Royal Alexandra Hospital

## Student Life

Life as a medical student at the University of Alberta is not limited to academics. The Medical Students' Association (MSA) ensures that there is ample focus on student well-being and recreation so that students can get the most out of their medical school experience. The range of student activities within the Faculty include:

- Intramural sports
- Annual art exhibits rotate through local hospitals

- Music series performed for hospital patients and staff
- Jazz band
- Choir

Moreover, recreational and leisure activities within the broader University are virtually unlimited. In addition, medical students are strongly encouraged to give their time and energy to community-based initiatives. For example, medical students spearhead the Buttout program, a program that targets students in grades five and six about the adverse effects of smoking before they encounter increased peer-pressure in junior high. Developed by medical students, the program was recognized in 2003 by both AADAC and the provincial government with the first ever Barb Tarbox Award for Excellence in Tobacco Reduction for a non-profit organization.

Other community activities include:

- Shinerama: a cystic fibrosis fundraiser
- A sexual education program for youths
- A blood bank drive
- A diabetes education program
- MSA foster child
- Operation Christmas child
- Festival of trees



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### The Office of Student Affairs

The Office of Student Affairs looks after issues pertaining to student health, student well-being and student advocacy. Student health and well-being encompasses all areas pertaining to both physical and mental health. The Office provides counseling on both academic and personal matters and look after students with special circumstances, including students with infectious diseases or physical handicaps. Its aim is to ensure that students are not distracted by health matters and are able to perform to the best of their abilities. The Office also provides career counselling for all students and helps organize financial counselling for students with financial need.



The capital city of Alberta has all the amenities of big city living without the problems associated with urban life.

Student advocacy ensures that the best interests of students are represented in all Faculty and University considerations. This includes both advocating for students and making sure students are represented on all major policy committees.

### **The Well-Being Committee**

The Well-Being committee works in association with the Student Affairs Office in order to promote wellness among students. They provide students with resources to guidance and support, education about stress management and promote student and family involvement in social events. They also publish “Words of Wellness”, a bi-annual newsletter for students concerning various aspects of student well-being.

The committee organizes events for the National Wellness Week in April, including stress management seminars, yoga sessions, cooking lessons, interest talks, a sports day, and massages for students. Moreover, it organizes interest talks on topics such as conflict management on the medical wards, and life as a parent in medical school. Social events include fundraisers, a Christmas party, family get-togethers, sports (ex., outdoor hockey games), and contests including a Halloween pumpkin carving contest and a Christmas gingerbread house building contest.

### **The U of A within a dynamic city:**

The capital city of Alberta has all the amenities of big city living without the problems associated with urban life. With a metropolitan area of one million people, Edmonton is home to the most expansive urban parkland in all of North America. Providing the city with twenty-two major parks, the river valley boasts over 1,500 kilometres of trails used for walking, biking and cross-country skiing.

The City also boasts major sports franchises, one of North America’s finest concert halls (the Winspear Centre), a symphony orchestra, a vibrant theatre scene and a summer packed with major arts and cultural events. The University, situated on the banks of the North Saskatchewan River, is close to one of Edmonton’s most vibrant urban landscapes, Whyte Avenue, home to arts and entertainment activities in all seasons.

For more detailed information on what the City of Edmonton has to offer, please consult these web sites:

City of Edmonton: <http://www.edmonton.ca>

University of Alberta: <http://www.ualberta.ca/>

Economic Development Edmonton: <http://www.edmonton.com/portal.asp?page=1>