

## PRE-PROFESSIONAL PROGRAMS

### PRE-PROFESSIONAL MEDICINE

- UNIVERSITY OF ALBERTA
- UNIVERSITY OF CALGARY

UPDATED FEBRUARY 2012\*

This Academic Planning Guide highlights major points only regarding admission and transfer. Students are advised to read the university and RDC calendars, and the Alberta Transfer Guide for other necessary information. Some courses listed may have prerequisites; refer to [Course Descriptions](#). Access this guide online: [www.rdc.ab.ca/academic\\_advising](http://www.rdc.ab.ca/academic_advising).

#### PLEASE NOTE THAT:

- Some professional programs have a limited number of seats available according to province of origin;
- Some professional programs do not accept international students;
- Neither completing preprofessional program requirements nor the GPA received on that coursework guarantees acceptance into a professional program;
- Entrance requirements for professional programs vary as per university. It is a student's responsibility to ensure they are taking correct preprofessional coursework for a university other than specified in the title of an Academic Planning Guide;
- The information in this guide is a summary only and students are strongly advised to consult the calendar for the university they wish to attend. This guide is for UofA and UofC only.

\*This information will be updated for Fall 2013 when UofA and UofC publish their new application manuals.

This program is tailored for the completion of twenty prerequisite courses within two academic years in preparation for admission to Doctor of Medicine at University of Alberta and University of Calgary. Although these courses can be taken within two years as shown *the courses do not have to be completed during the first two years of study*. Instead, students preparing for admission to Doctor of Medicine are strongly advised by both universities to follow a degree program that is of interest to them, suitable for possible future employment, and flexible enough to accommodate as many prerequisite courses as possible. Programs like BSc Biological Sciences, BSc Cell Biology, BSc General, BSc Kinesiology, BSc Nutrition, etc. can work well as preparation degrees when the prerequisite courses are taken within the degree. Consult with an academic advisor if you require additional information.

UofA and UofC have specific admission requirements, some of which are noted in this guide. Students are responsible for confirming university admission information and should take note of limited seat availability in the Doctor of Medicine programs at both universities. All students planning to apply to Medicine must register in a degree program, maintain good standing in that program, and either be enrolled in a degree program when applying or have already earned a degree. One degree is not preferred over another when applying for entry to Doctor of Medicine.

**Medical Schools in Alberta have admission policies regarding Residency, Citizenship, and International Students.** It is imperative to read calendar information for your destination university *BEFORE* applying to or beginning the pre-medicine program at Red Deer College. The majority of seats in the Faculty of Medicine at UofA and UofC are reserved for Albertans and international students are not admitted to either school.

**Students are encouraged to have an alternative career in mind** as the number of well-qualified applicants for medical school is far greater than the number of spaces available. It is recommended students obtain a baccalaureate degree prior to admission. Application may be made with two or three years of post-secondary study, however most students accepted into Medical School have at least three years of study and more frequently, a four-year degree. Very few applicants are accepted with only two years of preprofessional study. As of 2010, UofC no longer accepts applications from students who have not fully completed two years of study.

**PREREQUISITE COURSES FOR UofA AND UofC**

UNIVERSITY OF ALBERTA (required courses)	UNIVERSITY OF CALGARY (recommended courses)	NUMBER OF CREDITS	COURSES TAKEN AT RED DEER COLLEGE
Statistics		3	STAT 251
Biochemistry		3	BIOCH 301 <i>or</i> BIOCH 393
General Chemistry	General Chemistry	6	CHEM 211/ 212
Organic Chemistry	Organic Chemistry	6	CHEM 351/352
Biology	Biology	6	BIOL 217/218
Physics	Physics	6	PHYS 205/226
English	English	6	ENGL 219/220
	Statistics or Calculus	3	STAT 251 or MATH 202 (or 203)
	Anthropology, Psychology, or Sociology	3	One of: ANTH 200, 201, PSYC 260, SOCI 260
	Biochemistry	6	BIOCH 393 <sup>2</sup> (page 3)
	Physiology	6	PSIO 258/259 or PSIO 262 <sup>4</sup> (page 3)
Options for UofA		24	Choose courses that fit into your degree program
	Options for UofC	15	Choose courses that fit into your degree program

**SUGGESTED PATTERN OF COURSES YEAR 1**

FALL	WINTER
BIOL 217 (3)	BIOL 218 (3)
CHEM 211(3)	CHEM 212 (3)
ARTS OPTION <sup>1</sup> (3)	CHEM 351 (3)
MATH 202 (or MATH 203) or ARTS OPTION <sup>1,2,4</sup> (3)	Statistics course <sup>2,3</sup> (3)
ENGL 219 (3)	ENGL 220 (3)

**NOTES:**

- Arts Option.** Transferable courses in ANTH, CLAS, DRAM, ECON, FREN, GEOG (not GEOG 230 or 231 for UofA bound students) HIST, MUSE, MUSI, PHIL, POLI, PSYC, SOCI (not SOCI 310 or 312 for UofA bound students), SPAN. PSYC 260 may be used as an Arts Option for UofC but it is a Science Option for UofA.
- The Faculty of Medicine at UofC recommends either \*3 (3 credits) calculus or \*3 statistics. Students bound for Faculty of Medicine at UofA are required to take \*3 of statistics; calculus is not required. Take STAT 251 if there is a chance you will apply to the MD programs at UofA *and* UofC. Calculus (MATH 202 or 203) may be a required course in your preparation degree program. If your prep program does not require calculus, you may take an Arts or Science Option instead (see #4 and #5 in *Suggested Courses for Year 2* for Options).
- STAT 251 is recommended for all students taking statistics as it is accepted for credit in all faculties.* If you have taken **PSYC 312** do not take STAT 251 as you will be given credit for STAT when applying to Doctor of Medicine at UofA or UofC. PSYC 312 is a six-credit course with pre/co-requisites of PSYC 260/261. PSYC 312 will fulfill \*3 statistics and \*3 Science Option (or Open Option) for UofA bound students; the two junior PSYC courses will fulfill one Science Option and one Arts Option. For students applying to medicine at UofC, PSYC 312 fulfills the statistics recommendation but take note that PSYC 312 is *not* accepted in the Faculty of Science at UofC. **KNSS 209** or **BUS 306** also fulfill STAT when applying to the MD program at UofA or UofC but neither course will be accepted for credit in the Faculty of Science at UofA or UofC. Speak to an academic advisor if you require more information.
- Students with 70% or higher in Math 31 who will take calculus: take MATH 203 instead of MATH 202.

## SUGGESTED COURSES FOR YEAR 2

BIOL 317<sup>1</sup> (3)

BIOL 318<sup>1</sup> (3)

CHEM 352 (3)

PHYS 205/226 (6)

BIOC 301 *or* BIOC 393<sup>2</sup> (3)

ARTS OPTION<sup>3</sup> (3): \_\_\_\_\_

2 SCIENCE OPTIONS<sup>4</sup> (6): \_\_\_\_\_

OPEN OPTION<sup>5</sup> (3): \_\_\_\_\_

### NOTES:

1. Neither **BIOL 317** nor **BIOL 318** is listed in the prerequisites for UofA or recommended courses for UofC but the course work is considered beneficial in future medical study and may be included in program requirements for your preparation degree program. BIOL 317 is prerequisite for GENE 370 which may be taken as a Science Option.
2. Students who will only apply to BSc programs and/or the MD program at UofA may take BIOC 301 or BIOC 393. Those applying to BSc programs and/or Medical School at UofC *must* take BIOC 393 (lecture & lab). Biochemistry courses must have a lab component to be accepted for science credit at UofC. If you are considering other universities and are unsure of their curriculum requirements for biochemistry, take BIOC 393.
3. **ARTS OPTION.**  
**Students bound for UofC** require one course from: ANTH 200, 201, PSYC 260, or SOCI 260. If you have taken one of these already, choose from transferable: ANTH, CLAS, DRAM, ECON, FREN, GEOG, HIST, PHIL, POLI, PSYC (not 312), SOCI, SPAN. . Make sure your Arts Options fit into the degree you are working towards.  
**Students bound for UofA** choose Arts Option from transferable: ANTH, CLAS, DRAM, ECON, FREN, GEOG (not 230 or 231) HIST, PHIL, POLI, PSYC (not 260, 312, 368, 369, 375, 377), SOCI (not 310 or 312), SPAN. Make sure your Arts Options fit into the degree you are working towards.
4. **SCIENCE OPTIONS. Choose Science Options from** BIOL 301, 317, 318; GENE 370; MICR 365, ZOOL 325, 342.  
**UofA bound students:** may also take PSYC 260 as a Science Option. You may wish to ensure your course choice fits into your degree program
5. **UofC bound students:** PSYC 260 cannot be used as a Science Option to UofC as it transfers as an Arts course. PSIO 258/259 or PSIO 262 may be taken as \*6 Science Options for UofC. The courses transfer in the same manner to UofC: ZOOL361/363 (\*6). You may wish to ensure your course choice fits into your degree program. Note: seats in PSIO 258/259 may be restricted to Kinesiology majors and not be available to students in other majors.
6. **OPEN OPTION.** Any \*3 course transferable to your destination university. Consult the academic planning guide for the degree program you are using before choosing an Open Option. You may wish to take a course that fits into your degree.

### ALL STUDENTS IN THE PRE-MEDICINE PROGRAM ARE STRONGLY ADVISED TO:

- Consult [Course Prerequisites](#) for any course prerequisites,
- Check [Alberta Transfer Guide](#) concerning course credit transfer to UofA and UofC,
- Consult the calendars for [University of Alberta](#), [University of Calgary](#), and appropriate websites, and
- Consult the academic planning guide and university calendar for your alternate degree program concerning important program and transfer admission information.

# UNIVERSITY OF ALBERTA

It is imperative students consult UofA Faculty of Medicine and Dentistry and MCAT websites for admission information.

1. Be aware of the total length of time required to obtain a medical degree and following this, a licence to practise. The usual time is a *minimum* two years pre-medical study with four years being the norm; followed by four years of medical studies (at which point the MD degree is awarded) followed by a minimum two years of internship before a license to practice can be issued.
2. Students with a grade of 6 or 7 in International Baccalaureate Program (IB) courses and students with a grade of 4 or 5 in Advance Placement (AP) courses should refer to <http://alis.alberta.ca/ec/ep/aas/ta/ibap.html> and [http://www.med.ualberta.ca/education/ume/admissions/dofm\\_require.cfm#Prerequisite](http://www.med.ualberta.ca/education/ume/admissions/dofm_require.cfm#Prerequisite) for further information.
3. APPLICATION ELIGIBILITY  
**This is a summary of information from [MD Admissions](#) for Fall 2012. It will be updated when Fall 2013 admission requirements are published by UofA.**
  - a. All applicants to the MD program must be registered in or have completed a degree program and must be Canadian citizens or Permanent Residents. Applications from international students are not accepted.
  - b. The minimum requirement for admission is the successful completion of at least two full years of transferable post-secondary work (*60 credits*). Of this, *30 credits* must be taken during one academic year (September 1 - April 30 inclusive). A full academic year consists of at least 18 credits completed per academic year.
  - c. One academic year (fall/winter terms) must contain 30 credits.
  - d. The minimum cumulative GPA requirement for applicants with **four or more years** of post-secondary transferable course work is 3.30/4.00 for Alberta residents and 3.50/4.00 for non-Alberta residents. The minimum grade requirement for applicants with **two or three years** is 3.70/4.00. The number of years completed is determined by how many years you will have completed by April 30th of the year following the submission of your application.
  - e. In addition to the above, applicants will also be assessed on MCAT results, personal activities and reference letters, interview, criminal record check, and required prerequisite courses.  
See <http://ume.med.ualberta.ca/ProspectiveLearners/MDAdmissions/Pages/default.aspx>
4. Prerequisite courses must be successfully completed or in progress at the time of application.
5. For applicants who have completed **four or more years** of transferable course work, the admissions cumulative average is calculated with the deletion of the lowest year GPA, provided it is not the most recent completed year, nor the one and only year where 30 transferable credits were completed. Applicants with four or more years of study admitted to Fall 11 had a mean cumulative GPA of 3.87 and a mean MCAT score of 10.92.
6. For students with **fewer than four years** of study, the GPA is cumulative. Applicants with two or three years of study admitted to Fall 11 had a mean cumulative GPA of 3.97 and a mean MCAT score of 11.86.
7. Cumulative admissions academic average is comprise of all transferable postsecondary study done while registered as a full-time student (at least \*18 per academic year).
8. In the 2011-12 application cycle 1,344 applications were received for 167 positions. There are five over quota seats reserved for Aboriginal applicants and ten over quota for Rural applicants. 85% of the quota is reserved for Alberta residents and 15% is for out-of-province applicants. Of those [admitted to Fall 2011](#), 114 applicants completed four or more years of study and five had earned a graduate degree.
9. All degrees are considered equally for admission.
10. Consult Faculty of Medicine MD Admission information concerning Spring or Summer Session courses, application and transcript deadlines, non-academic criteria, etc.
11. UofA will permit *two* attempts only on any transferable course. Attempts include withdrawal, non-transferable grade (below C-), and a fail grade on courses taken at any college or university. Please note where the applicant has more than one transferable grade for the same course at any institution, only the first transferable grade received is used in calculating the GPA for admission purposes. Courses that are failed are considered to be deficient.
12. **To improve a low transferable grade**, you are advised by UofA to take a *higher level course in the subject area* instead of repeating the lower level course. You may need to audit the lower level course to gain the understanding required for the higher level coursework. The highest mark in the subject area will be used in calculation of your GPA.
13. **Medical College Admission Test (MCAT)** All applicants must write the MCAT *before* submitting an application to the MD program (see <http://www.aamc.org/students/mcat/>).

# UNIVERSITY OF CALGARY

**It is imperative students consult UofC Faculty of Medicine and MCAT websites for admission information.**

**NOTE:** The UofC Faculty of Medicine publishes an Admission Manual in August of each year for the next admission cycle. The information in this guide is updated at that time. This guide is based on the 2011-2012 manual.

1. Be aware of the total length of time required to earn a medical degree at UofC and following this, a licence to practice. The usual time is a minimum two years of pre-medical study with four years being the norm; followed by three years of medical studies (at which point the MD degree is awarded) followed by a minimum of two years of internship before a license to practice can be issued.
2. The Faculty of Medicine accepts IB (higher) and AP courses according to UofC policy. There is no admission advantage or disadvantage to using IB or AP coursework to meet requirements. Students with a grade of 6 or 7 in International Baccalaureate Program (IB) courses and students with a grade of 4 or 5 in Advance Placement (AP) courses should refer to <http://alis.alberta.ca/ec/ep/aas/ta/ibap.html> and <https://www.ucalgary.ca/pubs/calendar/current/a-20.html>.
3. **APPLICATION ELIGIBILITY**

**This is a summary of information from the [Applicant Manual 2011-2012](#). This information will be updated when UofC publishes the admission information for Fall 2013.**

  - a. Applicants must be a Canadian citizen or Permanent Resident; applications from individual international students are not accepted.
  - b. You must have completed, *by the time of application*, two full-time years of post-secondary education. In order for an academic year to be considered full-time you must have completed 24 credits for which a grade has been recorded over a consecutive period of eight months, usually September – April. However, it must be noted that most accepted applicants will have taken \*30 per academic year.
  - c. Medical College Admission Test (MCAT): The MCAT must be written by the fall of year of application with scores available for release to the Faculty of Medicine prior to the application deadline.
  - d. GPA is calculated using only full-time undergraduate years. Spring or summer term courses are not counted in the full-time study requirement or in calculation of the GPA but are considered as indicators of a student's academic background. In order to apply, Alberta residents require a minimum of 3.20/4.00 and Non-Alberta residents require a minimum of 3.60/4.00 based on the calculation information in *2.4 of the Applicant Manual* (<http://www.ucalgary.ca/mdprogram/prospective/admissions/applicants1011>).
4. No specific courses are required for application or acceptance to the MD program at UofC. The admissions committee encourages students to take as many recommended courses as their schedules allow because the content of these courses will be helpful during the MD program. Whether or not the applicant has taken the recommended courses at the time of application will not be taken into consideration in scoring the academic record. Note that extracurricular, volunteer, and employment activities weigh heavily; you are advised by the faculty to participate.
5. If you do not meet the application standards, your application will not be processed. The two years of full-time study do not have to be consecutive nor do they have to be the most recent but they must be completed when submitting an application. The GPA for students with a minimum two years of study is assessed on *all* post-secondary credit.
6. All applicants identifying themselves as Aboriginal who meet the application criteria will be invited to interview.
7. 85% of the seats are reserved for Albertans and 15% for out-of-province applicants.
8. Consult the Applicant Manual for the pre-interview scoring criteria and weighting, Aboriginal applicant specifics, residency requirements, important deadlines, and other information. Admission statistics are available at <http://www.ucalgary.ca/mdprogram/prospective/admissions/refstats>.
9. More than 2200 applications were received in the 2010-11 application process for 170 positions; 644 applicants were interviewed. The UofC Faculty of Medicine encourages applicants to have an alternative career in mind as the number of well-qualified applicants for medical school is far greater than the number of spaces available.
10. A student may repeat a course previously attempted (including withdrawals, non-transferable grade, and failing grade) only once.
11. Students who were Required to Withdraw from any post-secondary institution or earned a GPA less than 2.0 in any academic year should contact the UofC Office of the Registrar concerning future admission.
12. **Medical College Admission Test (MCAT)** Detailed information is available at <http://www.aamc.org/students/mcat/>.

## HOW TO FIND MORE INFORMATION

### [Science Department](#)

Warren Elgersma, Chairperson  
Office: 1607-E 403-343-4052  
[warren.elgersma@rdc.ab.ca](mailto:warren.elgersma@rdc.ab.ca)  
[http://www.rdc.ab.ca/about\\_rdc/academic\\_departments/sciences](http://www.rdc.ab.ca/about_rdc/academic_departments/sciences)

### [Academic Advising](#)

Academic Advising Centre: Room 1102  
[advisors@rdc.ab.ca](mailto:advisors@rdc.ab.ca) 403-342-3400  
[http://www.rdc.ab.ca/academic\\_advising](http://www.rdc.ab.ca/academic_advising)

### [RDC Website](#)

<http://www.rdc.ab.ca>

### [RDC Timetable](#)

<http://www.rdc.ab.ca/timetable>

### [Alberta Transfer Guide](#)

<http://www.acat.gov.ab.ca>

### **UofA** [Faculty of Medicine and Dentistry](#)

[admissions@med.ualberta.ca](mailto:admissions@med.ualberta.ca) 780-492-6350  
<http://www.med.ualberta.ca>  
<http://www.med.ualberta.ca/education/ume/>  
<http://www.ualberta.ca>

### [Undergraduate MD Program Brochure](#)

University of Alberta

### **UofC** [Faculty of Medicine](#)

[ucmedapp@ucalgary.ca](mailto:ucmedapp@ucalgary.ca) 403-220-4262  
<http://medicine.ucalgary.ca>

### [Applicant Manual](#)

University of Calgary

<http://www.ucalgary.ca/mdprogram/prospective/admissions/applicants1011>  
<http://www.ucalgary.ca>

### **PLEASE NOTE:**

Be aware that you are responsible for ensuring that your registration is complete and appropriate and that your course choices comply with the program to which you have been admitted at RDC and/or to the university to which you wish to transfer.

You are cautioned that any changes to your courses, your major or your transfer destination may adversely affect your transferable credit or admission requirements for future programs. Consult with an academic advisor if you have any questions.

The function of academic advisors is to provide students with information and resources that enable them to make informed decisions relevant to their education. These resources include the RDC Calendar, the Academic Planning Guide for your chosen program and destination university, the Alberta Transfer Guide and the calendar and contact information for your destination university. Academic advisors will assist you in interpreting information from these resources or refer you to your destination university if appropriate. Students in university transfer programs are strongly advised to refer to the calendar of the university to which they wish to transfer and should contact appropriate university departments as required.