



UNIVERSITY  
OF MANITOBA

## Faculty of Engineering

### Applicant Information Bulletin for the 2011-2012 Academic Year

**EARLY BIRD DEADLINE: APRIL 1, 2011**  
**APPLICATION DEADLINE: MAY 2, 2011**

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#### I. GENERAL INFORMATION

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The purpose of this document is to provide applicants applying to the Faculty of Engineering under Route I, Route II, and Route III with the admission requirements and selection procedures for the 2011-2012 academic year. It supplements, but does not take precedence over the admission policies set out in the University of Manitoba General Calendar and the regulation of the Faculty of Engineering.

Enrolment in the Faculty of Engineering is limited to applicants satisfying the minimum requirements specified below. Selection is academically competitive and at the discretion of the Faculty of Engineering Admissions Committee. The Admissions Committee consists of the Associate Dean and the Admissions Officer.

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#### II. THE PROGRAMS

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The Faculty of Engineering offers a four-year Bachelor of Science in Engineering degree in the following areas:

- Biosystems
- Civil
- Computer
- Electrical
- Mechanical

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#### III. PROFESSIONAL REGISTRATION

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In order to practice engineering in any province or territory in Canada, it is necessary to be a member of the Professional Engineering Association of that province or territory. The requirements for membership are acceptable academic preparation and a subsequent period of acceptable experience gained under the supervision of a registered professional engineer. The undergraduate programs in Biosystems, Civil, Computer, Electrical and Mechanical Engineering are accredited by the Canadian Engineering Accreditation Board (CEAB), reflecting acceptable academic preparation for membership in the association of professional engineers in any

province or territory in Canada. Through a mutual recognition agreement, the programs are also recognized as satisfying accreditation requirements in Australia, France, Hong Kong, Ireland, Japan, Korea, New Zealand, Singapore, South Africa, Taiwan, the United Kingdom, and the United States of America.

Graduates of an accredited program are eligible to apply for membership as an engineer-in-training, in the association of professional engineers in their province of residence in Canada. After a period of acceptable experience, they are eligible to apply to the association for registration as a professional engineer in that province.

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#### IV. ELIGIBILITY REQUIREMENTS AND ENTRY ROUTES

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##### ROUTE I: DIRECT ENTRY

##### 1. High School Graduates

Applicants in this category apply directly from a Manitoba high school (or the equivalent) and have met the General Entrance and Specific Requirements as listed on the Application for Undergraduate Admission 2011-2012. Applicants must have completed Manitoba grade 12 Pre-Calculus 40S, Chemistry 40S, and Physics 40S (or the equivalent) with a minimum average of 85% over the three required subjects, with no individual grade less than 60%.

##### 2. Year One Transfers

Applicants who have entered another faculty at the University of Manitoba (or equivalent) and do not meet the requirements of Route II (see below), will be considered under Route I if they have completed less than 24 credit hours of university course work and apply to the Faculty of Engineering immediately after their first year of admission. Applicants will be required to meet the requirements as specified above as



well as, be in good academic standing, and have a minimum overall grade point average of 2.0 on their university work.

### 3. Mature Students

Mature applicants who are Manitoba Residents and are 21 years of age must have completed the same requirements as High School Graduates described above and have not completed prior post-secondary studies at a recognized institution. They must have completed Grade 12 Pre-Calculus 40S, Chemistry 40S, and Physics 40S with a minimum average of 85% over these three required courses, with no individual grade less than 60%.

### ROUTE II: ADVANCED ENTRY

Applicants who have completed university level courses must have a minimum grade of "C" in eight of the following courses or the equivalent:

**Table 1: Required Preliminary Year Courses**

Course Number	Course Title
CHEM 1300	Structure and Modeling in Chemistry
COMP 1010*	Introductory Computer Science 1
ENGL 1310	Literary Topics I
PHIL 1290	Critical Thinking
PHYS 1050	Physics 1: Mechanics
MATH 1210	Techniques of Classical and Linear Algebra
MATH 1510 (or MATH 1500)	Applied Calculus 1
MATH 1710 (or MATH 1700)	Applied Calculus 2
ENG 1430	Design in Engineering
ENG 1440	Introduction to Statics
ENG 1450	Introduction to Electrical and Computer Engineering
ENG 1460	Introduction to Thermal Sciences

\* NOTE: As of September 2011 COMP 1012 Computer Programming for Science & Engineers will be offered and considered as a preliminary year course, for students applying to future sessions, beginning with the Fall 2012.

If you have completed more than eight of the twelve courses for selection, the eight courses with the highest grades will be used to determine an adjusted grade point average for

selection. All applicants must complete the preliminary course requirements by May/June 2011.

NOTE: All applicants seeking admission for 2012-2013 academic year must complete the preliminary course requirements by April 2012.

### ROUTE III: ENGINEERING AS A SECOND DEGREE

#### 1. Degree Graduates

Applicants who have completed a Baccalaureate degree must present the pre-requisite courses, Pre-Calculus 40S, Chemistry 40S, and Physics 40S (or equivalent) with no grade lower than 60%. After that, admission is based on an Adjusted Grade Point Average (AGPA). The AGPA will be calculated in accordance with the following table:

**Table 2: AGPA Calculation Table**

Total Credit Hours In Previous Degree	Number of Credit Hours Excluded in AGPA Calculation
90-104	18
105-119	21
Over 120	24

A minimum AGPA of 2.50 is required to be considered. However, higher averages may be required to be competitive for admission to specific departments.

#### 2. Diploma Graduates

Applicants who have graduated from a recognized Engineering Technology Diploma program (or related diploma program) with an overall grade point average of 2.50 may be considered for admission. Students must have also completed Manitoba Grade 12, Pre-Calculus 40S, Chemistry 40S and Physics 40S (or the equivalent) with no grade lower 60% in each course.

Non-graduates of an Engineering Technology program must meet the eligibility requirements for advanced entry (Route II), or that of High School Graduates (Route I) if applicable.

### V. TRANSFER STUDENTS FROM AN ACCREDITED ENGINEERING PROGRAM

Canadian Citizens, Permanent Residents and International Applicants must be registered in an Engineering program that is accredited by the Canadian Engineering Accreditation



Board and must be in good academic standing in order to transfer to University of Manitoba, Faculty of Engineering.

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## VI. ENGINEERING ACCESS PROGRAM

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The Engineering Access Program provides access to an engineering education for Manitobans of Aboriginal ancestry who would not otherwise have the opportunity. Applicants are typically mature students who do not meet the normal admission requirements of the Faculty. For more information please contact the director of the Engineering Access Program (see XIV. Useful Office Names, Addresses & Telephone Numbers).

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## VII. SELECTION OF ENGINEERING PROGRAM

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The first year consists of courses common to all engineering programs. Following completion of the preliminary year, students must apply to one of the five Engineering degree programs offered by the Faculty. Route I applicants will apply for a program, through the Faculty of Engineering, following completion of the preliminary year. Route II and Route III applicants will declare which programs (1<sup>st</sup> choice and 2<sup>nd</sup> choice) they wish to be considered for, on the application submitted to the Admissions Office.

All programs have enrolment quotas, and applicants are not guaranteed acceptance into their first program choice. Applicants will be ranked based on the average of the best eight final grades that they have achieved in the preliminary year courses.

Additionally, students must meet the University of Manitoba minimum performance level (cumulative grade point average of 2.00) as outlined in the Addendum to the *Undergraduate Calendar 2010-2011*.

*NOTE: Effective September 2010, applicants will be subject to the Faculty regulations and requirements for continuation in an Engineering degree program which are detailed in the University of Manitoba Undergraduate Calendar 2011-2012 (www.umanitoba.ca/calendar). For further information, please contact the Faculty of Engineering.*

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## VIII. ENGLISH LANGUAGE PROFICIENCY REQUIREMENTS

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English is the language of instruction and communication at the University of Manitoba. Accordingly, if students' primary language is not English, or if their previous education has been conducted in another language, they must demonstrate a command of English sufficient to meet the demands of

classroom instruction, written assignments and participation in tutorials and discussions.

The term 'primary language' refers to that language which is most commonly used in homes, communities and daily commerce in the applicant's native country. It may or may not be the country's official language or one of the country's official languages or the language of instruction.

If students' primary language is not English, they will be required to demonstrate their proficiency in the use of the English language by meeting any of the options 1-7 listed below.

### English language proficiency options

1. Achieve a satisfactory result on the *Test of English as a Foreign Language (TOEFL)* by achieving any one of the following:
  - a. a minimum total score of 550 with no less than 50 in each of the component scores on the paper-based TOEFL, OR
  - b. a minimum total score of 213 with no less than 17 in each component score, on the computer-based TOEFL, OR
  - c. a minimum total score of 80 with a recommended minimum score of 19 in each skill area on the internet-based TOEFL.
- The TOEFL institution code for U of M is 0973.
2. Achieve minimum scores of 4.5 in Reading, 4.5 in Listening, and 4.0 in Writing on the *Canadian Test of English for Scholars and Trainees (CanTEST)*.
3. Achieve a minimum score of 6.5 based upon the academic module on the *International English Language Testing System (IELTS)*.
4. Achieve a minimum score of 80 on the *Michigan English Language Assessment Battery (MELAB)* offered by the University of Michigan.
5. Achieve a minimum grade of C in the **University of Cambridge Certificate of Proficiency in English**.
6. Achieve a score of 60 or more in the **Canadian Academic English Language Assessment (CAEL)**.
7. Achieve a minimum of 65% in the *Direct-Entry English Program* (also known as *Academic English Program for University and College Entrance* or *AEPUCE*), taught at U of M by the English Language Centre.

### Criteria for an English language proficiency requirement waiver

Under certain circumstances students may request a waiver of the English language proficiency requirement. Students must



complete a waiver application and provide supporting documentation to show that they meet one of the following conditions:

1. Ten consecutive years of residency in Canada which may include years of study in Canada. The period of residency will be the time lapsed between the 'Landed On' date on the 'Record of Landing' document and July 1 of the year of application.
2. a. Successful completion of a three year secondary school program in Canada, or a three year post-secondary education in Canada, or any combination of three successful years of secondary and post-secondary education in Canada, *OR*  
b. Graduation from a Manitoba high school, with five credits at the Senior Four level, which include two credits of English at the 40S level with an average grade of 75%.  
Successful completion of secondary studies equates to meeting the General Entrance Requirements of the University of Manitoba. Secondary education must include Grade 12 where appropriate.
3. Achieved a grade of four or greater on the International Baccalaureate Higher Level English course, or a grade of four or greater on the Advanced Placement English examination (Language Composition; Literature and Composition).
4. Verify conditions equivalent to 1 or 2 listed above in a country where English is the primary language.

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## IX. TRANSFER CREDIT

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Transfer credit will be considered for coursework completed at recognized colleges/universities within ten years of admission to the Faculty of Engineering. All coursework assessed by the University as acceptable for transfer credit will be reviewed and assigned as authorized by the Faculty of Engineering, and can be applied to the degree up to the maximum allowed under the Faculty's residence requirement (consult the Faculty of Engineering section of the University's *Undergraduate Calendar* at [www.umanitoba.ca/calendar/](http://www.umanitoba.ca/calendar/) for details). For students transferring from an Engineering Technology Diploma program, only courses with grades of "B" or higher will be considered for transfer of credit.

**In most cases, students will be asked to provide comprehensive and accurate course descriptions, including course outlines, textbook listings and copies of examinations, to assist in the transfer credit assessment process.**

Only successful applicants will be notified of transfer credit assignment. Students should expect to wait six to eight weeks

for completion of the transfer credit assessment after a *Certificate of Acceptance* has been received.

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## X. APPLICATION FEE

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The application fee of **\$95.00 prior to Apr 1<sup>st</sup>, 125.00 after Apr 1<sup>st</sup>**, (Canadian Citizens and Permanent Residents) or **\$110.00 prior to Apr 1<sup>st</sup>, \$125.00 after Apr 1<sup>st</sup>**, (International Applicants) must be included with the application, and is non-refundable.

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## XI. DEADLINES

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**April 1, 2011:** Deadline to submit the Early Bird application form for the Faculty of Engineering to the Admissions Office. (Application fee incentive, apply early and save \$30)

**May 2, 2011:** Deadline to submit the completed application form for the Faculty of Engineering to the Admissions Office.

**June 10, 2011:** Deadline for submission of complete and official university and college transcripts and any other documentation requested by the Admissions Office.

**July 15, 2011:** Deadline for receipt of final grades from applicants at the University of Manitoba who attended courses offered in the May/June Summer Term.

*Note: Where deadlines date fall on a weekend or statutory holiday, the normal office closing time of the next working day will be used.*

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## XII. COUNSELLING OF APPLICANT TO THE FACULTY OF ENGINEERING

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The Dean's Office in Engineering is pleased to assist all applicants who seek counseling regarding admission to the Faculty. The following points, however, should be noted:

- No Official of the Faculty of Engineering or the Admissions Office can guarantee the admission of any applicant. Admission is determined by the Admissions Committee on the basis of an annual competition.
- All applicants are advised to supplement any personal communication with written inquiries so that an official written response can be made. It is only these written responses which will be considered as evidence of any advice given by the Faculty.

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## XIII. APPEALS

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Applicants may request reconsideration of any decision made by the Admissions Committee. If an applicant believes there



has been a procedural error, they may request to have their application reconsidered. This request must be in writing and addressed to the Associate Dean, Undergraduate Programs, Faculty of Engineering within ten days of the mailing of the notification of a negative admission decision (see XV. Useful Office Names, Addresses & Telephone Numbers for contact information for the Associate Dean). Past experience has shown that most inquiries can be satisfied at this level without further reference.

To appeal the reconsidered decision, the applicant must submit a request in writing to the University Secretary, within ten days of the mailing of the reconsidered decision. This request will be conveyed to the Senate Admissions Appeal

Committee. For more information on Senate Admissions Appeals see [www.umanitoba.ca/admin/governance/governing\\_documents/students/286.htm](http://www.umanitoba.ca/admin/governance/governing_documents/students/286.htm) (see also XV. Useful Office Names, Addresses & Telephone Numbers). Appeals of reconsidered decisions by the Senate Admissions Appeal Committee focus on questions of correct adherence to published policies and procedures by the Selection Committee.

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#### **XIV. USEFUL OFFICE NAMES, ADDRESSES & TELEPHONE NUMBERS**

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The mailing address for the following University offices is:

(Name of Office)  
(Room Number and Building)  
University of Manitoba  
Winnipeg, Manitoba R3T 2N2

##### **Faculty of Engineering**

Associate Dean (Undergraduate Programs)  
Dr. Nariman Sepehri  
E2-290 EITC Building  
*Telephone:* (204) 474-9821

Student Advisor  
Judy Schroen-Galinaitis  
*Telephone:* (204) 474-9808  
*FAX:* (204) 275-3773  
*E-mail:* [judy@cc.umanitoba.ca](mailto:judy@cc.umanitoba.ca)

Engineering Access Program Director  
Randy Herrmann  
E2-442D EITC Building  
*Telephone:* (204) 474-9872  
*FAX:* (204) 474-7518  
*E-mail:* [herrmann@cc.umanitoba.ca](mailto:herrmann@cc.umanitoba.ca)

**Aboriginal Student Centre**  
45 Curry Place  
*Telephone:* (204) 474-8850

**Disability Service**  
155 University Centre  
*Telephone:* (204) 474-6213

##### **Admissions Office**

424 University Centre  
*Telephone:* (204) 474-8808

Admissions Officer  
Michelle Paragg  
*Telephone:* (204) 474-8813  
*Fax:* (204) 474-7554  
*Email:* [michelle\\_paragg@umanitoba.ca](mailto:michelle_paragg@umanitoba.ca)

**English Language Centre**  
520 University Centre  
*Telephone:* (204) 474-9251

**Financial Aid & Awards**  
422 University Centre  
*Telephone:* (204) 474-9531

**Housing & Student Life**  
101 Arthur V. Mauro Residence  
*Telephone:* (204) 474-9922

**International Centre for Students**  
541 University Centre  
*Telephone:* (204) 474-8501



**Learning Assistance Centre**

201 Tier Building

*Telephone: (204) 480-1481*

**Student Advocacy**

519 University Centre

*Telephone: (204) 474-7423*

**Student Counseling & Career  
Centre**

474 University Centre

*Telephone: (204) 474-8592*

**Student Union Office (UMSU)**

101 University Centre

*Telephone: (204) 474-6822*

**Student Financial Assistance  
Branch (Canada Student Loans)**

401-119 Portage Avenue

Winnipeg, Manitoba R3G 0T3

*Telephone: (204) 945-6321*

**University Secretariat**

312 Administration Building

*Telephone: (204) 474-9593*