

# MATHEMATICS, B.A. GENERAL

## Degree Requirements

Course	Title	Hours
<b>Year 1</b>		
MATH 1220	Linear Algebra <sup>1</sup>	3
MATH 1230	Differential Calculus <sup>1</sup>	3
MATH 1232	Integral Calculus <sup>1</sup>	3
MATH 1240	Elementary Discrete Mathematics <sup>1</sup>	3
6 credit hours from your Minor area of study as described in that unit's section of the calendar		6
12 credit hours from outside of your Major and Minor areas of study		12
<b>Hours</b>		<b>30</b>
<b>Years 2-3</b>		
18 credit hours of 2000, 3000 and/or 4000 level Mathematics courses (of these a minimum of 3 credit hours must be at the 3000 or 4000 level)		18
12 credit hours from your Minor area of study as described in that unit's section of the calendar		12
18 credit hours from outside of your Major and Minor areas of study		18
12 credit hours of open electives <sup>2</sup>		12
Refer to the information directly below this list for other important degree requirements students need to complete prior to graduation		
<b>Hours</b>		<b>60</b>
<b>Total Hours</b>		<b>90</b>

<sup>1</sup> Students are strongly advised to take MATH 1220, MATH 1230 and MATH 1232.

The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved:

- MATH 1500 (B) or MATH 1510 (B) may be taken in place of MATH 1230;
- MATH 1210 (B) or MATH 1300 (C+) may be taken in place of MATH 1220;
- MATH 1700 (B) or MATH 1710 (B) may be taken in place of MATH 1232;
- MATH 1200 may be taken in place of MATH 1240, but these courses are not equivalent, i.e., students should note that MATH 1240 is a prerequisite to some 2nd year Mathematics courses for which MATH 1200 is not a prerequisite.

<sup>2</sup> MATH 1010, MATH 1018, MATH 1020, FA 1020, MATH 1080, and MATH 1090 may not be used for credit in this program.

### Notes:

- For entry to either Major in Mathematics, the prerequisite is a grade of "C+" or better in six hours of Mathematics courses taken.
- A detailed listing of courses in the Department of Mathematics is available in the Calendar entries of the Faculty of Science.

**While completing the courses listed above, students in the B.A. General Degree must satisfy the University's Written English (W) and**

**Mathematics (M) requirements, plus the following Faculty requirements in order to graduate:**

### Ten Faculty Requirements for Graduating with a B.A. General Degree

1. A student must successfully complete a minimum of 90 credit hours of courses acceptable for credit in the Faculty of Arts (see Courses Acceptable for Credit (<https://catalog.umanitoba.ca/undergraduate-studies/arts/#Courses-Acceptable-Credit>) in the Faculty of Arts) with a "C" average or better on the courses that contribute to satisfying all of the B.A. General Degree requirements.
2. The minimum 90 credit hours of passed coursework must also include the remaining nine faculty requirements:
3. At least six credit hours from subject fields designated Humanities (<https://catalog.umanitoba.ca/undergraduate-studies/arts/#Arts-Humanities>), at least six credit hours from subject fields designated Social Science, (<https://catalog.umanitoba.ca/undergraduate-studies/arts/#Arts-Social-Sciences>) at least six credit hours from the list of courses that satisfy the Science (<https://catalog.umanitoba.ca/undergraduate-studies/arts/#Arts-Science>) requirement, and at least three credit hours from the list of courses that satisfy the Indigenous Content (<https://catalog.umanitoba.ca/undergraduate-studies/arts/#Indigenous-Content>) requirement.
4. At least three credit hours completed in each of five different Faculty of Arts subject fields (as listed under Five Faculty of Arts subject Field Requirements (<https://catalog.umanitoba.ca/undergraduate-studies/arts/#Five-subject-field>) and Humanities/Social Science/ Science Requirement). A subject field may also satisfy other Bachelor of Arts Degree requirements such as Humanities, or Social Sciences, or Indigenous Content, or Mathematics, or Written English.
5. Major: 30 credit hours which constitute a **Major** in one of the subject fields approved by the Faculty of Arts. The student must also have a minimum "C" average in courses where a final grade is recorded and that are used toward the Major including only the higher grade of any course that has been repeated and excluding any failed course(s). A student who declares only one Major must also complete a Minor. A student who declares a Double Major will not be required nor allowed to complete a Minor, but must complete 30 credit hours as specified by each Major department. *Students who have questions about a Major in a particular subject are strongly urged to consult an instructor in the appropriate department.* A Major may be declared once the prerequisite is satisfied.

Students who declare and complete a Major in Global Political Economy will not be required to complete a separate field for a Minor for purposes of satisfying the degree requirements.

6. Minor: 18 credit hours which are in a subject field (<https://catalog.umanitoba.ca/undergraduate-studies/arts/#Five-subject-field>) that is different from that of the declared Major, which constitute a Minor approved by the Faculty of Arts. A student who declares only one Major must also complete a Minor. A student who declares a Double Major will not be required nor allowed to complete a Minor. It is not possible to declare a "Double Minor." No course can be used to satisfy both the Major(s) and the Minor requirement. A Minor may be declared once the prerequisite is satisfied.
7. At least 30 credit hours of coursework must be successfully completed outside the Major(s) and Minor subject fields. In addition, there must be at least 12 credit hours of coursework successfully completed in any subject acceptable for credit in the Faculty of Arts including courses in the Major(s) and Minor. Note: Students who

complete a Double Major will satisfy this 12 credit hour requirement within their Double Major.

7. A student may not declare a Major/Minor combination in both Sociology and Criminology or both Italian and Italian Studies.
8. At least 60 credit hours must be taught by the Faculty of Arts (may include up to 24 credit hours from the Department of Mathematics or Art History courses considered as Humanities), or which have been accepted on transfer as equivalent to courses taught by the Faculty of Arts.
9. At least 30 credit hours must be numbered at or above the 2000 level.
10. Residency Requirement: A student in the B.A. General Degree Program must complete University of Manitoba residency requirements (<https://catalog.umanitoba.ca/undergraduate-studies/arts/#Residency-Requirement>).