MATH-100 – Pre-Calculus

University Arts and Science

Effective Term & Year: Fall 2025
Course Outline Review Date: 2026-09-01

Program Area: Math and Sciences

Description:

This course is intended for students who wish to strengthen their pre-calculus skills prior to taking MATH 103. MATH 100 presents topics that are necessary for the study of calculus. Students build more advanced concepts and look at the mathematics necessary to study them.

Program Information:

This course prepares students for Calculus, which is a required course for a Bachelor of Science degree in most universities.

Delivery Methods: On-campus (Face-to-Face)

Credit Type: College of the Rockies Credits

Credits: 3

Course type/s: Sciences

Instructional Activity and Hours:

Activity	Hours
Classroom, Directed Studies or Online Instruction	45
Seminar/Tutorials	
Laboratory/Studio	
Practicum/Field Experience	
Co-op/Work Experience	

Other	
Total	45

Course Requisites:

- Complete 1 of the following
  - Earned a minimum grade of C+ (65%) in at least 1 of the following:
    - MATH080 – Mathematics – Advanced Level
    - PREC 11 – Pre-Calculus 11
    - PREC 12 – Pre-Calculus 12
  - Earned a minimum grade of C+ (65%) in each of the following:
    - FOM 11 – Foundations of Mathematics 11
    - FOM 12 – Foundations of Mathematics 12
  - Earned a minimum grade of C+ (65%) in each of the following:
    - CALC 12 – Calculus 12
  - Those who have already earned credit for MATH 103 may not enroll in MATH 100 or use MATH 100 for program credit.

Prior Learning and Recognition: Yes

In some cases students may be able to apply for recognition of prior learning outside the classroom. This flexible assessment process provides equivalent course credit. It is a rigorous process that may include external evaluation, worksite assessment, demonstration, standardized test, self-assessment, interview, products/portfolio, and challenge exam, or other measures as appropriate. Tuition fees apply. Contact an education advisor for more information.

Course Transfer Credit:

For information about receiving transfer credit for courses taken at either British Columbia or Alberta institutions, please see https://www.bctransferguide.ca/ or https://transferalberta.alberta.ca . For more transfer credit information, please visit https://www.cotr.bc.ca/Transfer

All requests for course transfer credit from institutions in British Columba or elsewhere should go to the College of the Rockies Enrolment Services office.

Textbook Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

Connally, Hughes-Hallett, Gleason, et al, *Functions Modeling Change*, Wiley, 5th Edition

Please see the instructor's syllabus or check COTR's online text calculator
https://textbook.cotr.bc.ca/ for a complete list of the currently required textbooks.

Learning Outcomes:

Upon the successful completion of this course, students will be able to:

- perform basic algebra manipulations including factoring polynomials, operations on rational functions, rationalizing numerators and denominators, and partial fraction decomposition;
- work with function notation and the most common algebraic functions;
- recognize the laws of exponents and logarithms and how they are applied;
- explain the definitions of the trigonometric functions; be able to prove and apply the trigonometric identities and the laws of sines and cosines;
- draw the graphs of the functions they have studied and apply rigid transformations to them; and
- find the areas and volumes of geometric figures and apply them.

This course should help students:

- use written and oral communication skills effectively, employing methods appropriate to message and context;
- think clearly and critically, fusing experience, knowledge and reasoning into considered judgment;
- identify, interpret, and solve problems, effectively implementing and evaluating proposed strategies;
- to work both independently and in groups;
- to transfer knowledge to new contexts;
- to understand and interpret abstract written materials;
- to use abstract ideas to solve applied problems; and
- to appreciate the importance of persistence, a positive attitude and energy.

Course Topics:

- Functions
- Exponential and Logarithmic Functions
- Transformations of Functions
- Trigonometric Functions and Identities
- Composition, Inverses and Combinations of Functions
- Polynomial and Rational Functions

See instructor's syllabus for the detailed outline of weekly readings, activities and assignments.

Evaluation and Assessments

Assessment Type: On-Campus (face-to-face)

Assessment Type	% of Total Grade
Assignments	30%
Midterms	30%
Final Exam	40%
Total	100%

Grade Scheme

A+	A	A-	B+	B	B-	C+	C	C-	D	F
>=90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	<50

No pass requirements available.

Evaluation Notes: A grade of "D" grants credit, but may not be sufficient as a prerequisite for sequential courses.

Exam Attendance:

Students must attend all scheduled exams at the appointed time and place. Instructors may approve an alternate exam to accommodate an illness or personal crisis. Department heads will consider other written requests. Any student who misses a scheduled exam without prior approval will receive a "0" on the exam.

Academic Policies:

College of the Rockies policies related to courses can be found at https://cotr.bc.ca/about-us/college-policies/ and include the following:

- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Conduct (plagiarism, other cheating, behavioral misconduct)
- Policy 2.5.8 Academic Performance
- Policy 2.5.3 Grade Appeal
- Policy 2.4.9 Student Concerns Re Faculty

Course Changes:

The College of the Rockies updates course outlines regularly to meet changing educational, employment and marketing needs. The instructor will notify students in writing of any updates to this outline during the semester. The instructor reserves the right to revise, add or delete material while meeting the learning outcomes of this course outline.