



MATH 073 DS19
Advanced Mathematics 2
Course Outline – Winter 2017
School of Access
Community Learning Partnerships
MATH 073 DS19
Advanced Mathematics 2
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Instructor: Pooja Gupta
Class Hours: Online

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Office Hours: By Arrangement

Calendar Description

This course is the second half of Math 11 and is an excellent refresher for those who wish to upgrade before Math 12 or Precalculus. Topics include: rational and radical expressions and equations, quadratic equations and functions, right triangle trigonometry, trigonometric functions of any angle and the Sine and Cosine Laws.

Prerequisite(s): "C+" in MATH 072; or "C" in Principles of Math 11, or Pre-calculus 11, or Foundations of Math 12; or assessment.

<http://camosun.ca/learn/calendar/current/web/math.html>

Exit Grade: B+ (77%) or better is necessary to continue into MATH 115. C+ (65%) or better is necessary to continue into MATH 092, 105, 107 or 109. C (60%) or better is necessary to continue into MATH 112.

Required Materials

- (a) Reliable access to the internet
- (b) Registration with MyMathLab: <http://www.pearsonmylabandmastering.com/northamerica/mathxl/students/get-registered/index.html>
- (c) Course ID: **gupta47647**
- (d) scientific calculator (Sharp EL531 is the recommended calculator, and is good through MATH 073)

Course Content and Schedule

The course is designed to be completed in one term. However, it can be completed sooner, depending on a number of factors including the students' beginning level of math skills, motivation, learning rate, and how much time they can actually study **(average 15-20 hours per week to complete in 4 months)**.

If you do not understand something seek help right away. In addition to online, resources include your family and friends, your instructor, and /or the Math Tutor Center.

Contact your instructor to get permission to write the Final exam. The Final Exam must be written with an invigilator.

Grade Calculation: *Five Unit Exams 50%
**Final Exam 50%



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*As this is a mastery-based course, the goal for each test is 65% or better. If you receive between 60 & 70%, you have the option of rewriting once. If you scored less than 60% then you will need to rewrite the test before you continue. Note: Tests can only be rewritten once for a total of two times. The lowest test mark will be dropped when calculating the test average.

** If your term average is **at least 50%** and all your assignments are complete and if your final exam mark is higher than your term average, then your final course grade may be based 100% on your final exam mark.

Access Math Lab and Testing Centres:

Ewing 342 & 224 (LANS) and Tec142 (INT): These drop-in centres are available for you to work on math homework and to seek **free** help from the Instructional Assistant. See the hours posted on the math lab doors or go to Camosun College website.

Study Tips: It is recommended that approximately 3-6 hours per week be spent studying and completing homework for this course outside of class time. Find a study buddy to discuss math problems and **use the math labs**.

Tests can be written in Ewing 342 or at Interurban in CBA109. Contact your instructor for permission to write with your preferred location.

Check the college website (<http://camosun.ca/services/help-centres/math.html>) for details and hours.

Important Dates:

See the college website at <http://camosun.ca/events/important-dates.html> for important dates including the last day to withdraw to avoid an F on your transcript.

Grading System

| Percentage | Grade | Grade Point Equivalency |
|-------------|-------|-------------------------|
| 90-100% | A+ | 9 |
| 85-89% | A | 8 |
| 80-84% | A- | 7 |
| 77-79% | B+ | 6 |
| 73-76% | B | 5 |
| 70-72% | B- | 4 |
| 65-69% | C+ | 3 |
| 60-64% | C | 2 |
| 50-59% | D | 1 |
| <50% | F | 0 |
| In Progress | IP | N/A |



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| MATH 073 course content | | (Suggested) Due Date |
|--|--|-----------------------------|
| Unit 1 - Polynomials and Polynomial Functions | | |
| Pre-test | | |
| 4.1 | Introduction to polynomials and polynomial functions | |
| 4.2 | Multiplication of polynomials | |
| 4.3 | Introduction to factoring | |
| 4.4 | Factoring trinomials: $x^2 + bx + c$ | |
| 4.5 | Factoring trinomials: $ax^2 + bx + c$, $a \neq 1$ | |
| 4.6 | Special factoring | |
| 4.7 | Factoring: a general strategy | |
| 4.8 | Applications of polynomial equations and functions | |
| Post-Test (timed 3 hrs.) | | |
| Unit 1 Final Test (timed 3 hrs.) | | January 26, 2017 |
| Unit 2 - Rational Expressions, Equations, & Functions | | |
| Pre-test | | |
| 5.1 | Rational expressions and functions: multiplying, dividing, and simplifying | |
| 5.2 | LCMs, LCDs, addition, and subtraction | |
| 5.3 | Division of polynomials | |
| 5.4 | Complex rational expressions | |
| 5.5 | Solving rational equations | |
| 5.6 a,c | Applications and proportions (omit section b) | |
| 5.7 | Formulas and applications | |
| 5.8 | Variation and applications | |
| Post-Test (timed 3 hrs.) | | |
| Unit 2 Final Test (timed 3 hrs.) | | February 15, 2017 |
| Unit 3 - Radical Expressions, Equations, & Functions | | |
| Pre-test | | |
| 6.1 | Radical expressions and functions | |
| 6.2 | Rational numbers as exponents | |
| 6.3 | Simplifying radical expressions | |
| 6.4 | Addition, subtraction, and more multiplication | |
| 6.5 | More on division of radical expressions | |
| 6.6 | Solving radical equations | |
| 6.7 | Applications involving powers and roots | |
| 6.8 | The complex numbers | |
| Post-Test (timed 3 hrs.) | | |
| Unit 3 Final Test (timed 3 hrs.) | | March 7, 2017 |



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| Unit 4 - Quadratic Equations and Functions | | (Suggested)Due Date |
|---|--|------------------------------------|
| Pre-test | | |
| 7.1 | The basics of solving quadratic equations | |
| 7.2 | The quadratic formula | |
| 7.3 | Applications involving quadratic equations | |
| 7.4 | More on quadratic equations | |
| 7.5 | Graphing $f(x) = a(x - h)^2 + k$ | |
| 7.6 | Graphing $f(x) = ax^2 + bx + c$ | |
| 7.7a | Mathematical modeling with quadratic functions | |
| Post-Test (timed 3 hrs.) | | |
| Unit 4 Final Test (timed 3 hrs.) | | March 30, 2017 |
| Summary & Review/Chapter Test | | |
| Unit 5 – Trigonometry This section is from the trigonometry booklet which is available on D2L | | |
| Pre-test | | |
| 6.1 | Trigonometric functions of acute angles | |
| 6.2 | Applications of right triangles | |
| 6.3 | Trigonometric functions of any angle | |
| 8.1 | The law of sines | |
| 8.2 | The law of cosines | |
| Post-Test (timed 3 hrs.) | | |
| Unit 5 Final Test (timed 3 hrs.) | | To be announced |
| MATH 073 Final Pre-Test | | April 13th, 2017 |
| MATH 073 Final Post-Test | | April 13th, 2017 |
| MATH 073 FINAL EXAM (timed 3 hrs.) | | To be announced |



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Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College Calendar, Registrar's Office or the College web site at:

<http://www.camosun.ca>

STUDENT CONDUCT POLICY

There is a Student Conduct Policy. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section, or the College web site at:

<http://camosun.ca/about/policies/education-academic/e-2-student-services-&-support/e-2.5.pdf>

STUDENT GRADING POLICY

A new student grading policy is in effect for students in the School of Access. This information is available in the College Calendar, Registrar's Office or the College web site at:

<http://camosun.ca/about/policies/education-academic/e-1-programming-&-instruction/e-1.5.pdf>

ACADEMIC PROGRESS POLICY

There is an Academic Progress Policy designed to enhance a learner's likelihood of success. Students should become familiar with the content of this policy. The policy is available in each School Administration Office, Registration, and on the College web site in the Policy Section or the College web site at:

<http://camosun.ca/about/policies/education-academic/e-1-programming-&-instruction/e-1.1.pdf>