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|  | <p>School of Access<br/> Department of Mathematics &amp; Statistics<br/> <b>MATH 072 S02</b><br/> Advanced Mathematics 1<br/> <b>Fall 2017</b></p> |
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**COURSE OUTLINE**

The course description is online @ <http://camosun.ca/learn/calendar/current/web/math.html>

**[?] Please note: the College electronically stores this outline for five (5) years only. It is **strongly recommended** you keep a copy of this outline with your academic records. You will need this outline for any future application/s for transfer credit/s to other colleges/universities.**

**1. Instructor Information**

|     |               |  |
|-----|---------------|--|
| (a) | Instructor:   | Torsten Schoeneberg  |
| (b) | Office Hours: | Mon & Wed 3:00-5:00  |
| (c) | Location:     | Ewing 342A (Lansdowne)   |
| (d) | Phone:        | 250-370-3303   |
| (e) | Email:        | schoenebergT@camosun.bc.ca   |
| (f) | Websites:     | D2L: <a href="http://online.camosun.ca">http://online.camosun.ca</a><br>MyMathLab: <a href="http://pearsonmylabandmastering.com">http://pearsonmylabandmastering.com</a> |

**2. Intended Learning Outcomes**

(4 credits) This course is the first part of Math 11 and provides the algebra skills required for statistics, criminal justice and some business programs. Topics include linear equations and inequalities, rearranging formulas, linear equations in two variables, systems of linear equations, integer and rational exponents, polynomials and factoring.

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

**3. Prerequisites and Exit Grade**

- (a) Prerequisites: “B” in Applications of Math 11; or “C” in Principles of Math 10, or Foundations of Math and Pre-calculus 10, or Foundations of Math 11, or Applications of Math 12, or Math 053 or 057; or “C-“ in Principles of Math 11 or Pre-calculus 11; or assessment.
- (b) Exit Grade: You need a grade of “C+” in Math 072 to continue into Math 073 and most college programs.

#### 4. Required Materials

- (a) Textbook: *Intermediate Algebra*, 12<sup>th</sup> Edition, M.L. Bittinger. If you do not want a print text, then you can purchase the standalone MyMathLab (MML) digital code since it grants access to the digital textbook (and student solutions manual). Our course ID is: **math02196**
- (b) Calculator: The only calculator allowed on tests and the final exam is the *Sharp EL-531* scientific calculator. There is a no-calculator portion of the course and the final exam.

#### 5. Basis of Student Assessment (Weighting)

##### Grade Calculation

The final grade will be calculated according to the following breakdown:

|             |           |
|-------------|-----------|
| Term Tests: | 50% total |
| Final Exam: | 50%       |

##### Term Tests

There will be 5 chapter tests. Each chapter test is written in the Math Help Centre (E342) after you feel comfortable with the chapter contents.

- The Math Help Centre is open 4pm-8pm Monday-Thursday. The latest you can start a test is at 6:30 pm. You must finish tests in one sitting. They take about 1.5 hours.
- No electronic device other than the approved calculator may be used on tests. There is no calculator allowed on the Chapter R and Chapter 2 tests.
- No papers, references, books, etc., may be used on term tests.
- If you score lower than 65% on a test, you must rewrite (up to three attempts).
- If you score lower than you would like on a test, you have the option of rewriting once.
- You must get permission from your instructor to write each test and the final exam.

##### Final Exam

The final exam will cover the entire course and will take approximately 3 hours. There are **no rewrites** for the final exam. 40% of the final exam is no-calculator.

#### 6. Grading System

##### Standard Grading System (GPA)

| Percentage | Grade | Description   | 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     | Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite. | 1                       |
| 0-49       | F     | Minimum level has not been achieved.  | 0                       |

**NS** You will be assigned a “no show” grade if you do not attend the first class and you do not contact your instructor within two days of the first class.

**W** If you find you are too busy to work on the course, then you need to officially withdraw before the withdrawal deadline to avoid getting an F for the course. The withdrawal deadline will depend on when you joined the course, so please talk to registration to find out more.

**IP** An “in-progress” grade is only given in self-paced courses. If you have not finished the course at the end of the term but have attended at least 75% of the classes or have successfully completed at least 3 unit tests that term, then you may be awarded an IP grade. You may only receive two IP grades for a course; the third time you register for the course, you will be assigned an F if you do not complete the course.

## 7. 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, at Student Services, or the College web site at [camosun.ca](http://camosun.ca).

### STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student’s responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services, and the College web site in the Policy Section.

### 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. <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.1.pdf>

### STUDY TIPS

Approximately **70-140** hours (2-4 hours per section) will be required to work through the concepts in this course (this does not count studying for or writing tests). Create a schedule, stick to it, and make use of class time and the Math Help Centre.

## 8. Course Content

| Section          | Topic  | Section          | Topic  |
|------------------|--|------------------|--|
| <b>Chapter R</b> | <b>Review of Basic Algebra</b>                   | <b>Chapter 3</b> | <b>Systems of Equations</b>                          |
| R.1              | Set of Real Numbers                              | 3.1              | Systems of Equations in Two Variables                |
| R.2              | Operations with Real Numbers                     | 3.2              | Solving by Substitution                              |
| R.3              | Exponential Notation and Order of Operations     | 3.3              | Solving by Elimination                               |
| R.4              | Introduction to Algebraic Expressions            | 3.4a             | Solving Applied Problems                             |
| R.5              | Equivalent Algebraic Expressions                 | 3.7ab            | Systems of Inequalities in Two Variables             |
| R.6              | Simplifying Algebraic Expressions                | <b>Chapter 4</b> | <b>Polynomials and Polynomial Functions</b>          |
| R.7              | Properties of Exponents and Scientific Notation  | 4.1              | Introduction to Polynomials and Polynomial Functions |
| <b>Chapter 1</b> | <b>Solving Linear Equations and Inequalities</b> | 4.2              | Multiplication of Polynomials                        |
| 1.1              | Solving Equations                                | 4.3              | Introduction to Factoring                            |
| 1.2              | Formulas and Applications                        | 4.4              | Factoring Trinomials:                                |
| 1.3              | Applications and Problem Solving                 | 4.5              | Factoring Trinomials:                                |
| 1.4              | Sets, Inequalities, and Interval Notation        | 4.6              | Special Factoring                                    |
| 1.5              | Intersections, Unions, and Compound Inequalities | 4.7              | Factoring: A General Strategy                        |
| 1.6a-d           | Absolute-Value Equations                         |                  |  |
| <b>Chapter 2</b> | <b>Graphs, Functions, and Applications</b>       |                  |  |
| 2.1              | Graphs of Equations                              |                  |  |
| 2.2              | Functions and Graphs                             |                  |  |
| 2.3              | Finding Domain and Range                         |                  |  |
| 2.4              | Linear Functions: Graphs and Slope               |                  |  |
| 2.5              | More on Graphing Linear Equations                |                  |  |
| 2.6              | Finding Equations of Lines; Applications         |                  |  |

## 9. Other Information

### Extra Help

You can get free face-to-face tutoring from our instructional assistant in the Math Help Centre E342. Hours are posted on the lab doors and on the web <http://camosun.ca/services/help-centres/math.html>.

You are also very welcome to stop by my office hours and ask any questions you have.

Class time is another great time to ask questions!

### D2L

This class uses Desire2Learn (D2L), an online course management system. All course-related materials, grades, and announcements will be available on D2L.

### MyMathLab

MyMathLab (MML) is a resource that can help with course content if you purchased the digital access code. Our course ID is: **math02196**

- Textbook: A digital version of the textbook and student solution manual can be accessed through MML.
- Study Plan: The study plan on MML contains questions that can help you practice concepts. It adapts to you to aid you in mastering all the course content.

(b) Videos: There are videos explaining each of the textbook sections if you would like to listen to and watch concepts instead of (or in addition to) reading.

### **Class Time**

Class time is optional for Math 072. It is a resource for you to use as much or as little as you need.

However, it is much easier to keep on top of your studies if you work on them regularly. So I encourage you to come to class, work on your readings and practice problems and ask me questions! If you'd like to watch videos in class, please wear headphones and be respectful to your classmates.

### **Class Protocol**

1. Sign in when you come into class. Please indicate what you'll be working on.
2. Let me know if you need help or if you've finished a test I need to mark. I don't want to bother you while you're studying, but I do want to help!
3. Please be patient while I'm working with someone else, but (politely) make sure I know you're waiting for me so I don't take too long.
4. You may bring drinks and food to class as long as you clean up afterward. If you have an allergy, please let me know.
5. Work quietly. Discussing math is a great way to learn, but if you're bothering others you'll need to move to another room.

### **Good Habits**

- Do the margin exercises as you read through each section to get an idea of how the concept works.
- Do the recommended exercises. Complete them one at a time until you feel comfortable with the skill, then move onto a new section. The exercises are to guide you through thinking about the skill you're learning – you should not rush through them just to get them done. Think about each one, how it relates to the basic skills you learned in the section, how it could be extended to other problems, and how it could be used with other skills you know.
- Always check your answer with the answer in the back of the text and correct any mistakes (even better, try to figure out how to check your own work before you look at the answers).
- Stay organized. Label each set of notes and problem set. Highlight, circle, or list questions that you need to ask about.
- Study for an hour or two each day. Using the skills everyday helps retention, and cramming learning into longer blocks of time does not give your brain time to organize the information.
- Create a schedule and stick to it. There is a suggesting pacing schedule on the next page – it shows which sections you should work on before the next class in order to finish Math 072 in one semester.

Fill out the blank pacing schedule with any commitments you have, then plan out your semester and stick to it!