# Grande Prairie Regional College
# Department: Academic Upgrading

COURSE OUTLINE – FALL 2009

## INTRODUCTION TO MATH 0120

Instructor: Christine Frattini Phone number: 780-539-2810
Instructor's office: Math Lab A210 Email: cfrattini@gprc.ab.ca
Office Hours: Daily after MA0120 class.

## Calendar Description:

MA 0120 Mathematics Grade 11 Equivalent (Pure) 5 (5-0-0) Time: 75 Hours
Description: This course explores equations, inequalities, systems of equations, exponents and radicals, rational expressions and equations, polynomial functions and equations, other functions, geometry and mathematical reasoning, and mathematical applications.

Prerequisite: MA0110 or equivalent math placement test score.

## Resource requirements:

Package of Ma0120 modules, 2007
Scientific calculator, graph paper

## Attendance:

Regular attendance is expected of all students in all mathematics courses. Your success in math is directly linked to your attendance. Attendance will be taken during class. Any student **missing more than 10 classes may be debarred from writing the final exam**.

## Course Delivery and Evaluation:

This course is divided into 9 separate units called modules. The instructions for each topic are given in the modules, followed by several examples and exercises. As well, the instructor will teach a mini lesson daily to clarify the more difficult concepts and also to keep you on schedule.
**The key to success** is to **ask questions** whenever you have difficulty understanding the instructions, the examples, or the exercises. **Do not hesitate to ask for help.**
After each module you must write a test. When writing a test, be sure to show all of your work on the test paper. Marks are given for method as well as for the final answer. A passing mark of 50% is required. If you are unable to attain this mark, you must review the material and rewrite the test. The first and second test marks will be averaged. Repeat tests must be written outside of class time.

A 50-minute midterm, which will cover the first five modules, will be written on **Thursday, October 22**. Upon completion of all the course modules, you will write a three hour final exam.

The test date for each module and the midterm is on the next page. Any student not attending class on a test date will receive a grade of zero for that test unless a phone call is made *prior* to the time of the test and an explanation of the absence satisfactory to the instructor is provided. As well, there will be a deduction of 10% for any late test.

**Consult your instructor immediately if you find yourself unable to keep up to the schedule.** Your instructor may need to reassess your math skills to ensure that you are placed in a course where you can be successful. Extra help is available outside of class time.

Your final mark is determined by:

| | |
|---|---|
| 9 module tests | 45% |
| Midterm | 20% |
| Final Exam | 35% |

Final grades are given as follows:

| Alpha Grade | 4-Point Equivalent | Percentage Guidelines | Designation |
|---|---|---|---|
| A+ | 4.0 | 90 - 100 | Excellent |
| A | 4.0 | 85 - 89 | |
| A- | 3.7 | 80 - 84 | First Class Standing |
| B+ | 3.3 | 76 - 79 | |
| B | 3.0 | 73 - 75 | Good |
| B- | 2.7 | 70 - 72 | |
| C+ | 2.3 | 67 - 69 | Satisfactory |
| C | 2.0 | 64 - 66 | |
| C- | 1.7 | 60 - 63 | |
| D+ | 1.3 | 55 - 59 | Minimal Pass |
| D | 1.0 | 50 - 54 | |
| F | 0.0 | 0 - 49 | *Fail* |

**MA0120 – Fall 2009**

| Module | TOPIC/DESCRIPTION | Test Date | Your mark |
|---|---|---|---|
| 1 | Equations and Inequalities<br>-solving linear equations and inequalities<br>-graphing linear equations and inequalities<br>-absolute value equations and inequalities | 7 days<br>Sept. 14<br>Monday | |
| 2 | Systems of Equations<br>- solving systems of equations by graphing, substitution, and elimination; applications | 5 days<br>Sept. 21<br>Monday | |
| 3 | Exponents and Radicals<br>- rational exponents; four basic operations on exponents and radicals; solving radical equations | 7 days<br>Sept. 30<br>Wednesday | |
| 4 | Rational Expressions<br>-nonpermissible values; simplifying; four basic operations; equations | 7 days<br>Oct. 9<br>Friday | |
| 5 | Geometry<br>-basic theorems<br>-circle terminology; properties of angles and chords in a circle; tangents to a circle | 6 days<br>Oct. 20<br>Tuesday | |
| | **MIDTERM EXAM** | **Thursday Oct. 22** | |
| 6 | Relations and Functions<br>- domain and range; functional notation; graphing; inverse functions; transformations | 8 days<br>Nov. 3<br>Tuesday | |
| 7 | Quadratic Functions<br>- graphing; completing the square; characteristics; applications | 6 days<br>Nov. 12<br>Thursday | |
| 8 | Quadratic Equations<br>- solving by factoring and quadratic formula; nature of roots; applications | 7 days<br>Nov. 23<br>Monday | |
| 9 | Polynomial Functions & Equations<br>- synthetic division<br>- remainder & factor theorems; equations and graphs | 9 days<br>Dec. 4<br>Friday | |
| | **Final Exam** 3-hours (date to be announced) | Dec.8-18 | |

# Fall 2009 Homework Schedule

1. Equations and Inequalities

| 1 | 2 | 3 | 4 | 5&6 | Review | **Test: Monday Sept. 14** |
|---|---|---|---|---|---|---|
| **Sept.3** | **4** | **8** | **9** | **10** | **11** | |

2. Systems of Equations.

| 1 | 2 | 3&4 | 5 | Review | **Test: Monday Sept. 21** |
|---|---|---|---|---|---|
| **Sept.14** | **15** | **16** | **17** | **18** | |

3. Exponents and Radicals

| 1 | 2&3 | 4&5 | 6&7 | 8&9 | 10 | Review | **Test: Wednesday Sept. 30** |
|---|---|---|---|---|---|---|---|
| **Sept.21** | **22** | **23** | **24** | **25** | **28** | **29** | |

4. Rational Expressions

| 1 | 2 | 3 | 4 | 4 | 5 | 6& Review | **Test: Friday Oct. 9** |
|---|---|---|---|---|---|---|---|
| **Sept.30** | **Oct.1** | **2** | **5** | **6** | **7** | **8** | |

5. Geometry

| 1&2 | 3 | 4&5 | 6 | Review | **Test: Tuesday Oct. 20** |
|---|---|---|---|---|---|
| **Oct.13** | **14** | **15** | **16** | **19** | |

## Midterm Exam on Thursday Oct. 22

6. Relations and Function

| 1(A,B,C,D) | 2 | 3A | 3B | 4 | 5 | Review | **Test: Tuesday Nov. 3** |
|---|---|---|---|---|---|---|---|
| **Oct.23** | **26** | **27** | **28** | **29** | **30** | **Nov.2** | |

7. Quadratic Functions

| 1&2 | 3 | 4&5 | 6 | Review | **Test: Thursday Nov. 12** |
|---|---|---|---|---|---|
| **Nov.4** | **5** | **6** | **9** | **10** | |

8. Quadratic Equations

| 1 | 2&3 | 4 | 4&5 | 6 | 7 | Review | **Test: Monday Nov. 23** |
|---|---|---|---|---|---|---|---|
| **Nov.12** | **13** | **16** | **17** | **18** | **19** | **20** | |

9. Polynomial Functions

| 1&2 | 3&4 | 4&5 | 6 | 7 | 8&9 | 10 | Review | **Test: Friday Dec. 4** |
|---|---|---|---|---|---|---|---|---|
| **Nov.24** | **25** | **26** | **27** | **30** | **Dec.1** | **2** | **3** | |

## Final Exam: (Dec. 9 – 18) to be announced

**AUD STUDENT CLASSROOM DEPORTMENT GUIDELINES** **DRAFT May 2008**

The Academic Upgrading Department is an adult education environment. Students are expected to show respect for each other as well as faculty and staff. They are expected to participate fully in achieving their educational goals in a timely manner.

Certain activities are disruptive and not conducive to an atmosphere of learning. In addition to the ***Student Rights and Responsibilities*** as set out in the College calendar, the following guidelines will maintain an effective learning environment for everyone. We ask the cooperation of all students in the following areas of classroom deportment.

1. Students are expected to turn off cell phones during class time or in labs.

2. Refrain from disruptive talking or socializing during class time.

3. Be respectful of others regarding food or beverages in the classroom. Clean up your eating area and dispose of garbage.

4. Recycle paper, bottles and cans in the appropriate containers.

5. Students are expected to be punctual. Arrive on time for classes and remain for the duration of scheduled classes or related activities.

6. Children are not permitted in the classrooms.

7. Students are expected to notify the instructor of any extenuating circumstances.

**Electronic Devices**
No unspecified electronic devices will be allowed in exams.

**Success Standard**
Although 50% is considered a pass in most courses, if you wish to be successful at the next level, we strongly recommend that you have a mark of 60% or better in your pre-requisite courses.

## Examinations:
The final exam will be 3 hours long and is scheduled by the Registrar's office during December 9 – December 18.

Statement on Plagiarism:
The instructor reserves the right to use electronic plagiarism detection services.