

**TO: Beth Dobkin, Provost**

**FROM: Steve Cortright, Chair  
Academic Senate**

**DATE: March 28, 2011**

**RE: Senate Action S-10/11-22  
Proposal for Permanent Status for  
Math 002 and Math 012**

At the March 24, 2011 meeting, the Academic Senate approved the attached Proposal for Permanent Status for Math 002 and Math 012 by a vote of 8-0 with one abstention. The issue was forwarded to the Senate from the Undergraduate Educational Policies Committee (UEPC) where it was approved by a vote of 6-3 with one abstention. This action was assigned Senate Action # S-10/11-22.

Attachment

cc: Brother Ronald Gallagher, President  
Dean Roy Wensley

# Proposal for Permanent Status for Experimental Courses Math 002 and Math 012

## 1. School of Science

Department of Mathematics and Computer Science (DOMACS)

MATH 002: *Mathematics Readiness*

MATH 012: *Mathematics Readiness for Calculus*

## 2. Justification of the Courses:

In the years prior to fall 2008, we (DOMACS) found ourselves facing more and more students in our service courses who were not prepared for the college level courses in which they were enrolled. As a faculty we struggled with helping these students, adding more office hours, creating the evening Student Math Center, but many students were still not successful. For example in the fall of 2007 (a class almost 100% comprised of freshmen) only 53% of the students in Math 13 *Calculus for Elementary Functions I* learned enough to go on to the required second course in the sequence, MATH 014 *Calculus with Elementary Functions II*.

Also SMC had indicated in the 2007-2012 Strategic Plan that "Special attention will be given to students identified as potentially needing additional support services, based on incoming preparedness indicators..." (Item 1.3) With this aim of retaining students, DOMACS decided that offering appropriate remedial mathematics courses to those students arriving at SMC unprepared to begin college level courses was needed. In addition the WASC report echoed the need for maintaining a diverse student population; it is often first generation students who need additional time to adjust to college and the college level standard of academics; many of these students do need Math 2 and 12 first in order to succeed in their area B math courses.

In the fall of 2008 we began offering Math 012 (it was called Math 002 at that point). We offered two sections of the course. In spring 2009 we offered two sections of Math 002 to the non calculus aimed students. We repeated this same level of offering in the 2009-2010 academic year. We offered one Math 002 and two Math 012 sections this past fall (2010) and are currently (Spring 2011) running one section of Math 002. Math 012 is offered only in the fall because the students who take Math 12 are aiming to take calculus in the spring.

The two courses are designed to help mathematically underprepared students so that when they take their first college level mathematics class they will be successful.

### Course Objectives (for both courses.)

- (a) These courses will increase the level of critical thinking, algebraic skills, reasoning and problem solving skills of the students.
- (b) These courses will assist in the preparations of the students for their next mathematics course in terms of mathematical knowledge and thinking, and study skills.
- (c) students who enter Saint Mary's College but have not satisfied their high school Algebra

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II requirement may take one of these courses to satisfy this requirement. (All mathematics and computer science courses at Saint Mary's have the prerequisite of one year each of Algebra I, Geometry, and Algebra II with a C- or better as stipulated in the catalog.)

Neither of these courses will satisfy the Area B mathematics requirement but will assist students in being prepared for their necessary college level mathematics courses. Both courses will earn the student college credit though. The course will not be offered as pass fail. The student will need to earn a C- or better, as well as pass the appropriate placement exam, to continue on to their next mathematics class.

In both these courses students are assessed by means of daily homework (written and computer based), quizzes, midterm exams, and a comprehensive final exam. This is typical of almost all of our lower division mathematics courses.

3. **Student Population:**

Math 002 *Mathematics Readiness* is designed for the student who plans to enroll in Math 001 *Fundamental Mathematical Concepts I* (a course for Liberal & Civics Studies majors), Math 003 *Finite Mathematics* (a course primarily for Business Administration or Economics majors but also taken by others to satisfy the Area B mathematics requirement), or Math 004 *Introduction to Probability and Statistics* (a course that some people take for their Area B requirement but required for sociology and pre-nursing majors). We have been offering 2 sections of Math 002 each year (30-40 students) in the past 2 years and anticipate this will continue.

Math 012 *Mathematics Readiness for Calculus* is designed for students who want to enroll in a calculus class but are not ready for even our two semester sequence Math 013-014 *Calculus with Elementary Functions I & II* which covers the material in Calculus I along with Precalculus. The audience for this course is students in a major where calculus is required; this includes mathematics, physics, engineering, chemistry, biology, environmental science, and a B.S. in economics; some Business Administration students choose to take calculus to satisfy their major's mathematics requirement. We have been offering 2 sections of Math 012 in the fall semester (30-48 students) for the past 3 falls and anticipate this will continue.

4. **Relationship to Present College Curriculum:**

As indicated above, these courses are intended to assist students succeed in their college level mathematics and science classes. These offerings of these courses will not affect the offerings of other mathematics or science courses. The potential impact is positive for all students taking the courses. The courses should not affect other mathematics courses in a negative manner.

5. **Any Extraordinary Implementation Costs:**

The courses are already running. There are no extraordinary implementation costs.

6. **Library Review:**

The library reviews for these two courses are on pages 4 and 5.

7. **Course Credit and Grading Options:**

The course will meet for three hours of lecture/discussion each week (1 credit) and one hour of tutorial help (0 credits) each week. The lecture part of the class will be graded on the A, B, C, D, F grading scale while the tutorial will be graded P or F. It is expected that students will spend approximately 8 hours outside of class time on the course.

8. **Prerequisites:**

The prerequisites for this course are one year each of high school Algebra and Geometry. Most students will also have taken Algebra II but the courses are also designed for students who have not completed Algebra II successfully.

9. **Catalog Description:**

**Math 2: Mathematics Readiness**

This course covers a review of basic algebra and geometry concepts including polynomials, solving equations and inequalities, graphs, functions, lines, systems of equations, sets and operations, ratios, proportions, measurement, and percents. Emphasis will be placed on problem solving, critical thinking, and mathematical reasoning.

*Prerequisites:* One year each of high school Algebra 1 and Geometry with a C- or better.

Students who have also completed Algebra 2 with a C- or better should take the placement exam before taking this course.

*Does not satisfy the area B mathematics requirement.*

*Offered every semester.*

**Math 12: Mathematics Readiness for Calculus**

This course includes the study of number systems, linear equations and inequalities, quadratic equations and inequalities, functions, graphs, polynomials, factoring, rational expressions, radicals, exponentials, inverse functions, logarithmic and exponential functions, angles, triangles, surface area, volume, and applications. Emphasis will be placed on problem solving, critical thinking, and mathematical reasoning.

*Prerequisites:* One year each of high school Algebra 1 and Geometry with a C- or better.

Students who have also completed Algebra 2 with a C- or better should take the placement exam before taking this course.

*Does not satisfy the area B mathematics requirement.*

*Offered every fall.*

10. **Course Content:**

Our most recent syllabus for each of the courses is attached to the proposal. See pages 7-12 for Math 002 and pages 13-17.

11. **Review of Experimental Offering:**

**Math 002 Mathematics Readiness**

We offered Math 002 *Mathematics Readiness* (the non-calculus preparation course) for the first time in spring 2009. Thirteen students enrolled and 10 were successful in completing the course with a C- or better. Of the 10 successful students, three are no longer at SMC and six

have successfully completed their area B math; only one has yet to take another class and he has plans to do so in Fall 2011,

In spring 2010 we offered two sections of Math 002 and 42 students enrolled. Twenty nine of the students were successful in completing the class. Sixteen students have since successfully completed their next mathematics class, one is no longer at SMC, while two are currently taking their area B math class.

In fall 2010 one section of Math 002 was offered with 20 students enrolled. Sixteen of the twenty completed the course successfully. Four of these students are currently enrolled in an area B course with at least six others planning to take their math in fall 2011.

Overall the department is satisfied with the structure and results of the course. We keep in mind that all of the students enrolling in Math 002 would most likely not have passed their first area B mathematics class and many would have been subsequently in danger of being on probation or disqualified. Thus, that we can help many of these students succeed and continue in their studies is satisfying.

### Math 012 Mathematics Readiness for Calculus

We offered this course for the first time in fall 2008. Thirty-three students enrolled in Math 012 with twenty-one successfully finishing the course. Seventeen of the twenty-one have since successfully completed their area B mathematics. Two of the students who initially did not pass Math 012 this semester have since done so. Two more of the successful Math 012 students are currently taking area B mathematics.

In fall 2009 thirty-three students enrolled in two sections of Math 012. Twenty-five of these students were successful in Math 012, eleven of which have already passed their area B math requirement. Four of the unsuccessful students later completed Math 012 successfully. Two of the fall 2009 Math 012 students are currently in an area B math course.

This past fall (2010) forty-six students enrolled in Math 012 with thirty-two successfully completing the course. Nineteen of these students are currently enrolled in Math 13 *Calculus with Elementary Functions*. We consider this to be a big success! The increase in Math 012 enrollment is attributed to an increase in SMC enrollments with a greater percentage of students interested in studying mathematics and science.

As with the Math 002 course, we consider this course to be important for those students who arrive at SMC without the mathematics skills to succeed in an area B mathematics course. The department is satisfied with the design and purpose of the course.

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## **Review of Library Resources**

### **New Course Proposal: MATH 002 *Mathematics Readiness***

For the 2010-2011 budget year, the Mathematics materials allocation was \$4,596.84; this amount is used to purchase new monographs in the various mathematical topics taught at Saint Mary's College, including general mathematics skills, such as problem solving, reasoning, and logic, as well as coping with mathematics anxiety and keys to success in college-level mathematics.

The following is a sample of materials (including traditional monographs and periodicals) selected from the whole collection that may be helpful for students needing to take a mathematics course but do not have much mathematics experience or past successes:

- Mathematics Everywhere / Aigner & Behrends, translated by Spain (510 Ai33m)
- For All Practical Purposes: Mathematical Literacy in Today's World / COMAP (510 G180a)
- What is Mathematics? An Elementary Approach to Ideas and Methods / Courant & Robbins (510 C833a)
- The Nature of Mathematics / Smith (510 Sm61a)
- The Princeton Companion to Mathematics / Gowers, editor (510 G747p)
- How to Succeed in College Mathematics: A Guide for the College Mathematics Student / Dahlke (510.71 D138)

- Conquering Math Anxiety: A Self-Help Workbook / Arem (510.7 Ar32)
- Overcoming Math Anxiety / Tobias (510.7 T553a)
- Arithmetic and Algebra—Again: Leave Math Anxiety Behind Forever / Immergut &Smith (electronic book via *ebrary*)
- Studying Math: Pathways to Success / B. Sidney Smith (on order)
- Understanding Mathematics / Keith Gregson (on order)
- *Math Horizons* (2002 – to present in print)

Also included in the collection are video resources. These can be used individually by students, or employed by faculty as a tool to engage various learning styles. Some examples of video resources include:

- Algebra: In Simplest Terms (on VHS S693; also, link to streaming online video in *Albert*)
- Learning Math (link to streaming online video in *Albert*)
- Mathematics Illuminated (link to streaming online video in *Albert*)

Expanding the available materials all the more, the Library provides access to over 20 million unique book and media titles from all subject areas through our participation in the Link+ consortium.

Also of interest, *Access Science* is an electronic resource that includes a collection of science reference materials based on the latest edition of the *McGraw-Hill Encyclopedia of Science and Technology*. This resource provides easy to read definitions and explanations of many mathematical concepts.

As Library policy, we do not actively purchase textbooks but through donations, we maintain a modest circulating collection of various mathematics textbooks that offer various approaches to a subject. Individual teaching faculty members are invited to place a personal copy in our Reserve collection for the benefit of his/her students during the semester.

This lower division course does not outline an expectation for student reading or research outside of the textbook, thus no significant impact to Library instruction is expected. As always, reference librarians are available to assist students research topics or find library materials on a one-on-one basis as needed.

Respectfully submitted,

Sarah Vital  
Assistant Librarian  
February 2011

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## **Review of Library Resources**

### **New Course Proposal: MATH 012 *Mathematics Readiness for Calculus***

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The following is a sample of traditional monographs selected from the whole collection that may be helpful for students needing to take Calculus but do not have much mathematics experience or past successes:

- Calculus Gems: Brief Lives and Memorable Mathematics / Simmons (510 Si47a)
- How to Ace Calculus: The Streetwise Guide / Adams, Hass, & Thompson (515 Ad17)
- Understanding Calculus / Bear (515 B3803)
- Calculus Deconstructed: A Second Course in First-Year Calculus / Nitecki. (515 N638)
- Calculus Made Easy / Thompson & Gardner (515 T377)
- Arithmetic and Algebra—Again: Leave Math Anxiety Behind Forever / Immergut &Smith (electronic book via *ebrary*)

- The Princeton Companion to Mathematics / Gowers, editor (510 G747p)
- How to Succeed in College Mathematics: A Guide for the College Mathematics Student / Dahlke (510.71 D138)
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Also included in the collection are video resources. These can be used individually by students, or employed by faculty as a tool to engage various learning styles. Some examples of video resources include:

- Algebra: In Simplest Terms (on VHS S693; also, link to streaming online video in *Albert*)
- Change and Motion: Calculus Made Clear (DVD S743)
- The Queen of the Sciences: A History of Mathematics (DVD S1011)

Expanding the available materials all the more, the Library provides access to over 20 million unique book and media titles from all subject areas through our participation in the Link+ consortium.

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This lower division course does not outline an expectation for student reading or research outside of the textbook, thus no significant impact to Library instruction is expected. As always, reference librarians are available to assist students' research topics or find library materials on a one-on-one basis as needed.

Respectfully submitted,

Sarah Vital  
Assistant Librarian  
February 2011

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## **MATH 002 Mathematics Readiness Spring 2011**

PROFESSOR: Hossam Mohamed-Aly

OFFICE: GAL 204

TELEPHONE: X8214

EMAIL: hnm1@stmarys-ca.edu

OFFICE HOURS: MF 11:30-12:30, W 1:10-2:10

TEXTBOOK: *Mathematics: Its Power and Utility*, by Karl Smith, 9<sup>th</sup> edition bundled with Webassign.

COURSE CONTENT: problem solving, sets of numbers, polynomials, solving equations and inequalities, ratio, proportions, percent, geometry, measurement, sets and operations, reasoning, graphing, functions, lines, systems of equations

OVERVIEW: Math 002 *Mathematics Readiness* is designed for students who need to strengthen their mathematical thinking and skills before starting their college level mathematics course or who have not completed high school Algebra 2 with a C- average or higher. There will be daily & weekly assignments, quizzes, three hour-long exams, a comprehensive two hour final exam, and a placement exam. The weekly tutorial is required

for all students. All assignments and exams will emphasize both the mastery of basic mathematics skills as well as the student's ability to communicate mathematics. There will be a Blackboard website for this course where assignments and all course related information/announcements will be posted. Regular class attendance and participation is essential for this course and is expected of all students.

COURSE LEARNING GOALS: By the end of the course each student will be able to:

- Clearly and correctly express the basic mathematical concepts orally and in writing.
- Discuss and solve a variety of word problems involving percent, ratio & proportion, algebra, sets and operations, area, perimeter, and volume.
- Solve basic algebraic equations, inequalities, and linear systems, showing clear, logical, and complete steps.
- Understand and be able to give examples of inductive and deductive reasoning

DETERMINATION OF COURSE GRADES:

**Note: In order to earn a grade higher than a D+ you must also pass the Placement Exam. See below.**

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<b>activity</b>	<b>% of course grade</b>
homework	15%
quizzes	10%
Exam I	15%
Exam II	15%
Exam III	15%
Final Exam	30%

All grades (for assignments, quizzes, exams) will be posted on Blackboard. It is your responsibility to check Blackboard frequently to make sure that your grades are being recorded accurately.

FINAL COURSE GRADES:

90-100% = A    80-89% = B    70-79% = C    60-69% = D    0-59% = F

***Plusses and minuses will be assigned for borderline cases.***

EXAMS:

There will be three equally weighted midterm exams and a comprehensive final (not including the Placement, see below). The exam schedule is as follows:

Type of Exam	Date	Time
Hour-long exam	March 2 <sup>nd</sup>	Class time
Hour-long exam	March 30 <sup>th</sup>	Class time
Hour-long exam	May 4 <sup>th</sup>	Class time
Final Exam (2 hours)	May 16 <sup>th</sup>	2-4 pm

Make-up exams will not be given except in the case of an unexpected personal emergency which can be documented.

#### HOMEWORK:

Webassign assignments will be due every Wednesday at 1 pm. Hand-written homework is due at the following class meeting. You are welcome to seek help on the individual homework assignments from other students, the Student Math Center, TAs and your instructor. However, you must write up your own homework work yourself; your work should not look as if it has been copied from some other source/person. Late homework will not be accepted.

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#### QUIZZES:

There will be short 10-20 minute quizzes on some days (unannounced – all previous material is game!). These quizzes are meant to help you monitor and evaluate your progress in the class. The lowest grade will be dropped. Expect quizzes each week during tutorial.

#### THE PLACEMENT EXAM:

This exam will be given in the last week of classes. **In order to earn at least a C- in this class** you will need to pass this exam by earning at least 20 out of 45 on the placement exam.

#### HELP FOR THE COURSE:

Come see me for help in my office either during my office hours or another time (drop by or make an appointment!) Also plan to use the Student Math Center (SMC), a free help lab provided by the Mathematics Department. It is located in Gal 110 and is open 7-9pm, Sunday-Thursday. In the SMC you will be able to work with other students. There is also help offered by TASC whose office is in the Filippi Academic Hall.

#### FROM STUDENT DISABILITY SERVICES:

Student Disability Services extends reasonable and appropriate accommodations that take into account the context of the course and its essential elements, for individuals with qualifying disabilities. Students with disabilities are encouraged to contact the Student Disability Services Director at (925) 631-4164 to set up a confidential appointment to

discuss accommodation guidelines and available services. Additional information regarding the services available may be found at the following address on the Saint Mary's website: <http://www.stmarys-ca.edu/academics/academic-advising-and-achievement/student-disability-services.html>

SOME MORE INFORMATION TO HELP YOU SUCCEED:

1. **WELCOME TO COLLEGE!!!** It is expected that you will conduct yourself appropriately, with respect for each other, for faculty and staff, and for college property. You should expect that **much of your learning will take place outside of the classroom** and that you will take responsibility for your education. This means that you must seek assistance when you need it, prepare for each class by completing all reading and writing assignments prior to coming to class, and realize that it is normal for you to leave the class period with questions and concepts that you will need to explore before your understanding is complete.

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2. **Show work** on homework, quizzes and exams. I want to give you partial credit but if you have no work then you will earn no credit. I cannot read your mind so *show me the work!*

3. Attendance: Each student is allowed a **maximum of four hours of absences** (excused or unexcused) from class (this includes both the MWF lecture and the once per week tutorial!). Please save them for when you are ill. Each detected absence beyond three will subtract one percentage point from your final grade.

4. **Study time:** Plan to study/prepare a *minimum* of 1 hour every day for this class.

5. **Calculators are not allowed to be used on quizzes and exams.**

6. When you read your textbook, aim for **comprehension**. The textbook does not read like a novel as the reading needs to be slow-going and more careful. Read at your own pace with pencil and paper handy to work through the examples and fill in the omitted steps. The lecture/discussion will make more sense if you have read the textbook beforehand. Read the text often – before we go over a section read the section –then read it again after we go over the section!

7. All quizzes and exams must be done **without assistance** from any source or person, unless you are told otherwise. However, I do encourage you to work on practice problems and to discuss the concepts with other people in the class.

8. FORM A **STUDY GROUP!!!**

9. **Talk to me** if you think you are getting lost or behind.

10. The **honor code** and the Saint Mary's policies regarding academic honesty detailed in the student handbook apply to this course. I encourage you to work with other students on

practice work but on quizzes and exams you must do your own work and not share your work.

11. SMC **Athletes**: By Feb. 11<sup>th</sup>, I need a statement indicating your name, your sport, the class dates you will miss due to team commitments. This must be written and signed by you.

12. Classroom etiquette: **Cell phones and other electronic devices** must be turned off and not used for any purpose during class. If your cell phone rings or you use your cell phone in class, you will be required to leave the class for the day. Gum and food are not allowed in the classroom; water, soda, coffee, tea, etc. may be brought to class as long as you are careful and dispose of the container.

13. Write the names, phone numbers, and emails of sever

## MATH 2 Mathematics Readiness Tentative Class Schedule - Spring 2011

MONDAY	Tuesday (TUTORIAL)	WEDNESDAY	FRIDAY
2/7 Welcome & Information Sheets Sec 1.2 Formulating Problems	2/8 Sec. 1.4 Rounding & Estimating	2/9 Sec. 1.5 Exponents and Prime Factorization	2/11 Sec. 2.1 - 2.5 Operations with Integers
2/14 Sec. 2.6 Rational and Irrational Numbers	2/15 Practice Quiz 1	2/16 Sec. 3.1 Polynomials	2/18 Sec. 3.2 & 3.3 Combining and simplifying
2/21 Sec. 3.4 Equations	2/22 Practice Quiz 2	2/23 Sec. 3.5 More Solving And Sec. 3.6 Word Problems	2/25 Sec. 3.5 More Solving And Sec. 3.6 Word Problems
2/28 Review Quiz 3	3/1 Practice & Review	3/2 <b>Exam I</b>	$\frac{3}{4}$ Sec 4.1 & 4.2 Ratio and Proportion
3/7 Sec. 4.3 & 4.4 Percent	3/8 Practice Quiz 4	3/9 Sec. 5.1 Euclidean Geometry	3/11 Sec. 5.2 Polygons and Angles
3/14 Sec. 5.3 Triangles	3/15 Practice Quiz 5	3/16 Sec. 5.4 Similar Triangles	3/17 Sec. 6.1 Precision, Accuracy, & Estimation
3/21	3/22	3/23	3/35

Sec. 6.2 Perimeter	Practice Quiz 6	Sec. 6.3 Area	Sec. 6.4 Volume & Capacity
3/28 Review Quiz 7	3/29 Practice	3/30 <b>Exam II</b>	4/1 Sec. 8.1 & 8.2 Sets and Subsets

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<b>Monday</b>	<b>Tuesday (Tutorial)</b>	<b>Wednesday</b>	<b>Friday</b>
4/4 Sec. 8.3 Operations on Sets	4/5 Practice Quiz 7	4/6 Sec. 8.4 Venn Diagrams	4/8 Sec. 8.5 Survey of Problems with Sets
4/11 Sec. 8.6 Reasoning	4/12 Sec. 11.1 Cartesian Coordinate System	4/13 Sec. 11.2 Functions	4/15 11.3 Lines Quiz 8
4/18 <b>Easter Break</b>	4/19 <b>Easter Break</b>	4/20 <b>Easter Break</b>	4/22 <b>Easter Break</b>
4/25 <b>Easter Break</b>	4/26 Practice on graphs Quiz 9	4/27 More on Sec. 11.3	4/29 Sec. 11.4
5/2 Review	5/3 Practice Quiz 10	5/4 <b>Exam III</b>	5/6 Review
5/9 More on Chapter 11 if needed	5/10 Review	5/11 Placement Exam	5/13 Review

**FINAL EXAM PERIOD: Monday May 16<sup>th</sup> 2:00-4:00 pm**

## St. Mary's College, Math 012-01



**Fall 2010**

**Instructor:** Alice Stevens

**E-Mail:** ams23@stmarys-ca.edu

**Phone:**(925)-631-6298

**Office:** Galileo 103D

**Office hours:** You are welcome to stop by at any time. We will decide on official office hours the first day of class.

**Lecture:** MWF 9:10AM-10:10AM, Galileo 112

**Teaching Assistant:** Will Overell, wao1@stmarys-ca.edu

**Tuesday Tutorials:** Math-012T-01, 8:30AM - 9:30AM, Galileo 110

Math-012T-02, 9:40AM - 10:40AM, Galileo 105

**Textbook:**“Intermediate Algebra,” by Lial, Hornsby and McGinnis, 10th edition

**Online course information:** I plan to make course information and materials accessible online (syllabus, grades, HW assignments, etc.) using **GaelLearn** (<http://gaellearn.stmarys-ca.edu/>).

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**Grading Scheme:** Homework 10%, Quizzes 15%, 3 midterms at 15%, Cumulative final 30%

You **current course grade** percentage, can always be found on GaelLearn. The equivalent letter grade can be found using the following table (use the first two digits of your percentage, for example, if you have 82.5%, then your letter grade is B- ).

percentage	grade
93-100%	A
90-92%	A-
87-89%	B+
83-86%	B
80-82%	B-
77-79%	C+
73-76%	C
70-72%	C-
60-69%	D
below 60%	F

**\*\*Important\*\*** In order to move on to Calculus at St. Mary's College, you must complete Math 12 with a grade of C- or better **and** you must retake the Math Placement Exam and place into Calculus.

**Homework:** Homework will be collected at the beginning of lecture every **Friday**. Homework assignments will be posted on-line at GaelLearn (<http://gaellearn.stmarys-ca.edu/>). You will receive 10 points for completing the assignment and up to 10 points for correctly completing selected problems. No late homework will be accepted, but the lowest 2 homework grades will be dropped. Any regrades must be submitted within one week of the homework's return. To receive full credit, HW should be stapled and neat. You must show **ALL** work clearly.

**Quizzes:** Every **Wednesday** you will have a quiz (except during exam weeks). The quizzes will test understanding of basic definitions and examples found in both the *lecture notes* and the *textbook sections* that we cover. The quizzes will not be tricky, they are meant to help you assess if you are studying enough/correctly. You may drop your lowest quiz grade.

**Exams:** There will be three midterms and a final. The tentative exam schedule follows:

- **Midterm I:** Monday, September 20, 2010, 9:10AM-10:10AM in Galileo 112
- **Midterm II:** Wednesday October 13, 2010, 9:10AM-10:10AM in Galileo112
- **Midterm III:** Monday November 8, 2010, 9:10AM-10:10AM in Galileo 112
  
- **Re-take Math Placement Exam:** last day of class
- **Final Exam:** Wednesday December 8, 2010, 9-11 AM in Galileo 112

Books, notes, laptops, calculators and cell phones will not be allowed on any exam. There will be absolutely no make-up exams. Any regrades for exams must be submitted by the following lecture.

**Tutorials:** During Tuesday tutorials, you will work on **problem solving skills, presenting, and discussing** mathematics.

**Attendance:** Attendance is expected in all lectures and Tuesday tutorials.

**Extra Credit:** During the course of the semester, up to 100 points worth of extra credit will be awarded, which have the potential to increase your final grade by up to 2%, depending on how much extra credit you earn. You will be able to earn extra credit from doing such things as using the Student Math Center or tutoring services in TASC, solving the department's *Problem of the Week*, solving challenging questions in the text, etc.

**Getting extra help:**

- The **Student Math Center** is a drop-in tutoring service that runs Sunday through Thursday from 7-9 PM in Galileo 110. All students are welcome. I will be in the center on Wednesday evenings from 7-9PM.
- The **TASC: Tutorial and Academic Skills Center (TASC)** offers a variety of undergraduate support services and programs to students who are seeking to achieve greater academic success. <http://www.stmarys-ca.edu/academics/academic-advising-and-achievement/tutorial-and-academic-skills-center.html>

**Some course expectations and advice:**

- You are expected to read the **textbook**. In lecture, we will only have time to briefly touch upon the important definitions and examples.

## Tentative Lecture Schedule for Math 12

Mon. Aug. 30	1.1 Basic Concepts; 1.2 Operations on Real Numbers
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Wed. Sept. 1	1.3 Exponents, Roots, and Order of Operations; 1.4 Properties of Real Numbers
Fri. Sept. 3	Geometry review: triangles, angles, area, and surface area
Mon. Sept. 6	Holiday – Labor Day
Wed. Sept. 8 Last day to add!	Geometry review: triangles, angles, area, and surface area
Fri. Sept. 10	2.1 Linear Equations in One Variable (selected applications in 2.2-2.4)
Mon. Sept. 13	2.5 Linear Inequalities in One Variable
Wed. Sept. 15	3.1 The Rectangular Coordinate System
Fri. Sept. 17	Catch up; review for midterm I
Mon. Sept. 20	** First Midterm I **
Wed. Sept. 22	3.2 The Slope of a Line
Fri. Sept. 24	3.3 Linear Equations in Two Variables
Mon. Sept. 27	3.3 Linear Equations in Two Variables
Wed. Sept. 29	3.5 Introduction to Functions
Fri. Oct. 1	4.1 Systems of Linear Equations in Two Variables
Mon. Oct. 4	5.1 Integer Exponents and Scientific Notation
Wed. Oct. 6	5.2 Adding and Subtracting Polynomials
Fri. Oct. 8	5.3 Polynomial Functions, Graphs, and Composition 5.4 Multiplying Polynomials
Mon. Oct. 11	Catch up; review for midterm II
Wed. Oct. 13	**Midterm II**
Fri. Oct. 15	6.1 Greatest Common Factors; Factoring by Grouping
Mon. Oct. 18	6.2 Factoring Trinomials
Wed. Oct. 20	6.3 Special Factoring (some) 6.4 A General Approach to Factoring
Fri. Oct. 22	6.5 Solving Equations by Factoring
Mon. Oct. 25	7.1 Rational Expressions and Functions; Multiplying and Dividing

Wed. Oct. 27	7.2 Adding and Subtracting Rational Expressions 7.3 Complex Fractions
Fri. Oct. 29	8.1 Radical Expressions and Graphs

Mon. Nov. 1	8.2 Rational Exponents 8.3 Simplifying Radical Expressions
Wed. Nov. 3	8.6 Solving Equations with Radicals
Fri. Nov. 5 <b>Last day to withdraw</b>	Catch up; review for midterm III
Mon. Nov. 8	<b>**Midterm III**</b>
Wed. Nov. 10	9.1 The Square Root Property and Completing the Square
Fri. Nov. 12	9.2 The Quadratic Formula 9.3 Equations Quadratic in Form
Mon. Nov. 15 <b>Spring Pre-registration Begins</b>	9.5 Graphs of Quadratic Functions
Wed. Nov. 17	9.7 Quadratic and Rational Inequalities
Fri. Nov. 19	Chapter 10: Inverse, Exponential, and Logarithmic Functions
Mon. Nov. 22 <b>Midterm Grades available</b>	Chapter 10: Inverse, Exponential, and Logarithmic Functions
Wed. Nov. 24	Thanksgiving
Fri. Nov. 26	Thanksgiving
Mon. Nov. 29	Review
Wed. Dec. 1	Review
Fri. Dec. 3	<b>**Placement Exam**</b>
TBA	<b>FINAL EXAM</b>