

# SPC St. Petersburg College

## COURSE SYLLABUS

Explorations in Mathematics & Quantitative Reasoning  
MAT1100 Online Fall 2016

Syllabus Addendum: [www.spcollege.edu/addendum](http://www.spcollege.edu/addendum)

### WELCOME

In this course you will be introduced to basic mathematical concepts of quantitative reasoning. You will see "real-world" applications of these concepts. This course serves as an alternative to MAT 1033 that will prepare students for Liberal Arts Math (MGF 1106/1107) and/or Statistics (STA 2023) courses.

### INSTRUCTOR

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### ACADEMIC DEPARTMENT

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# COURSE INFORMATION

## Course Description

This course builds the foundation for understanding selected concepts taken from topics which include algebra, set theory, logic, geometry, probability and statistics. Critical thinking skills, problem-solving strategies, communicating mathematically, and appropriate use of technology will be incorporated throughout the course via activities and projects. This course serves as an alternative to MAT 1033 that will prepare students for Liberal Arts Math (MGF 1106/1107) and/or Statistics (STA 2023) courses.

## Course Goals & Objectives

### 1. The student will apply fundamental mathematical properties by:

- Choosing appropriate steps on the calculator to evaluate functions.
- Performing operations with real numbers.
- Performing conversions of units of measurement within and across measurement systems.
- Selecting the correct method of rounding decimals and using it at the proper step in a calculation.
- Utilizing inductive and deductive reasoning.
- Developing conjectures and generalizing patterns.

### 2. The student will apply algebraic concepts by:

- Describing functions algebraically, numerically, and graphically.
- Solving simple linear and rational equations.
- Defining variables.
- Solving literal equations for a variable.
- Solving real-world problems involving ratios, rates, fractions, decimals, percentages and rates of change.

### 3. The student will visualize and interpret data by:

- Creating a table of coordinate values to evaluate and graph simple linear and exponential functions.
- Determining the equation of a line in point-slope form, writing the equation of a line in slope-intercept form, and graphing the resulting equation.
- Identifying the slope and y-intercept of a line from a graph or equation, and writing the equation of a line in slope-intercept form.
- Creating pie charts, bar graphs, and scatterplots.
- Recognizing and modeling change with linear and exponential functions.
- Making comparisons using tables, equations, and graphs.

### 4. The student will use basic concepts in geometry and set theory by:

- Articulating basic geometric vocabulary for shapes and solids.
- Solving real-world problems involving the perimeter and area of triangles, rectangles, and circumference and area of circles.
- Applying the Pythagorean Theorem.
- Performing basic operations with sets and applying them to real-life situations.
- Creating 2-set Venn diagrams to show set operations and solving word problems.

**5. The students will apply basic concepts in probability and statistics by:**

- Using the fundamental principle of counting to determine the outcomes of a sample space.
- Using basic terminology of probability and applying basic rules of probability.
- Developing basic statistical literacy by using samples to make inferences about populations.
- Evaluating measures of central tendency and variation.

**Prerequisites (Course & Skill Set)**

Demonstration of college-level math or appropriate scores on SPC Placement Test.

**Availability of Course Content:** MyMathLab materials (homework and quizzes) are available from the first day of the class. Appropriate MyCourses assignments and resources will be available each week based on the weekly schedule.

**Other Critical Course Expectations:**

This course has a proctored midterm and final exam. View the [Proctored Testing Information](#) site.

**Please schedule your appointment for your proctored Midterm and Final Exam as soon as possible.**

Midterm Dates: 10/7 – 10/9

Final Exam Dates: 12/ – 12/4

**REQUIRED TEXTBOOK & OTHER RESOURCE INFORMATION**

**Required Textbook: Math Lit by Almy/Foes; MyMathLab access kit required**

Publisher Information: Pearson

ISBN Number: 9780321970299

Scientific calculator is recommended

**Bookstore:** [www.spcollege.edu/textbooks](http://www.spcollege.edu/textbooks)

**Library:** [www.spcollege.edu/libraries](http://www.spcollege.edu/libraries)

## LEARNER SUPPORT

Accessibility: [www.spcollege.edu/dr](http://www.spcollege.edu/dr)

Academic Support Services: [www.spcollege.edu/support](http://www.spcollege.edu/support)

On-Campus Support: [www.spcollege.edu/tutoring/#tab=2](http://www.spcollege.edu/tutoring/#tab=2)

Online Support: [www.spcollege.edu/tutoring/#tab=3](http://www.spcollege.edu/tutoring/#tab=3)

Student Services and Resources: [www.spcollege.edu/services](http://www.spcollege.edu/services)

## IMPORTANT DATES

**Course Dates:** August 15 – December 9, 2016

**Drop Date:** August 19, 2016

**Withdrawal Date:** October 20, 2016

**Financial Aid Dates:** [www.spcollege.edu/pages/dynamic.aspx?id=800](http://www.spcollege.edu/pages/dynamic.aspx?id=800)

## ATTENDANCE

The College-wide attendance policy is included in the Syllabus Addendum:

[www.spcollege.edu/addendum/#attend](http://www.spcollege.edu/addendum/#attend)

For this class, attendance (“active participation”) is defined as completing assignments according to dates listed in the syllabus.

## GRADING

Category	Location of Assignments	# of Attempts	Drop Lowest Grade	% of Course Grade
Looking Ahead/Looking Back	MyCourses	1	Yes	5
MyMathLab Homework	MyMathLab	Unlimited*	Yes	15
Discussions	MyCourses	N/A**	Yes	10
Vocabulary Quizzes	MyCourses	1	Yes	5
Quizzes			Yes	10
Modules 1 -4	MyMathLab	3		
Syllabus Quiz	MyCourses	Unlimited		
Module 5	MyCourses	3		
Concepts/Applications	MyCourses	1	No	15
Proctored Midterm	MyCourses	1	No	20
Proctored Final Exam	MyCourses	1	No	20

\*For MyMathLab homework, you can rework any homework assignments that you worked on before the due date.

**You must earn 60% or higher on each homework assignment in order to access the cycle quizzes.**

\*\* For discussions, see the instructions for grading criteria. Also, the Syllabus quiz must be completed with a score of 100% to gain access to the Discussions

**ASSIGNMENTS: PLEASE VIEW THE WEEKLY SCHEDULE IN THE BEGIN HERE MODULE WHICH LISTS THE DUE DATES FOR EACH ASSIGNMENT**

See detailed weekly schedule located in the Begin Here Module. Please note due dates listed in the weekly schedule. Assignments are always due on Mondays by 11PM. Students are expected to complete assignments by the listed due dates. Each lesson of work builds on the concepts learned in the prior lesson so due dates will not be extended. For several categories of assignments, the lowest grade is dropped. This will help to accommodate times when an assignment is not completed on time.

**There is a required syllabus quiz in the Begin Here Module that must be completed with a score of 100% to unlock the course materials in MyCourses.**

**Looking Ahead** (5% of course grade): These are short self-assessments of your knowledge and familiarity with the objectives for a particular module. You can use these self-assessments to help you write your self-evaluation, which is included in the Module/Cycle Concepts/Applications (described below).

**Homework** (15% of course grade): There is MML homework assigned for each cycle lesson for Cycles 1 to 4. MML homework has due dates as shown in MML and MyCourses. If you access a homework at least once before the due date, you can redo the homework at a later date to improve your homework grade.

**You must score at least 60% on each lesson homework to gain access to the related quiz in MyMathLab.**

For Cycle 5, there are two ungraded homework assignments located in MyCourses.

**Vocabulary quizzes** (5% of course grade): These short quizzes assess your knowledge of the key vocabulary terms used in each module/cycle.

**Cycle Quizzes** (10% of course grade): Cycles 1 to 4 quizzes are taken in MyMathLab. Cycle 5 quiz is given in MyCourses. For the MML quizzes and Cycle 5 quiz, you are given three attempts. The highest grade for each quiz is used. Each time you take these quizzes you will get different questions. Quizzes are due on Monday by 11PM of the week after the material is covered in class. The due dates for the quizzes

are shown in this syllabus, in MML and on the course calendar in MyCourses. ***I do not extend due dates so be sure to complete quizzes on time.***

***Discussions*** (10% of course grade): (*located in the associated Cycle Module in MyCourses*) will open on Saturday and close on **Monday, 11PM of the week after they become available**. Each of these discussion topics will receive 20 points if successfully completed. For each discussion topic, you must post first before you see the postings of the students. Each discussion will include detailed instructions.

***Concepts/Applications*** (15% of grade): These assignments include selected homework problems from the textbook, and a self evaluation. You must show work for all problems to receive full credit. These assignments will be submitted by dropboxes in MyCourses.

***Proctored Midterm and Final Exam*** (20% of grade for each):

**Online Proctored Exams Information:** View the [Proctored Testing Information](#) site.

## **STUDENTS' EXPECTATIONS AND INSTRUCTOR'S EXPECTATIONS**

### **REQUIRED INTERACTION**

Students are expected to participate in the course discussions located in MyCourses. Students must use the MyCourses email to communicate with the professor. Emails will be responded to within 48 hours.

The assignments in MyMathLab are auto-graded so students will see their grades upon completion of the assignment. Discussion postings will be graded within 48 hours of the due date/time. Results from proctored testing will be available on the Monday following the proctored testing dates. MyMathLab grades (homework average and unit tests) will be transferred to the MyCourses gradebook each week within 48 hours after the due date/time.

### **PARTICIPATION, CONDUCT, & NETIQUETTE**

SPC has outlined expectations for student behavior and interaction for online discussions, email, and other forms of communication. View the Student Expectations in [How to be a Successful Student](#).

### **ACADEMIC HONESTY**

View the [Academic Honesty Policy](#).

## **COPYRIGHT**

Copyrighted material within this course, or posted on this course website, is used in compliance with United States Copyright Law. Under that law you may use the material for educational purposes related to the learning outcomes of this course. You may not further download, copy, alter, or distribute the material unless in accordance with copyright law or with permission of the copyright holder. For more information on copyright visit: [www.copyright.gov](http://www.copyright.gov).

## **TURNITIN**

The instructor of this course may require use of Turnitin.com as a tool to promote learning. The tool flags similarity and mechanical issues in written work that merit review. Use of the service enables students and faculty to identify areas that can be strengthened through improved paraphrasing, integration of sources, or proper citation. Submitted papers remain as source documents in the Turnitin database solely for the purpose of detecting originality. Students retain full copyright to their works. The Turnitin Usage Agreement can be reviewed at: [turnitin.com/agreement.asp](http://turnitin.com/agreement.asp). Students who do not wish to submit work through Turnitin must notify their instructor via course email within the first seven days of the course. In lieu of Turnitin use, faculty may require a student to submit copies of sources, preliminary drafts, a research journal, or an annotated bibliography.

## **STUDENT SURVEY OF INSTRUCTION**

**The Student Survey of Instruction is administered in courses each semester. It is designed to improve the quality of instruction at St. Petersburg College. All student responses are confidential and anonymous and will be used solely for the purpose of performance improvement.**

## **TECHNOLOGY**

**Technical Requirements for MyCourses:**

[mysuccess.helpdocsonline.com/#technical-requirements-for-mycourses](http://mysuccess.helpdocsonline.com/#technical-requirements-for-mycourses)

**Minimum Technical Skills:**

You will be using the MyCourses learning management system (LMS). If you are not familiar with this LMS complete the Introduction to MyCourses found under your Home page.

There is a MyCourses Tutorial in the class with clear instructions on how to use all sections of the course. Also, you will see an **Online Help** link at the top of your page for help with any technical issues.

**Accessibility of Technologies:**

**MyCourses (Brightspace by D2L) Accessibility Statement:**

[www.brightspace.com/about/accessibility](http://www.brightspace.com/about/accessibility)

**Pearson Accessibility Statement:**

[www.pearsonhighered.com/educator/accessibility/index.page](http://www.pearsonhighered.com/educator/accessibility/index.page)

**Privacy:**

**MyCourses (Brightspace by D2L) Privacy Statement:**

[www.brightspace.com/legal/privacy](http://www.brightspace.com/legal/privacy)

**Pearson Privacy Policy:**

[www.pearson.com/privacy-policy.html](http://www.pearson.com/privacy-policy.html)

**Technical Support:** [www.spcollege.edu/helpdesk](http://www.spcollege.edu/helpdesk)



## MAT1100 Detailed Weekly Syllabus

The schedule below shows the material covered each week. The assignments are organized by Modules in MyCourses and cycles in MyMathLab (MML).

Week	Date	Sections Covered	Looking Ahead*	MML Homework & Quiz	Discussions*	Vocabulary Quiz*	Concepts & Applications *	
1	Aug 15	1.2, 1.3, 1.4, 1.5	Cycle 1 Looking Ahead <b>Due Aug 22</b>	Sections 1.2 - 1.5 <b>Due: 8/22</b>	Introduce Yourself (Begin Here) <b>Due 8/22</b>			
2	Aug 22	1.6, 1.7, 1.8, 1.9		Sections 1.6 - 1.9 <b>Due: 8/29</b>	Focus Problem: Medical Errors Part 1 (Cycle 1 Part 1) <b>Due 8/29</b>			
3	Aug 29	1.11, 1.12, 1.15, 1.16		Sections 1.11, 1.12, 1.15, 1.16 <b>Due: 9/6</b>				
4	Sept 6	1.17, 1.20, 1.21		Sections 1.17, 1.20, 1.21 Cycle 1 Quiz <b>Due: 9/12</b>		Cycle 1 <b>Due 9/12</b>	Cycle 1 <b>Due 9/12</b>	
5	Sept 12	2.2, 2.3, 2.4, 2.5	Cycle 2 Looking Ahead <b>Due: 9/19</b>	Sections 2.2 -2.5 <b>Due: 9/19</b>	Focus Problem: Magic Numbers (Cycle 2 Part 1) <b>Due 9/19</b>			
6	Sept 19	2.6, 2.7, 2.9, 2.11		Sections 2.6, 2.7, 2.9, 2.11 <b>Due: 9/26</b>				
7	Sept 26	2.13, 2.14, 2.17, 2.19		Sections 2.13, 2.14, 2.17, 2.19, Cycle 2 Quiz <b>Due: 10/3</b>		Cycle 2 <b>Due 10/3</b>	Cycle2 <b>Due 10/3</b>	
8	Oct 3	MIDTERM EXAMS October 7, 8, 9						
9	Oct 10	3.5, 3.6, 3.7	Cycle 3 looking Ahead <b>Due: 10/17</b>	Sections 3.5, 3.6, 3.7 <b>Due: 10/17</b>	Focus Problem Paper vs. Electronic (Cycle 3 Part 1)) <b>Due 10/17</b>			
10	Oct 17	3.9, 3.11		Sections 3.9, 3.11 <b>Due: 10/24</b>				
11	Oct 24	3.12, 3.15, 3.16		Sections 3.12, 3.15, 3.16 Cycle 3 Quiz <b>Due: 10/31</b>		Cycle 3 <b>Due 10/31</b>	Cycle 3 <b>Due 10/31</b>	
12	Oct 31	4.4, 4.5	Cycle 4 looking Ahead <b>Due: 11/7</b>	Sections 4.4, 4.5 <b>Due: 11/7</b>	Focus Problem Size Matters (Cycle 4) <b>Due 11/7</b>			
13	Nov 7	4.9, 4.10		Section 4.9, 4.10 Cycle 4 Quiz <b>Due: 11/14</b>		Cycle 4 <b>Due 11/16</b>	Cycle 4 <b>Due 11/16</b>	
14	Nov 14	Cycle 5 Part 1	Cycle 5 Looking Ahead <b>Due 11/21</b>		Focus Problem Probability in Real World (Module 5) <b>Due 11/21</b>			
15	Nov 21	Cycle 5 Part 2		Module 5 part b homework (in MyCourses) <b>Due: 11/28</b>		Cycle 5 <b>Due 11/28</b>	Cycle 5 <b>Due 11/28</b>	
16	Nov 28	FINAL EXAMS December 2, 3, 4						

**\*located in MyCourses NOTE: THE SCHEDULE ABOVE MAY CHANGE DURING THE SEMESTER. ANY CHANGES WILL BE ANNOUNCED PRIOR TO ASSIGNMENT DUE DATES. Please note:** St. Petersburg College will be closed September 5 (Labor Day), October 18 (Faculty Professional Development Day), November 11 (Veterans Day), November 23-27 (Thanksgiving Break)