MAT 194 – Precalculus Syllabus: Summer Start 2015

Instructor

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Additional individual meetings to discuss course material or any other concerns can be scheduled by contacting me. You can always feel free to stop by my office at any time to see if I am there. If I am free, I will be more than willing to discuss anything you might have for me.

Class Information

Days: MTWTh   Time: 8:00am - 10:25 am   Classroom: SIMS 237

Course Description

This course is designed to prepare you for success in the study of calculus. Using graphical, numerical, and symbolic representations, you will investigate the basic properties of many elementary functions, including linear, quadratic, polynomial, exponential, logarithmic, trigonometric, and rational. These functions and their applications will be the core focus of the course. You will engage in applied problem solving, often in collaborative group settings, using appropriate technologies. A second but equally important aim of this course is for you to refresh and retain the algebra skills necessary to succeed in your next math course.

Course Materials

- **Required Text:** Connally, E., Hughes-Hallett, D., Gleason, A. M., et al. (2011). *Functions Modeling Change: A Preparation for Calculus* (4th ed.). Hoboken, NJ: John Wiley & Sons, Inc. Also available as a custom edition.

- **Calculator:** TI-83+ or TI-84 graphing calculator. These may be purchased at any supplier, e.g. Orange Student Bookstore, Staples, or any merchandizing website. There are calculators also available for checkout in the library. Unless otherwise stated, a symbolic calculator is not permitted.

- **Webassign:** See the appropriate section below.

- **Optional:** Student Solution Manual: This book is normally available on 2-hour reserve from Carnegie Library on the first floor of Carnegie. However, due to construction this must be requested through Bird Library.

Webassign

<u>You</u> must create your WebAssign account at `www.webassign.net` in order to submit your on-line homework. You will "self enroll" into this section of MAT 194 by using a code given the first day of lecture. You should set up your account using your SU username and email address. Do this right away! You are responsible for any problems caused by delaying this process.

You will also need to enter an "access code" to use WebAssign. If you purchase a new textbook at the SU bookstore, it will come with an access code. If you purchase a new textbook elsewhere or a used textbook, you will need to purchase your access code separately. This can be done on-line

with a credit card through WebAssign or you can purchase an access code at the SU bookstore.

Learning Outcome Goals

(i) To develop a matured perspective on how to approach mathematical problems and concepts.
(ii) To improve your ability to engage in mathematical thinking, reasoning, communication, and problem solving.
(iii) To learn how to take abstract questions, make them concrete, and use Mathematics to analyze these questions.
(iv) To properly utilize technology to explore, supplement, or answer mathematical questions.
(v) To encourage you to become a reflective mathematics student.
(vi) To understand Mathematics not only as a tool for solving problems but as an art and science in and of itself.
(vii) To learn to [self] assess mathematical problems, solutions, and concepts.
(viii) To learn to love word problems.

Grading

This course grade is determined by the following components:

Exam 1	10%
Exam 2	10%
Exam 3 (Final)	10%
Mini-projects/Reflections	20%
Homework	50%

Grade Scale

The grade scale is the standard Mathematics Department grading scale and is as follows:

A	93 - 100	C+	77 - 79
A-	90 - 92	C	73 - 76
B+	87 - 89	C-	70 - 72
B	83 - 86	D	60 - 69
B-	80 - 82	F	0 - 59

Homework, Reflections, & Mini-Projects

At the end of each class, there will be a homework assignment due the following class. These exercises will come primarily from the textbook and WebAssign but may also be from a handout or assigned in class. All homeworks assigned before an exam must be submitted before the day of the exam. In addition, all assignments assigned in the class must be submitted before the final week of class except for those assignments given the last week of lecture.

Homeworks will be graded on an all-or-nothing scale – 0% or 100%. To receive credit for a homework, the entire assignment must be correct. However, homeworks submitted on time may be resubmitted an unlimited numbers of times.

I encourage you to work with others on these homeworks. Mathematics is a social activity! However, I do expect each student to independently write up her/his own solutions. Do not simply use others to do your work but rather use others to help work through and engage in the concepts. If you work with others, indicate on your assignment with whom you worked. **Plagiarism is unacceptable** and will result in a zero grade for all persons involved and will result in serious academic repercussions.

In addition, there will be short mathematical reflection questions assigned as well as small mathematical projects. The reflection questions will often have no correct/incorrect answers but rather are to help emphasize important concepts and help solidify concepts. The mini-projects will be of a similar nature but will be consist of more concrete problems and will emphasize "real world" problems.

Exams

The two exams will each last one hour during one of the regular class days. If you must miss a test, it is imperative that you make the instructor aware before the exam begins. Reasons for missing a test must be documentable. Each exam case will be handled on an individual basis. The final exam will be cumulative, mandatory, and is scheduled for the final day of class – August 13, 2015 – during your regular class hour. The final exam will take the entire lecture block.

Attendance & Participation

It is essential to your success in this course that you attend each lecture and participate in the discussions. Learning Mathematics is not a passive activity! It is vital that you notify the instructor should the need to miss class arise. You are responsible for any work missed due to an absence. Frequent unexcused absences – two or more – could result in a zero for the course.

Students with Disabilities

If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), `http://disabilityservices.syr.edu`, located in Room 309 of 804 University Avenue, or call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations. Making arrangements with ODS takes time. Do not wait until just before the first test.

Academic Integrity

The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see `http://supolicies.syr.edu/ethics/acad_integrity.htm`

Mathematics Help

I am always available for help, either during my office hours or whenever you stop by my office and I am there with time to spare. You may also email me to try to set-up a time to see me. You can also seek help from any person staffing the Math Clinic. Due to construction in Carnegie, the clinic will be help in the Physics building. Hours, location, and staffing information can be found at `http://math.syr.edu/Help.htm`

Problem Resolution

Please inform the instructor of any problems, questions, or concerns that you have with this course. Do not wait to bring issues to the attention of your instructor! Problems not satisfactorily resolved with your instructor should be brought to the attention of the course supervisor without delay. The course supervisor for this course is Professor Graham Leuschke.

Counseling Servies

If at any point during the semester, you feel overwhelmed with your class work, feel thoughts of depression/suicide, experience sexual assault/rape, experience problems with substance abuse or relationship abuse, or have any other struggles with physical/mental health, _**please seek help**_! The Counseling Center Services at Syracuse University is a resource _free_ offering assistance with any issue you might have - both individually and through group sessions. There is _**never**_ any shame in seeking help. If you or someone you know is struggling with any of these issues, speak out! The Counseling Center Services website can be found at `http://counselingcenter.syr.edu/`, is located at 200 Walnut Place, Syracuse NY 13244-4350, and can be contacted at 315.443.4715.

If you or someone you know is having issues with gender or sexual identity issues, the LGBT[QIA] Center is there to create a safe space for those with marginalized genders and sexualities or those who might be struggling with these issues. The LGBT[QIA] Center website can be found at `http://lgbt.syr.edu/`, is located at 750 Ostrom Avenue, Syracuse, NY 13244-4350, and can be contacted at 315.443.3983. Know that my office is a safe space and should you prefer any gender specific pronoun/name, please be sure to make me aware!

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Cellular Phones

Following the Mathematics Department guidelines, all electronic devices other than perhaps a calculator should be turned off and put away during class. Calculators on cellular phones are not to be used on quizzes, tests, or other class activities.

Tentative Schedule

The following is a schedule for the course. This schedule is subject to change and should be considered only an approximation to the dates/order of material or assigned exercises.

Date	Possible Activities	Readings	Recommended Exercises	Deadlines
07/06	1.1 - 1.3	1.4	1.1: 19, 21, 27, 28 & 1.2: 16, 23 & 1.3: 20, 30	07/16
07/07	1.4 - 1.5	2.3	1.4: 31, 32, 35, 36, 47 & 1.5: 13, 14, 20	07/16
07/08	2.1 - 2.3	Review	2.1: 22 & 2.2: 24 & 2.3: 2, 8	07/16
07/09	2.4 - 2.5	3.1 - 3.2	2.4: 4-10, 34, 36 & 2.5: 13, 17, 18, 21	07/16
07/13	3.1 - 3.2	Review	3.1: 22, 23, 25, 26, 28, 34 & 3.2: 4, 10, 12, 14, 22	07/16
07/14	Practice	Review	Worksheet	07/16
07/15	Review	Review	Study	07/16
07/16	Exam 1	4.1 - 4.2	Worksheet	07/30
07/20	4.1, 4.3	4.4	4.1: 18, 20, 22, 24, 32 & 4.3: 37, 41	07/30
07/21	4.4 - 4.5	5.1	4.4: 22 & 4.5: 24, 25, 32, 40, 42	07/30
07/22	5.1 - 5.2	Review	5.1: 12, 29, 26, 28, 49 & 5.2: 22, 24-26, 36, 44, 53	07/30
07/23	5.3	Practice	5.3: 4	07/30
07/27	6.1 - 6.5	Practice	6.1:2,6,14|6.2:10,23,24,30|6.3:20,28|6.4:10|6.5:22,24	07/30
07/28	Practice	Review	Worksheet	07/30
07/29	Review	Review	Study	07/30
07/30	Exam 2	7.2	Worksheet	08/10
08/03	7.1 - 7.3	8.2	7.1: 24 & 7.2: 12 & 7.3: 24, 32, 36	08/10
08/04	8.1 - 8.2	11.1	8.1: 2-12 even, 31, 32, 34, 40 & 8.2: 4, 14, 32	08/10
08/05	10.1, 11.2 - 11.3	11.2 - 11.3	10.1: 4, 16, 18, 34, 36, 40 & 11.2: 26 & 11.3: 18-20, 32	08/10
08/06	11.2 - 11.5	Practice	11.3: 26 & 11.4: 10 & 11.5: 19, 42	08/10
08/10	Practice	Practice	Worksheet	08/10
08/11	Presentations	Review	Worksheet	08/10
08/12	Review	Review	Study	08/10
08/13	Final	–	–	–