

## Departmental Syllabus for MAT 295, Calculus I Summer II 2014

**Course Description:** MAT 295 is the first course in a three-semester sequence in Calculus. This sequence is designed for mathematics, science and engineering majors and for those students in other majors who intend to take more advanced courses in mathematics. This course covers functions, limits, differentiation, and integration as well as applications such as curve sketching, optimization, linear approximation, and computation of areas.

**Course Supervisor:** Professor Andrew Vogel, 229F Physics Building, 443-1584,  
[alvogel@syr.edu](mailto:alvogel@syr.edu)

**Text:** Essential Calculus: Early Transcendentals, second edition, by James Stewart (Cengage Learning) and a WebAssign access code for submitting on-line homework.

**Prerequisites:** A grade of C- or better in MAT 194, or its equivalent, is required. During the first week of class a readiness test will be given; those who do not do well should take a precalculus course such as MAT 194 instead of MAT 295.

Students who have scored a 4 or 5 on the Advanced Placement Calculus AB exam should register for MAT 296 Calculus II. Students who have scored a 4 or 5 on the Advanced Placement Calculus BC exam should register for MAT 397 Calculus III.

**Credit:** You cannot receive credit for MAT 284 and MAT 285 after completing MAT 295. In addition, you cannot receive credit for MAT 295 after completing MAT 286.

Students who receive a grade of C or better in MAT 295 are exempt from the Quantitative Skills requirement in the Liberal Arts Core. MAT 295 may also be used to partially satisfy the Divisional Perspectives requirement. It is included on the Basic List for the Natural Sciences and Mathematics Division.

### **Purchasing Your Textbook and WebAssign Access Code:**

All students are required to have a WebAssign access code for online homework assignments. This code includes access to the online electronic version of the textbook. Some students will also want a physical copy of the textbook or of the study guide. **You may choose among the following options.** If you are unsure about which option to choose, please consult with your instructor.

(1) Purchase a WebAssign access code either at the SU bookstore or online at [www.webassign.net](http://www.webassign.net). This access code includes access to the online electronic version of the textbook. If you purchase this code at the SU bookstore, it is valid for future semesters in the Calculus sequence. If you purchase it online and plan to take MAT 296, you should purchase the multi-term (lifetime of edition) version.

(2) Purchase a new textbook bundled with a WebAssign access code at the SU bookstore. This access code includes access to the online electronic version of the textbook, and is valid for future semesters in the Calculus sequence.

**Other Resources:** Your textbook comes with access to an online resource at [http://www.stewartcalculus.com/media/13\\_home.php](http://www.stewartcalculus.com/media/13_home.php). This website has some interactive visuals to accompany the topics in your textbook. It also has “homework hints” for the problems in your textbook that are marked in blue. Other interactive visuals can be found by clicking the TEC icon in the pages of your ebook.

**Calculators:** If your instructor uses a calculator in class, it will be a TI84 Plus calculator. Such a calculator may be useful at times with homework problems. However, ***calculators will not be allowed on any hourly exams or on the final exam.*** If your instructor decides to allow calculators on some quizzes, any graphing calculator may be used, but cell phone calculators and calculators with a symbolic capability (such as the TI-89 or TI-Nspire with CAS) are forbidden.

**Course Format:** The course meets four times per week, consisting of three lectures and one recitation. Your recitation instructor will answer questions on the course material and will work with you in solving additional problems related to the lecture material. A quiz will be given in most recitation sessions.

**Class Attendance and Participation:** You are expected to attend and participate in class. Your success will be limited without your full attendance and participation. If you miss a class, you are responsible for obtaining notes for that class from a student who attended. It is your responsibility to find out about any announcements concerning homework, quizzes or exams that were made during the class.

**Examinations:** There will be three in-class examinations. Exam dates are listed on the schedule below. Your instructor may make some changes to this schedule. **There will be no make-up quizzes or exams, even in the case of an emergency.** A missed quiz or examination counts as a zero unless you present a valid excuse from a physician or the Dean's Office. With an acceptable written excuse, your missed exam score will be replaced by your score on that portion of the material on the final.

**Final Examination:** The final exam covers the entire course. It is a **two-hour** exam during class and will be given on

**Thursday,  
August 7,  
2014**

**Grades:** Your grade will be computed using the following percentages:

3 Exams	20% each
Final	20%
Quizzes and homework	20%

Your course grade will be determined as follows:

93-100	A	77-79	C+
90-92	A-	73-76	C
87-89	B+	70-72	C-
83-86	B	65-69	D
80-82	B-	0-64	F

**Students with Disabilities:** Students who may need academic accommodations due to a disability are encouraged to discuss their needs with the instructor at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498, and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance. For more information about services and policy, see <http://disabilityservices.syr.edu>.

**Faith Tradition Observances:** SU's religious observances policy, found at [http://supolicies.syr.edu/emp\\_ben/religious\\_observance.htm](http://supolicies.syr.edu/emp_ben/religious_observance.htm), recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice/Student Services/Enrollment/My Religious Observances from the first day of class until the end of the second week of class.

**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 regards 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://academicintegrity.syr.edu>. *The use of or availability of any electronic device during an hourly exam or final exam is a violation of the Academic Integrity Policy.*

**Course-related Problems or Questions:** Please inform your instructor of any problems you have with this course. Problems not satisfactorily resolved with your instructor should be brought to the attention of the course supervisor (listed on the first page) without delay.

**How to Succeed:**

1. It is absolutely essential that you understand how to solve all the assigned problems. Since quiz and exam questions will be similar to these problems, it is crucial that you are able to solve every one of them. Once you understand how to solve a problem, write your solution down neatly and in full detail with explanations that would make your reasoning clear to a friend who sees the problem for the first time. You may want to save these solutions for review when you prepare for the exams.
2. Ask questions! If something is not completely clear, ask about it in lecture, in recitation or at the Calculus Help Center as soon as possible. Don't hesitate to bring questions to your course instructor or recitation instructor during office hours.
3. Reading mathematics takes time! Read carefully and work through all the examples in complete detail. To test your understanding of the text discussion, try to work an example on your own before reading the solution.
4. Stay caught up! Calculus concepts build on each other cumulatively and you need to stay on top of the material at every stage. If you are having difficulty, don't expect that the problem will take care of itself and disappear later. Contact your course instructor or your recitation instructor immediately and discuss the problem!
5. Form a study group! Explaining your reasoning to another student can help to clarify your own understanding. However, you should attempt the problems ahead of time by yourself and then work through any difficulties with your study partners.
6. We believe you can be successful in this course! You should expect to work hard. Don't get discouraged if you find some of the material difficult at first. Be persistent and patient! If you follow the above suggestions, your experience in this course will be a rewarding one.

## MAT 295 – Summer II 2013 Tentative Course Schedule

MONDAY		TUESDAY		WEDNESDAY		THURSDAY	
June 30	1	July 1st	2	2rd	3	3rd	4
<b>§1.3</b> - The Limit of a Function <b>§1.4</b> - Calculating Limits		<b>§1.5</b> - Continuity <b>§1.6</b> - Limits Involving Infinity <b>quiz</b>		<b>§1.6</b> - Limits Involving Infinity <b>§2.1</b> - Derivates & Rates of Change		<b>§2.1</b> - Derivates & Rates of Change <b>quiz</b>	
7th	5	8th	6	9th	7	10th	8
<b>§2.2</b> - The Derivative as a Function		<b>EXAM 1</b>		<b>§2.3</b> - Basic Differentiation Formulas <b>§2.4</b> - The Product & Quotient Rules		<b>§2.5</b> - The Chain Rule <b>§2.6</b> - Implicit Differentiation <b>quiz</b>	
14th	9	15th	10	16th	11	17th	12
<b>§2.7</b> - Application: Related Rates <b>§3.1</b> - Exp Fcns		<b>§3.2</b> - Inverse Fcns and Logs <b>§3.3</b> - Derivatives of Logs & Exp Fcns <b>quiz</b>		<b>§3.5</b> - Inverse Trig Fcns		<b>EXAM 2</b>	
21st	13	22nd	14	23rd	15	24th	16
<b>§3.7</b> - Indeterminate Forms & L'Hospital's Rule		<b>§4.1</b> - Maximum & Minimum Values <b>§4.2</b> - The Mean Value Theorem <b>quiz</b>		<b>§4.3</b> - Derivatives and the Shapes of Graphs		<b>§4.4</b> - Curve Sketching <b>quiz</b>	
28th	17	29th	18	30th	19	31st	20
<b>§4.5</b> - Application: Optimization Problems <b>§4.7</b> - Antiderivatives		<b>§5.1</b> - Areas & Distances <b>quiz</b>		<b>§5.2</b> - The Definite Integral		<b>EXAM 3</b>	
Aug. 4th	21	5th	22	6th	23	7th	24
<b>§5.3</b> - Evaluating Definite Integrals		<b>§5.4</b> - The Fundamental Theorem of Calculus <b>quiz</b>		<b>§5.5</b> - The Substitution Rule		<b>FINAL EXAM</b>	

**DEPARTMENT OF MATHEMATICS SYRACUSE UNIVERSITY  
UNDERGRADUATE MATHEMATICS CLINIC SCHEDULE**

**SUMMER SESSION II - 2014 – Begins Monday, June 30 through  
August 7 (the last day mathematics classes meet).**

**(Tutors will assist with MAT courses numbered 100-397. Both tutors will also  
assist students with MAT 525)**

**THE CLINIC WILL MEET IN THE PHYSICS BLDG. – ROOM 233**

**MONDAY**

9:00 a.m. – 12:00 p.m. Mr. Patrick Biermann  
2:00 – 6:00 p.m. Mr. Hubeyb Gurdogan

**TUESDAY**

9:00 a.m. – 12:00 p.m. Mr. Hubeyb Gurdogan  
2:00 – 6:00 p.m. Mr. Patrick Biermann

**WEDNESDAY**

9:00 a.m. – 12:00 p.m. Mr. Patrick Biermann  
2:00 – 6:00 p.m. Mr. Hubeyb Gurdogan

**THURSDAY**

9:00 a.m. – 12:00 p.m. Mr. Hubeyb Gurdogan  
2:00 – 6:00 p.m. Mr. Patrick Biermann

**FRIDAY**

10:00 – 11:00 a.m. Mr. Patrick Biermann  
11:00 a.m. – 12:00 p.m. Mr. Hubeyb Gurdogan