MATH 181-3003
Calculus I
SYLLABUS and COURSE EXPECTATIONS

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• Office Hours: See my schedule at http://sites.csn.edu/jmartin/f2016sched.pdf
• Class Meeting info: Tue/Thur 12:30-2:20 pm in I-308, Charleston campus

COURSE DESCRIPTION: A first semester, single variable calculus course. Topics include limits, differentiation, and integration of algebraic and transcendental functions with applications. PREREQUISITE: C or better in Math 127 or Math 128; satisfactory placement score.

REQUIRED TEXT:

© Apex Calculus – Version 3.0
Authors: Hartman, Heinold, Siemers, Chalishajar

Note about Apex Calculus: This textbook was created under a “Creative Commons” copyright license. The authors created the book with the intention for it to be freely shared with calculus students around the world.

- PDF VERSION: you can download the pdf of the book at this site http://www.apexcalculus.com/downloads
- PRINTED VERSION: you can order a printed version through amazon or creative space http://www.apexcalculus.com/purchase

CALCULATORS: Calculators will NOT be allowed on any in-class exams.

In general, the use of technology to learn math is very much encouraged. Sites like https://www.desmos.com/calculator and http://www.wolframalpha.com are very helpful learning tools and can be used when completing HW. Just keep in mind that on in-class exams, technology is NOT allowed. Prepare yourself accordingly!

OUTLINE: These are the sections from the book we will cover (to some extent) in class. (The order may vary.)

Ch 1: sections 1.1 – 1.6 (Limits and continuity)
Ch 2: sections 2.1 – 2.7 (Definition of derivative, differentiation rules, implicit differentiation)
Ch 3: sections 3.1 – 3.5 (Extreme values, mean value theorem, concavity, curve sketching)
Ch 4: sections 4.2 & 4.3 (Related rates, optimization)
Ch 5: sections 5.1 – 5.4 (Riemann sums, definite integral, indefinite integral, integration rules, fundamental theorem)
Ch 6: sections 6.1 & 6.7 (Integration by substitution, L’Hospital’s rule)

Note: A tentative schedule outlining which sections will be covered each day in class can be accessed through my website. http://sites.csn.edu/jmartin/181-3003-fall2016-lectureschedule.pdf
**GRADING BREAK DOWN:**

- HW---------------------------15%
- Prerequisite Quiz-----------5%
- Exam 1-----------------------15%
- Exam 2-----------------------15%
- Exam 3-----------------------15%
- Exam 4-----------------------15%
- Final Exam -----------------20%

**GRADING SCALE:**

- A: 92-100%,
- A−: 90-91.9%,
- B: 82-89.9%,
- B−: 80-81.9%,
- C: 72-79.9%,
- C−: 70-71.9%,
- D: 62-69.9%,
- D−: 60-61.9%,
- F: 0-59.9%

**Notes on class grades:**

1. A college policy dictates that the instructor CANNOT give a grade of “W.” If a student wishes to withdraw from a class, he or she must do so on their own through MyCSN or the registrar by Sunday, November 6th.

2. Each student’s class grade will be determined by the breakdown above, period. So, please don’t ask for a grade you did not earn through satisfactorily completing the above assignments.

**LECTURE STYLE:** During class I will do my best to explain the major concepts in each section. I will give context when possible, I will explain why the concept is valid, and I will work as many examples as I can. I will pick examples that I feel teach something important about calculus. As I lecture, I will assume a basic level of knowledge in algebra, precalculus, and trigonometry. If these prerequisites are giving you trouble, make sure to meet with me after/outside of class to discuss the problem.

**You should question everything I tell you.** Take nothing I say at face value. Think about it deeply. Decide if it makes sense, and if it doesn’t, please formulate and ask a question that gets to the bottom of your confusion.

**I will study with you for 60 minutes after class.** During class, I will have to keep a swift pace in order to get through all of the material. Therefore, I will stay after class for about 60 minutes every day to help students study. If no students stay, I will go back to my office.

**HOMEWORK (HW):** There will be 11 HW assignments to be completed during the course. HW assignments will be announced in-class and on the class website and will usually be due on Thursday at the BEGINNING of class. (For the exact due dates, see the lecture schedule on the class website.)

HW assignments will consist of 20 book problems and up to 5 problems written by the instructor. These questions are the **minimum** number of problems that must be completed in order to succeed in the class. **It is suggested that ALL book problems are completed from each section** to ensure a thorough understanding of the material.

**Note 1:** HW should be done every day, during the instructor’s study session after class when possible. **DO NOT** wait until the last minute to finish a HW assignment; it will end poorly and you will not learn as much as you could have by starting earlier.

**Note 2:** HW should be done mindfully. Copying HW, having a tutor do your HW for you, or simply completing a problem without thoroughly understanding what you’ve done will slow your learning and hurt your exam scores.

**Note 3:** HW will be graded on completeness only. Answers to the instructor-written problems will be provided after the assignment due date. **It is the student’s responsibility to check their answers when HW is returned.**

**Note 4:** The lowest 2 HW assignments will be dropped when calculating the final class grade. Do not miss more than one HW assignment.

**EXAMS:** There will be four in-class exams AND a comprehensive in-class final exam. The exams will be designed to test your understanding of the critical principles covered in the class. **Questions on exams may ask students to apply previously studied concepts in new settings. This is how I believe understanding is tested.**

**Note:** To encourage you to understand and review your old exams, each exam will include one problem similar to a problem on the previous exams.
**EXAM DATES:** Here are the dates for each exam. These dates will not change.

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>Thursday, September 29th</td>
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<tr>
<td>Exam 2</td>
<td>Thursday, October 20th</td>
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<tr>
<td>Exam 3</td>
<td>Thursday, November 10th</td>
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<tr>
<td>Exam 4</td>
<td>Tuesday, December 6th</td>
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The **FINAL EXAM** is on **Thursday, December 15th**

**PARTIAL CREDIT ON EXAMS:** Credit on exams will only be awarded if logical work is shown. If no work is shown, or insufficient work is shown, the student will be given zero points for that problem.

MOST questions on exams will be graded out of 3 points. The following partial credit scale will usually be used:

<table>
<thead>
<tr>
<th>Partial Credit</th>
<th>Description</th>
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<tbody>
<tr>
<td>3-point solutions</td>
<td>These are solutions that are almost mathematically perfect, with sufficient work shown, and contain only very (very!) minor arithmetic or transcriptional errors.</td>
</tr>
<tr>
<td>2-point solutions</td>
<td>These are solutions that are logical and display a concrete understanding of the pertinent principles in the problem; however 2-point solutions contain at least one critical error.</td>
</tr>
<tr>
<td>1-point solutions</td>
<td>These are solutions that show some understanding of the underlying principles in the problem but contain two or more critical errors.</td>
</tr>
<tr>
<td>0-point solutions</td>
<td>These are solutions that show no understanding of the underlying principles in the problem, or solutions that have insufficient work shown.</td>
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**EXTRA RESOURCES:** Below is a list of resources that I believe may help a motivated student study calculus. This is not a comprehensive list, but it is a start. I thoroughly encourage you to mindfully take advantage of all of these resources.

- **Josh’s Calculus Website:** [http://sites.csn.edu/jmartin/math181videos.html](http://sites.csn.edu/jmartin/math181videos.html)
- **Professor Eric Hutchinson’s Calculus Videos:** [http://sites.csn.edu/ehutchinson/MATH181NOTES.html](http://sites.csn.edu/ehutchinson/MATH181NOTES.html)
- **Extra Textbook:** [http://scidiv.bellevuecollege.edu/dh/Calculus_all/Calculus_all.html](http://scidiv.bellevuecollege.edu/dh/Calculus_all/Calculus_all.html)
- **Paul's Online Calculus Notes:** [http://tutorial.math.lamar.edu](http://tutorial.math.lamar.edu)
- **Khan Academy:** [https://www.khanacademy.org/math/calculus](https://www.khanacademy.org/math/calculus)
- **University of Utah Videos:** [http://www.math.utah.edu/lectures/math1210.html](http://www.math.utah.edu/lectures/math1210.html) and [http://www.math.utah.edu/lectures/math1220.html](http://www.math.utah.edu/lectures/math1220.html)
- **University of Houston Videos:** [http://www.online.math.uh.edu/HoustonACT/videocalculus](http://www.online.math.uh.edu/HoustonACT/videocalculus)
- **Advanced Placement Practice Problems and Solutions**

**ATTENDANCE:** Attendance is strongly encouraged. If there is a quiz or exam that day, attendance is required. It is the student’s responsibility to understand all material covered in class, whether or not he or she attends class. Sometimes important information is discussed during class, so be sure to contact the instructor or a classmate, to get any information given in class in the case of an absence.

**MAKE-UP POLICY:** No late exams will be given. No late HW will be accepted. Please make every effort to attend class on exam days. In the case of a prearranged absence, exams may be taken a day or two early, but special arrangements with the instructor must be made in advance.

**DISRUPTIVE STUDENT POLICY:** It is expected that students will refrain from activities that disrupt the learning of other students. Do not partake in inconsiderate activities during class. It is distracting and will not be tolerated. Examples of inconsiderate activities include (but are not limited to): listening to music, texting or talking on the phone, talking out of turn, frequently leaving the classroom, making disrespectful comments, etc. Continually disruptive students will be asked to leave the classroom. (The Student Code of Conduct can be found in the 2015-2016 general catalog on page 428: [https://www.csn.edu/2015-2016-catalog](https://www.csn.edu/2015-2016-catalog))
**ACADEMIC DISHONESTY:** Exams are to be completed independently with no aid from other persons or forbidden items as specified by the instructor (such as books, calculators, cell phones, tablets, etc.). Dishonest work on an exam or quiz will be punished by a zero on that assignment. No exceptions. (Students’ rights and responsibilities regarding academic dishonesty are outlined in the CSN academic integrity policy, which can be found in the 2015-2016 general catalog on page 428: https://www.csn.edu/2015-2016-catalog)

**AMERICANS WITH DISABILITIES ACT STATEMENT:** Students with medical, psychological, learning or other disabilities desiring academic adjustments, accommodations or auxiliary aids will need to contact a campus Disability Resource Center. Only the Disability Resource Center determines eligibility for and authorizes the provision of services. (Information regarding the DRC can be found at https://www.csn.edu/drc, and information about the ADA can be found at https://www.csn.edu/ada.)

**OUTSIDE RESOURCES:** If you find yourself falling behind or becoming even the slightest bit confused, seek help immediately!

- CSN provides free tutoring for all enrolled math students. There is a free **walk-in tutor lab** on all three CSN campuses that is staffed with tutors and math instructors (https://www.csn.edu/math-science-resource-centers).
- In addition, a student can sign up for **one-on-one tutoring** sessions by visiting https://csnts.mywconline.com.
- Other resources including Advising, Day Care, Testing Center, Financial Aid, and TRIO Support Services are listed here: https://www.csn.edu/student-resources.

**DISCLAIMER:** Information contained in this syllabus, other than the grading, late assignments, make-up work, and attendance policies, may be subject to change with advance notice, as deemed appropriate by the instructor.