Calculus for Engineers I - MAT 265, §18269 (Spring 2016)
Class Day/Time: M W F, 1:30PM - 2:20PM
Location: ECG G215

Instructor: Joseph Wells
Email: jswells@asu.edu
Course Website: www.blackboard.asu.edu
Instructor Website: joedub.net
Office Location: WXLR 434
Office Hours: (in WXLR 303) Mon 11:30AM - 1:00PM, Wed 2:30PM - 4:00PM, or by appointment
Textbook: Stewart, James. *Essential Calculus, Early Transcendentals, 2nd Edition* (Brooks/Cole).

Prerequisites and Placement: MAT 170-Pre-calculus with grade C or better, or a passing score (67 or better) on the placement exam.

Exam Schedule: Exams are coordinated, so the dates of the exams are firm.

Exam	Topics Covered	Date	Room
0	Algebra Prerequisites	January 15	Testing Center
1	1.3-1.6, 2.1-2.3	February 12	Classroom
2	2.4-2.8, 3.1-3.3, 3.5, 3.7	March 25	Classroom
Mastery	Differentiation	March 30	Classroom
Mastery	(Retake) Differentiation	April 06 or 07	Testing Center
3	4.1-4.5, 4.7, 5.1, 5.2	April 22	Classroom
Final	Cumulative	May 5	TBA

Grade Calculation: Your grade is dependent upon how well you demonstrate your comprehension of the subject through application and completion of the items listed above in this syllabus.

Assignments	*Percentage of Final Grade*
Exam #0	1%*
Exam #1-#3 & Mastery Exam	50%
Homework & Quizzes	25%
Final Exam	25%

*Exam #0 is extra credit. See page 3.

Letter Grades: There will be no extra credit and I will not round up grades, but I will drop the lowest written homework score. The table below shows the breakdown for the final letter grades assigned to the overall percentage in the class.

Percentage	*Letter Grade*	*Percentage*	*Letter Grade*
97% - 100%	A+	80% - 81.99%	B−
93% - 96.99%	A	77% - 79.99%	C+
90% - 92.99%	A−	70% - 76.99%	C
87% - 89.99%	B+	60% - 69.99%	D
82% - 86.99%	B	0% - 59.99%	E

Your final grade will be assigned based on the course credit you have earned during the period from the first day of class to the final exam, with weights assigned to grade components as given in the table above. Your opportunity to earn course credit ends with the final exam. You will not receive extra credit assignments before or after the final exam to raise your grade to a more desirable one.

Final percent grades *will not be* rounded up to the next higher integer before they are converted into letter grades. That means that a grade of 89.99% is a B+.

<u>Withdrawal Deadlines</u>: University policy dictates the following withdrawal dates.

- Course Withdrawal Deadline: April 3, 2016
- Complete Withdrawal Deadline: April 29, 2016

<u>Academic Status Report</u>: There are two times during the semester when you will be issued an academic status report from your instructor if your class grade is failing at that time.

- Status Report # 1 is issued on February 16th, 2016.
- Status Report # 2 is issued on March 30th, 2016.

If you receive a bad status report, you must act on it. In particular, if the status report says that you are to meet with your instructor in person, come to office hours within one week of receiving the report. Status reports are not a real-time running tally of your grades in the class and are not updated to reflect grades earned after the report has been issued.

<u>Graphing Calculator</u>: A graphing calculator is required for this course. If you already have a graphing calculator, you may use it. Examples of highly recommended models are the TI-nspire & TI 83/84 or Casio 9850GB Plus. Calculators that do symbolic algebra, such as the Casio FX2, Casio 9970Gs,TI-89, TI-92, or TI- nspire CAS cannot be used in class or during an exam.

<u>Spring 2016 Workshops for Graphing Calculator</u>: Students who attend the workshop and prove attendance by returning their stamped flyer to the instructor will get a small amount of extra credit. The flyer must be returned to the instructor by the third week of class. This Spring 2016 the workshops for Texas Instruments TI 83/84 graphing calculators will be

- Tuesday Jan. 19, 2016   NEEB 105   6:00-8:00 PM
- Wednesday Jan. 20, 2016   LSA 191   6:00-8:00 PM

<u>Textbook</u>: You must read each section of the textbook before it is covered in class.

<u>Attendance</u>: Attendance is expected, and the instructor will regularly record attendance. For classes that meet twice a week, the maximum number of absences is four. For classes that meet three days a week, the maximum number of absences is six. Students who exceed those numbers will receive a grade of EN. Students athletes, students with disabilities, etc. should contact the professor within the first week so that arrangements can be made regarding class absences.

<u>Written Homework</u>: Written homework will be assigned each week via Blackboard, due the following week at the beginning of the class period. Written homework must have your name, be stapled, and any extra pages must have the spiral fringe removed. Assignments submitted without adhering to any of these guidelines will receive a zero score. Absence does not entitle you to an extension without prior instructor approval. When in doubt, you may submit the assignment early either via email (scanned as a PDF) or to the instructor's mailbox in WXLR 216.

Online Homework: You will also have online homework through WeBWorK. To access it, click on your instructors name at `webwork.asu.edu`. If you have not been imported into the WeBWorK roster, it is your responsibility to notify your instructor of that fact. Failure or delay in doing so will not entitle you to time extensions. *Murphys Law of online homework systems* is that something always happens on the evening of the due date. You should start working on homework assignments on the day the material was covered in class, and finish well before the due date. Failing to do this will not entitle you to a time extension in case of a server breakdown, broken computer, or personal emergency.

Quizzes: They may exist. Their existence will be announced in advance both in class and via Blackboard.

Exams: There will be three midterm exams given during the semester. They will be taken in the classroom on the dates indicated on page 1. Exam 0 will test your prerequisite algebra knowledge (MAT 170/171 or equivalent). *Exam 0 is taken in the testing center on Friday, January 15, at the time of your choosing from 9:00AM to 4:00PM.* If you earn a passing grade on Exam 0 (70% or higher), 1% of your grade on this exam will be added to your final grade as extra credit. To prepare for Exam 0, you should review the sample tests posted at `https://math.asu.edu/first-year-math/mat-170-precalculus`

Exam Calculator Policy: It is your responsibility to bring a permitted graphing calculator to the exam. Your teacher will not be able to supply you with a calculator if you do not bring yours. You cannot share a calculator with another student who is also taking the test. Your calculator memory may be viewed during any exam and will be cleared if anything suspicious is written therein. The instructor has the right to regard any suspicious material in your calculator memory as cheating.

Exam Communications Policy: All internet-capable devices must be turned off and be made inaccessible during all exams. Anyone who accesses such a device during an exam for any reason will receive a score of 0 for that exam and possible further disciplinary measures.

Exam Bathroom Breaks Policy: You are not permitted to go to the bathroom during midterm exams or the mastery tests. Please use the restroom before you start your exam. If you go to the bathroom during the exam, that ends your testing period. If you have a medical condition that may require you to go to the bathroom during exams, you must provide documentation to your instructor in advance. On the final exam, you are permitted one bathroom break. A proctor will escort you to the bathroom.

Exam Make-up Policy: Make-up exams are given *at the discretion of the instructor* and only in the case of verified medical or other emergency, which must be documented. **The instructor must be notified before the test is given**. Notify your instructor directly or call the Math Department Office (480-965-3951) and leave a message.

There are no exam retakes or corrections. No lowest exam score will be dropped. You will not receive extra credit assignments to erase the consequences of a bad exam.

Mastery Test: The mastery test assesses basic differentiation skills (including implicit differentiation) and will be administered after covering in class the section of the book on implicit differentiation. No calculators are allowed on the mastery test. A score of at least 85% on one of the two attempts will be considered mastery. Those who pass the exam (with at least 85%) on the first attempt receive a score of 100%. Those who do not receive an 85% on the first attempt will be allowed a second attempt. Your score on the second attempt is capped at 85%. You will receive the better of the two mastery scores as your final mastery exam score.

The mastery test is weighted toward the final grade as 50% of a midterm exam. The first mastery test is taken in the classroom; the second in the testing center WXLR 21.

Math Testing Center: The Mathematics Department Testing Center is in WXLR (formerly PSA) 21 (basement). On the second mastery testing day, the testing center will be open 10:00AM-5:30PM. There will be 5 time slots on mastery testing days:

- 10:15AM - 11:30AM
- 11:30AM - 12:45PM
- 1:00PM - 2:15PM
- 2:15PM - 3:30PM
- 3:30PM - 4:45PM

You will be expected to commit to one of these time slots in advance. Each time slot will only be able to accommodate a limited number of students. Each mastery test attempt will be limited to 50 minutes, to allow for check-in and check-out.

Picture ID Requirement For Testing: For each exam and the mastery test attempts, you have to bring a picture ID (ASU ID preferred). On the exams, show your ID when you turn in your test. If you cannot show picture ID, instructors or proctors may take your picture with your exam. If you do not consent to that, they do not have to accept your exam.

Exam Reviews: You have a textbook with literally hundreds of exercises similar to those covered in lecture and on homework - use it. Math is not a spectator sport, so the more exercises you do, the better you'll internalize the material. Additionally, reviews and old exams are posted on the schools website at `http://math.asu.edu/first-year-math/mat-265-calculus-engineers-i`

Study Tips: While diligent and timely completion of the homework assignments is necessary to master procedural skills, this alone is insufficient to gain conceptual understanding. To master the concepts, you must actually review and study your class notes and the textbook thoroughly with the goal of understanding the connections between the concepts. Actually read the textbook - the authors have put serious effort into providing worked examples and motivation for the material. You must do this continuously throughout the semester. You must have learned the definitions and theorems covered in each class session and started the corresponding homework assignments by the time of the next class session. Because mathematics is cumulative, failure to know the material covered in a previous lecture will result in your inability to follow subsequent lectures, and the difference between where you are in your understanding and where you should be will be compounded with each lecture.

Cramming is a totally ineffective study technique for mathematics and will virtually guarantee failure in the class.

Tutoring: Should you require tutoring, the following options are available.

- The Math Tutoring Center North - WXLR 116. For hours, see
  `math.asu.edu/mathtutors`
- The Math Tutoring Center South - BAC 16. For hours, see
  `math.asu.edu/mathtutors`
- The Mathematics Community Center (MC^2) - WXLR 303. For hours, see
  `math.asu.edu/MC2`
- The Engineering Tutoring Center (free of charge). For hours and locations, see
  `tutoring.engineering.asu.edu`

- Many residence halls and the Memorial Union also offer evening or weekend free tutoring to all ASU students enrolled in math courses as part of the Student Success Centers.
- If you would like to seek private tutoring through the math department, please send an email to: `math@asu.edu`

Come in for help before it is too late, and several days before an exam day to strengthen your preparation. Each student must present their valid ASU Sun Card to be admitted into the Tutoring Centers.

Final Exam Make-up Policy: The final exam schedule listed in the Schedule of Classes will be strictly followed. Except to resolve those situations described below, no changes may be made in this schedule without prior approval of the Dean of the College of Liberal Arts and Sciences. Under this schedule, if a conflict occurs, or a student has more than three exams on one day, the instructors may be consulted about an individual schedule adjustment. If necessary, the matter may be pursed further with the appropriate dean(s). This procedure applies to conflicts among any combination of Downtown Phoenix campus, Tempe campus, Polytechnic campus, West campus, and/or off campus class. Make-up exams will NOT be given for reasons of a non-refundable airline tickets, vacation plans, work schedules, weddings, family reunions, and other such activities. Students should consult the final exam schedule before making end-of-semester travel plans.

Disabilities: If you have a disability that requires special accommodations, it is your responsibility to bring this to your instructors attention during the first week of class. You must also contact the ASU Disability Resource Center https://eoss.asu.edu/drc. All efforts will be made to ensure you have equal opportunity to succeed in the course, but there can be no retroactive accommodation.

Excused Absence Arrangements Athletes with travel schedules should meet with the instructor by the end of the first week of classes to discuss any necessary arrangements that need to be made. Arrangements for any religious observances or ASU sanctioned activity must be arranged with the instructor at least one week prior to the event.

Classroom Etiquette: Classroom disturbances, including but not limited to: arriving late, talking in class, using cellular devices, texting, listening to music, eating and drinking are not tolerated. Each student is expected to show respect for every student registered in the course. Turn off any cellular phones, pagers, laptops, tablets and other electronic devices and put them out of sight prior to entering class. The usage of laptops is prohibited in the classroom. Notes should be taken with pen/pencil on paper. If you wish to use an electronic device for note taking, talk to your instructor.

An instructor may withdraw a student from a course when the student's behavior disrupts the educational process under USI 201-10:

`http://www.asu.edu/aad/manuals/usi/usi201-10.html`

Students are required to adhere to the ABOR Student Code of Conduct:

`http://www.asu.edu/studentaffairs/reslife/outreach/abor_code.htm`

Academic Integrity: Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see http://provost.asu.edu/academicintegrity.

The Grade of XE: A grade of XE is reserved for "failure due to academic dishonesty." The grade goes on the student's transcript and usually remains there permanently. Examples of academic dishonesty are signing an attendance sheet for another student or asking another student to sign an attendance sheet on your behalf, accessing unauthorized help while taking an exam, and attempting to influence a grade for reasons unrelated to academic achievement. Asking for a higher grade than the one you have earned because you need a higher grade to maintain a scholarship, or to satisfy your own or someone elses expectations constitutes academic dishonesty.

Withdrawal: A student may withdraw from a course with a grade of W during the withdrawal period as noted on page 2. The instructor's signature is not required. A complete withdrawal must be done in person and that it involves withdrawing from all ASU classes, not just MAT 265. Students will not be withdrawn if they merely stop coming to class. It is a student's responsibility to verify whether they have in fact withdrawn from a class.

The Grade of Incomplete: A grade of incomplete will be awarded only in the event that a documented emergency or illness prevents the student who is doing acceptable work from completing a small percentage of the course requirements. The incomplete is not a get out of jail free card and cannot be used as an alternative to withdrawal, or as a way to re-take the class for free. The guidelines in the current general ASU catalog regarding a grade of incomplete will be strictly followed.

Instructor-Initiated Drop: At the instructor's discretion, a student who has not attended any class during the first week of classes may be administratively dropped from the course. However, students should be aware that non-attendance will NOT automatically result in their being dropped from the course. Thus, a student should not assume they are no longer registered for a course simply because they did not attend class during the first week. It is the student's responsibility to be aware of their registration status.

Note: This syllabus is tentative and should not be considered definitive. (The most recent revision date is found on on page 1.) The instructor reserves the right to modify it (including the dates of the tests) to meet the needs of the class. It is the student responsibility to attend class regularly and to make note of any change. The Instructor also reserves the right to create class policies in regards to homework due date, late assignments, etc.

Tentative Lecture and Test Schedule

Week Of	Section	Concepts
Jan 11	1.3	Introduction; Limits: Graphical and Numerical, One-Sided **Test 0 Friday 1/15 (Testing Center)**
Jan 18	1.4, 1.5	Limits: Algebraic; Continuity **Holiday Monday Jan 18**
Jan 25	1.6, 2.1	Limits involving Infinity, Asymptotes; Derivatives and Rates of Change
Feb 1	2.2, 2.3	Derivative as a Function; Basic Derivative Formulas Power Rule
Feb 8	2.4, 2.5	Product Rule, Quotient Rule; Chain Rule **Test 1 Friday 2/12 (In Class)**
Feb 15	2.6, 2.7	Implicit Differentiation; Related Rates
Feb 22	2.8, 3.1	Linear Approximation, Differentials; Exponential Functions
Feb 29	3.2, 3.3	Inverse Functions and Logarithms; Derivatives of Exponential and Logarithmic Functions
Mar 7		**Spring Break**
Mar 14	3.5, 3.7	Inverse Trigonometric Functions; Indeterminate Forms and L'Hospital's Rule
Mar 21	4.1, 4.2	Maximum and Minimum Values (Extrema); Mean Value Theorem **Test 2 Friday 3/25 (In Class)**
Mar 28	4.3, 4.4	Derivatives and the Shapes of Graphs; Shapes of Graphs and Curve Sketching; **Mastery Test # 1 Wednesday 3/30 (In Class)**
Apr 4	4.5, 4.7	Optimization; Antiderivatives **Mastery Test # 2 Wednesday 4/6 or Thursday 4/7 (Testing Center)**
Apr 11	5.1, 5.2	Areas and Distances; The Definite Integral
Apr 18	5.3	Evaluating Definite Integrals **Test 3 Friday 4/22 (In Class)**
Apr 25	5.4	The Fundamental Theorem of Calculus; **Final Exam review**
		Final Exam: Thursday, May 5th from 7:10-9:00pm (Room: TBA)