Syllabus for MAT 265: Calculus for Engineers I (2024 Spring - B)

Course Syllabus

Jump to Today 📎 Edit

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MAT 265: Calculus for Engineers I

Course and Faculty Information

Course Description: This is an introductory course on the study of functions, at what rate their values change and how they accumulate. The main areas of focus in the course are limits and continuity, differential calculus of functions of one variable, introduction to integration.

Course Overview: The purpose of the course is to help you gain basic theoretical and a good working understanding of limits and continuity, differential calculus of functions of one variable and integration. You will be introduced to the concept of instantaneous rate of change (derivative) at a point and as a function, differentiation formulas, and will learn and explore some applications of differentiation. The concept of accumulation (definite integral) will be introduced through approximate accumulation (Riemann Sums), as well as the concept of antiderivative (indefinite integral).

Credits: 3

Prerequisites: MAT 170 with C or better OR Mathematics Placement Test with a score of 60% or higher and the Advanced Mathematics Placement test with a score of 38 or higher (or ALEKS score of 67% or higher). Credit is allowed for only MAT 265 or MAT 270

Instructor: David Polletta

Zoom Office: <u>https://asu.zoom.us/j/9805715332</u> ⇒ (https://asu.zoom.us/j/9805715332) Email address: david.polletta@asu.edu

Office Hours: M/W 10:00am - 11:30am (MST) in Zoom Room: https://asu.zoom.us/j/9805715332 (https://asu.zoom.us/j/9805715332)

Supplementary MAT 265 notes and videos: <u>https://www.dropbox.com/sh/la6nx4953ijgh40/AAAxqDRDjuly4YBPArgvhfRoa?dl=0</u> (<u>https://www.dropbox.com/sh/la6nx4953ijgh40/AAAxqDRDjuly4YBPArgvhfRoa?dl=0</u>)

Prerequisite materials: <u>https://www.dropbox.com/sh/o1jaz48qz9e83n5/AACSchC5zAWVehqxYsOxsT1Ba?dl=0</u> (<u>https://www.dropbox.com/sh/o1jaz48qz9e83n5/AACSchC5zAWVehqxYsOxsT1Ba?dl=0</u>)

Textbooks

Essential Calculus Early Transcendentals, 2nd Edition, Stewart, ISBN-13: 978-1-285-10071-5

The e-book for this course is made available at a discounted price significantly cheaper than if purchased directly from the publisher. If you wish to take advantage of this discounted group price, no additional action is needed. Following the drop/add period, a charge of \$25.00, plus tax, will post to your student account under the header "Bkstr Publisher Negotiated Rate" and your access will continue uninterrupted. <u>To access the e-book</u>, click on the BryteWave Link <u>on the tab to the left in the main menu in canvas</u>. Note that books will be available approximately 5-days prior to the start of class.

If you'd rather purchase the material from an alternate source, you may choose to opt out of the program by using this link: <u>https://includedcp.follett.com/1230</u>

(https://urldefense.com/v3/_https:/includedcp.follett.com/1230_;!!IKRxdwAv5BmarQ!YyN8qMgSQbt9ADsbyEtUFofcdGEc6pbcxRenGnUPFssjWVEMq2GDq3BIHw dAGvi07lxy5E0M-2mOCU\$). Be aware that if you do opt-out, your access to the e-book will be discontinued. Enter your ASU e-mail address AS IT APPEARS IN THE ASU DIRECTORY (http://asu.edu/directory_(http://asu.edu/directory)_), then follow the instructions provided.

If you need assistance accessing the book or the opt-out portal, please email asuinclusiveaccess@gmail.com (mailto:asuinclusiveaccess@gmail.com)

You are not allowed a calculator that can perform symbolic manipulations and calculations.

Online homework

Online Homework will be submitted online via the internet using the online homework system, WeBWorK.

Google Chrome is the recommended browser.

The homework is online in WeBWorK: <u>http://webwork.asu.edu (http://webwork.asu.edu)</u> All sections are now open. Be aware of all due dates. No extensions will be given.

Course Topics, Schedule, & Grading

MAT 265 Course Format and Homework Statement

Students are responsible for watching the video presentation(s) in the modules.

Online homework and all exams will be submitted online via the internet using the online homework system, WeBWorK.

Below is a table of all due dates and times. Exact due dates for each assignment will be in WeBWorK. NOTE: All times are listed in Mountain Standard (Arizona) Time (MST).

Testing

• It is each student's responsibility to ensure a strong and reliable wi-fi or ethernet connection during exams, and a dependable power supply, and that in the event of a power or wi-fi outage, there will be no second chances at the exam.

Here is the link to a video on "How to Take a Test in WeBWorK". Click (<u>https://mathcast.la.asu.edu/engage/theodul/ui/core.html?id=1f752f0a-ded9-47ba-b0df-</u> 22ab4c631f8b) here (<u>https://mathcast.la.asu.edu/engage/theodul/ui/core.html?id=1b040a6a-7045-43af-8138-d99152421045</u>)

Google chrome is the required browser.

Be aware of all due dates. No extensions will be given.

There are 5 exams, all of which will require proctoring. Each exam is in WeBWorK.

There are exams reviews located on the MAT 265 website: math.asu.edu/mat265 (http://math.asu.edu/mat265).

Your Mastery Exam, Midterm Exams and Final Exam will be proctored by Honorlock. They will provide the password for your exams.

Mastery Exam: The Mastery Exam shows proficiency in computing derivatives.

All exams will be available from 12:00AM MST to 11:59PM MST on the day of the test. You can access the test any time during this 24-hour period, however, once you open the test, you will have 2 hours to complete it (provided you access the test before 09:59PM MST)

IMPORTANT:

1. To avoid accidentally clicking on the test and starting the timer, the test is password protected. Honorlock fills in the password.

2. Each problem in the exam contains a Preview Problem button. It is recommended you click on Preview Problem after you enter each answer so that it will be recorded in the log files (in case the internet goes down or there are other technical issues).

3. The Grade Test button is located at the end of the test. After clicking on Grade Test for your first attempt, you will be able to see which questions are incorrect. WRITE DOWN WHICH QUESTIONS ARE INCORRECT BEFORE YOU START WORKING ON FIXING THEM. From this point on do not click Preview or Enter. Just finish answering the test and click Grade Test.

4. You should not log out or click on the Back button while taking the test.

5. While taking the test, do not leave the test website and open WeBWorK in another tab. If you do have webwork open in another window, you will be logged out from the test and all the answers you entered will disappear.

IMPORTANT:

Again, students should not log out or click on the Back button while taking the exam. For all exams, students should not open WeBWorK in another, tab, window or device while taking the exam. Students who fail to follow these instructions, will receive a score of zero in the test.

For the Mastery, Midterm and Final Exams: You are not allowed to access your notes during any of the exams.

- For the Mastery Exam, you may use scratch paper and pencil/pen only.
- For the Midterm and Final Exams, you may use scratch paper, calculator and pencil/pen only.

Honorlock for the Proctored Exams:

Students will take proctored exams through Honorlock, which is accessed through the Honorock tab found on the left in Canvas. We require students in all online courses to position their camera so that their face and hands are in view of the camera at all times to make sure they do not use secondary devices.

3/1/24, 10:59 AM

Syllabus for MAT 265: Calculus for Engineers I (2024 Spring - B)

Watch the video: https://youtu.be/QlvhmGSYHEU;!!!KRxdwAv5BmarQ!!MtBYn3-RUF4Fu8Ly0KRAbSgd6gyDyyO8FO6UGXRs-MWRJttFQdvcedmKOCF4no\$) (https://urldefense.com/v3/_https://honorlock.kb.help/-students-startingexam/how-to-use-honorlock-student/__;!!KRxdwAv5BmarQ!!SL1Zh4lv25hJDol5Tl6pEs7fRM9UifHoCSwf5c4CU4OlluDocB0Uauqiqv5WPs\$)

It is a video which shows how to use Honorlock and the most important criteria to add google chrome extension.

You must verify that you have access to a computer system that meets the requirement for Honorlock, as Honorlock requires Google Chrome and the Honorlock Chrome Extension. **GOOD INTERNET CONNECTION, WEBCAM AND MICROPHONE ARE REQUIRED TO TAKE THE EXAM.**

To get started, you will need Google Chrome and download the <u>Honorlock Chrome Extension</u> (<u>https://static.honorlock.com/install/extension</u>).

Students must have ASU photo ID to verify identity at exam. If the proctor cannot verify your identity then you will not be permitted to take the exam. No exceptions.

For each exam you are allowed:

Calculator from the approved list on the syllabus.

Graphing Calculator: 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.

Scratch paper for calculations.

There will be NO browsing the web.

Maximum time allowed is 2 hours

No notes or make-ups are permitted

This course uses online proctoring that requires a laptop or desktop. Tablets, Hybrid Devices, and Mobile Devices are not supported.

You can find the detailed requirements at: https://honorlock.com/students/ E-(https://honorlock.com/students/)

Please be sure to check the requirements.

Recording yourself taking the test, using your cell phone during the test is strictly prohibited. Anyone using a camera device for any reason during an online exam will receive a score of 0 for that exam, and possible further disciplinary measures

Any (parts of) exams, assignments, reports, or solutions to these, from current or previous semesters, posted to any website not affiliated with ASU will result in academic integrity disciplinary actions against the students posting them and the students using them.

Final Exam

Your final exam will be proctored by Honorlock. They will provide the password for your exam.

Final Exam Make Up Policies: The <u>final exam schedule</u> will be strictly followed. Except to resolve qualifying situations as described below, no changes may be made to this schedule without prior approval of the Dean of the college in which the course is offered. Specifically, make-up exams will NOT be granted by instructors for reasons of 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.

The course instructor may grant a make-up final exam in the following qualifying situations:

- A student has more than three exams on one day, or there is a time conflict between the course final and another final exam. This rule applies to conflicts
 among any combination of Downtown Phoenix campus, Tempe campus, Polytechnic campus, West campus, and/or off campus classes.
- A documented accident or medical emergency.
- Situations covered by ACD304-02 or ACD304-04.

Exam Wrappers - !Extra Credit Opportunity!

An important step in our learning process is reflecting on what we have learned and how we prepared for an exam. There are optional assignment "surveys" called an Exam Wrappers included in our course. An Exam Wrapper is a carefully constructed item that can help a student understand their strengths and weaknesses and gives the teacher valuable insight about how students are engaging with course.

There are four Exam Wrappers, one for Exam 1, for Exam 2, for Exam 3, and the Final Exam, and EACH completion of an Exam Wrapper will result in 0.25% extra credit. If you complete all four exam wrappers, you will receive a 1% extra credit boost on your final grade.

Each Exam Wrapper should be completed within 24 hours after completing the corresponding exam. Each exam wrapper should take you approximately 10-15 minutes to complete.

Inscribe - Class Discussion

3/1/24, 10:59 AM

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We will be using Inscribe for class discussion. The system is highly catered to getting you help fast and efficiently from classmates, the TA, and myself. Rather than emailing questions to the teaching staff, I encourage you to post your questions on Inscribe. Content related questions and comments only are to be posted.

Course Access

Your ASU courses can be accessed by both my.asu.edu (http://my.asu.edu) and asu.instructure.com; bookmark both in the event that one site is down.

Computer Requirements

This is a fully online course; therefore, it requires a computer with internet access and the following technologies:

- Web browsers (<u>Chrome</u> ⇒ (<u>https://www.google.com/chrome</u>))
- Adobe Acrobat Reader ⇒ (http://get.adobe.com/reader/) (free)
- Webcam, microphone and speaker
- Microsoft Office (Microsoft 365 is free (https://myapps.asu.edu/app/microsoft-office-2016-home-usage) for all currently-enrolled ASU students)
- Reliable broadband internet connection (DSL or cable) to stream videos.

Note: A smartphone, iPad, Chromebook, etc. will not be sufficient for completing your work in ASU Online courses. While you will be able to access course content with mobile devices, you must use a computer for all assignments, quizzes, and virtual labs.

Student Success

To be successful:

- · check the course daily
- read announcements
- read and respond to course email messages as needed
- complete assignments by the due dates specified
- · communicate regularly with your instructor and peers
- create a study and/or assignment schedule to stay on track
- · access ASU Online Student Resources (http://goto.asuonline.asu.edu/success/online-resources.html)

Submitting Assignments

All assignments, unless otherwise announced, MUST be submitted to the designated area of Canvas. Do not submit an assignment via email.

Assignment due dates follow Arizona Standard time. Click the following link to access the <u>Time Converter</u> \Rightarrow (http://www.thetimezoneconverter.com/) to ensure you account for the difference in Time Zones. Note: Arizona does not observe daylight savings time.

Grading Procedure

Grades reflect your performance on assignments and adherence to deadlines. Grades on assignments will be available within 72 hours of the due date in the Gradebook.

Late or Missed Assignments

Notify the instructor **BEFORE** an assignment is due if an urgent situation arises and you are unable to submit the assignment on time.

Follow the appropriate University policies to request an <u>accommodation for religious practices (http://www.asu.edu/aad/manuals/acd/acd304-04.html)</u> or to accommodate a missed assignment <u>due to University-sanctioned activities (http://www.asu.edu/aad/manuals/acd/acd304-02.html)</u>.

Communicating With the Instructor

Inscribe Community and Canvas Discussions

For course-related questions, we will use the Canvas Discussion Board and Inscribe. Prior to posting a question or comment, check the syllabus, announcements, and existing posts to ensure it's not redundant. You are encouraged to respond to the questions of your classmates.

Email questions of a personal nature to your instructor. You can expect a response within 72 hours.

Chat

The Chat tool in Canvas allows students and teachers to interact in real time. Use Chat only for informal course-related conversations unless your instructor informs you otherwise. Chat is not ideal for questions about assignments; instructors are not required to monitor it and conversations may be buried or lost.

Email

ASU email is an official means of communication (http://www.asu.edu/aad/manuals/ssm/ssm107-03.html) among students, faculty, and staff. Students are expected to read and act upon email in a timely fashion. Students bear the responsibility of missed messages and should check their ASU-assigned email regularly.

All instructor correspondence will be sent to your ASU email account.

ASU Online Course Policies

View the ASU Online Course Policies (https://asuonline-dev.asu.edu/qm-template/CanvasQM/qm-policies.html)

Any (parts of) exams, assignments, reports, or solutions to these, from current or previous semesters, posted to any website not affiliated with ASU will result in academic integrity disciplinary actions against the students posting them and the students using them.

Accessibility Statements

View the <u>ASU Online Student Accessibility (https://asuonline-dev.asu.edu/qm-template/CanvasQM/qm-accessibility.html)</u> page to review accessibility statements for common tools and resources used in ASU Online courses.

If any other tools are used in this course, links to the accessibility statements will be listed below this sentence.

Syllabus Disclaimer

The syllabus is a statement of intent and serves as an implicit agreement between the instructor and the student. Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. Remember to check your ASU email and the course site often.

Course Schedule and Assignments

Course Schedule and Assignments

Tentative Lecture and Test Schedule

Module	Book Section	Concepts/Comments
Module 0 and Module 1	Intro to WW, 1.3, 1.4	Introduction, Functions (Review; Not for credit); Limits: Numerically, One-Sided, Algebraically
Module 1	1.5, 1.6	Continuity; Limits involving Infinity, Asymptotes
Module 2	2.1, 2.2	Derivatives and Rates of Change; Derivative as a Function
Module2	2.3, 2.4	Basic Derivative Formulas; Product Rule, Quotient Rule
Module 3	2.5, 2.6	Test 1 - 03/26 Chain Rule; Implicit Differentiation;
Module 3	2.7, 2.8	Related Rates ; Linear Approximation, Differentials;
Module 4	3.1, 3.2	Exponential Functions; Inverse Functions and Logarithms
Module 4	3.3, 3.5	Derivatives of Exponential and Logarithmic Functions, Inverse Trigonometric Functions
Module 5	3.7, 4.1	Indeterminate Forms and L'Hôpital's Rule; Test 2 - 04/13 Maximum and Minimum Values (Extrema);
Module 5	4.2, 4.3	Mean Value Theorem; Derivatives and the Shapes of Graphs ;

Module 6	4.4	Mastery Exam - 04/20 Curve Sketching
Module 6	4.5, 4.7	Optimization Problems; Antiderivatives
Module 6	5.1	Areas and Distances
Module 7	5.2	The Definite Integral
Module 7	5.3, 5.4	Test 3 - 04/23 Riemann Sums; Evaluating Definite Integrals, The Fundamental Theorem of Calculus; Final exam review
Module 7		Final Exam - 04/26

Testing Schedule			
Exam	Covering through	Date	Location
1	1.3-1.6, 2.1-2.3	03/26	Webwork
2	2.4-2.8, 3.1-3.3, 3.5, 3.7	04/13	Webwork
3	4.1-4.5, 4.7, 5.1, 5.2	04/23	Webwork
М	Mastery Exam	04/20	Webwork

Grade Allocations		Min. % for Grades	
Exams*			
Exam 1 (7%)			
Exam 2 (7%)	40%	A	90%
Exam 3 (7%)			
Mastery Exam (19%)			
Homework	20%	В	80%
Final Exam 04/26	40%	С	70%
Total	100%	D	60%
* No exam will be dropped		E	< 60%

Course Summary:

Date	Details	Due
Tue Mar 19, 2024	Section 1.3 (https://canvas.asu.edu/courses/183373/assignments/5021099)	due by 11:59pm
	Section 1.4 (https://canvas.asu.edu/courses/183373/assignments/5021100)	due by 11:59pm
	Section 1.5 (https://canvas.asu.edu/courses/183373/assignments/5021101)	due by 11:59pm

Date	Details	Due
	Section 1.6 (https://canvas.asu.edu/courses/183373/assignments/5021102)	due by 11:59pm
	Section 2.1 (https://canvas.asu.edu/courses/183373/assignments/5021103)	due by 11:59pm
Mon Mar 25, 2024	Section 2.2 (https://canvas.asu.edu/courses/183373/assignments/5021104)	due by 11:59pm
WOIT Wal 23, 2024	Section 2.3 (https://canvas.asu.edu/courses/183373/assignments/5021105)	due by 11:59pm
	Section 2.4 (https://canvas.asu.edu/courses/183373/assignments/5021106)	due by 11:59pm
Tue Mar 26, 2024	Exam 1 (https://canvas.asu.edu/courses/183373/assignments/5021094)	due by 11:59pm
	Section 2.5 (https://canvas.asu.edu/courses/183373/assignments/5021107)	due by 11:59pm
Mon Apr 1, 2024	Section 2.6 (https://canvas.asu.edu/courses/183373/assignments/5021108)	due by 11:59pm
	Section 2.7 (https://canvas.asu.edu/courses/183373/assignments/5021109)	due by 11:59pm
	Section 2.8 (https://canvas.asu.edu/courses/183373/assignments/5021110)	due by 11:59pm
	Section 3.1 (https://canvas.asu.edu/courses/183373/assignments/5021111)	due by 11:59pm
	Section 3.2 (https://canvas.asu.edu/courses/183373/assignments/5021112)	due by 11:59pm
Sun Apr 7, 2024	Section 3.3 (https://canvas.asu.edu/courses/183373/assignments/5021113)	due by 11:59pm
	Section 3.5 (https://canvas.asu.edu/courses/183373/assignments/5021114)	due by 11:59pm
	Section 3.7 (https://canvas.asu.edu/courses/183373/assignments/5021115)	due by 11:59pm
	Section 4.1 (https://canvas.asu.edu/courses/183373/assignments/5021116)	due by 11:59pm
Fri Apr 12, 2024	Section 4.2 (https://canvas.asu.edu/courses/183373/assignments/5021117)	due by 11:59pm
	Section 4.3 (https://canvas.asu.edu/courses/183373/assignments/5021118)	due by 11:59pm
Sat Apr 13, 2024	Exam 2 (https://canvas.asu.edu/courses/183373/assignments/5021095)	due by 11:59pm
Fri Apr 19, 2024	Section 4.4 (https://canvas.asu.edu/courses/183373/assignments/5021119)	due by 11:59pm
	Section 4.5 (https://canvas.asu.edu/courses/183373/assignments/5021120)	due by 11:59pm

Date	Details	Due
	Section 4.7 (https://canvas.asu.edu/courses/183373/assignments/5021121)	due by 11:59pm
Sat Apr 20, 2024	Mastery Exam (https://canvas.asu.edu/courses/183373/assignments/5021098)	due by 11:59pm
Mar Arr 22, 2024	Section 5.1 (https://canvas.asu.edu/courses/183373/assignments/5021122)	due by 11:59pm
MON API 22, 2024	Section 5.2 (https://canvas.asu.edu/courses/183373/assignments/5021123)	due by 11:59pm
Tue Apr 23, 2024	Exam 3 (<u>https://canvas.asu.edu/courses/183373/assignments/5021096</u>)	due by 11:59pm
TI A 05 0004	Section 5.3 (https://canvas.asu.edu/courses/183373/assignments/5021124)	due by 11:59pm
I nu Apr 25, 2024	Section 5.4 (https://canvas.asu.edu/courses/183373/assignments/5021125)	due by 11:59pm
Fri Apr 26, 2024	Final Exam (https://canvas.asu.edu/courses/183373/assignments/5021097)	due by 11:59pm
	<u>Similar Exam Wrapper (after exam)</u> (<u>https://canvas.asu.edu/courses/183373/assignments/5021089</u>)	
	Module 0: Academic Integrity Agreement (https://canvas.asu.edu/courses/183373/assignments/5021090)	