OneClass

Booster Classes

Introduction to Calculus - MATH2202
3 Credits
Syllabus and Schedule, Spring 2021 (Updated January 8, 2021)

Course Description:
This introductory course is designed for students entering the fields of science, technology, and engineering. Topics include algebra review, functions, mathematical modeling, limits and continuity, differentiation, the chain rule, and application of the derivative for: maximum and minimum in profit inventory costs and production, elasticity for demand, the antiderivative and integration.

Course Instructor: Tudor Cristea-Platon, PhD.

Prerequisites: Pre-calculus equivalent

Course Materials: This is an online course. All course materials such as video lectures, interactive texts, practice quizzes and exams are found on the Introduction to Calculus course website on oneclass.com.

Format of the Course:

- Students will need to watch short lecture videos for each skill which are paramount to succeeding in the course. Students will also have access to theories that reinforce and supplement the lecture videos, as well as exercises to test and cement their understanding of the concepts and serve to demonstrate their mastery of each skill.
- This course is delivered asynchronously - ie, students will be able to watch the videos at their own pace and convenience. Course progress is tracked through completion of skills - videos, theories, and the practice exercises.
- To successfully earn the credits, students must pass the midterm and final exams.

Course Grade:
There will be two exams - a mid term halfway through the course, and a final exam at the end of the course. The final exam is cumulative.
Mid-term exam counts for 40% of the overall course grade.
Final exam covers the entire course and counts for 60% of the overall course grade.

To pass this course and earn credits, students will need a 73% or C average as per the grade system at Becker College.

Course Policies:

1. Course Completion - To successfully complete the course, a student must complete all exams. All exams must be completed by their due dates for the student's specific cohort, as indicated. Failure to complete an assessment by the indicated due date will result in a grade of 0 for that assessment.
2. Students are expected to comply with the Academic integrity policy at Becker College
3. Transfer Credit – Credits earned in this course appear on an official Becker College transcript, and the course credits are likely to be eligible for transfer to other colleges and universities. Students are encouraged to contact potential colleges and universities in advance to ensure their credits would be accepted.

Important Dates:

	January Cohort	**February Cohort**	**March Cohort**	**April Cohort**	**May Cohort**
Cohort Start and End Dates	Jan 18, 2021 - Apr 9, 2021	Feb 15, 2021 - May 7, 2021	Mar 15, 2021 - Jun 4, 2021	Apr 12, 2021 - Jul 2, 2021	May 10, 2021 - Jul 30, 2021
Last Date to Register	Jan 31, 2021	Feb 28, 2021	Mar 28, 2021	April 25, 2021	May 23, 2021
Last Date to complete Mid-term Exam	March 1, 2021	March 29, 2021	April 26, 2021	May 24, 2021	June 21, 2021
Last Date to complete Final Exam	April 9, 2021	May 7, 2021	June 4, 2021	July 2, 2021	July 30, 2021

Accommodation Request:

If you have a request for reasonable disability accommodations, contact Dr. Richard DeCapua, richard@oneclass.com. Please include specifics regarding the accommodation you are seeking. Additionally, if you have an Accommodations Letter from a school you are currently attending, you may send that as well. We are committed to ensuring that learners with accessibility needs have equal opportunity to succeed in our courses.

Recommended schedule

Week	Chapter	Skills
1	Functions	Represent functions
		Classify functions
		Solve function word problems
		Sketch functions part 1
		Sketch functions part 2
2	Functions	Transform functions
		Combine functions
		Evaluate trigonometric functions
		Evaluate exponential functions
		Evaluate logarithmic functions
3	Limits and Continuity	Solve for limits
		Sketch continuous and differentiable functions
4	Limits and Continuity	Determine continuity of functions
		Determine differentiability of functions
		Apply the Intermediate Value Theorem
5	Midterm 1	Reading days/revision
		Midterm 1: covers chapters 1-2
6	Derivatives	Find tangent line equations
		Apply differentiation rules part 1
		Apply differentiation rules part 2
7	Derivatives	Find the derivative of the function
		Interpret the meaning of the derivative
		Last day to take midterm 1
8	Derivatives	Calculate the average rate of change and instantaneous rate of change
		Use implicit differentiation
		Use logarithmic differentiation
		Find the derivatives of inverse trigonometric functions
		Solve exponential growth and decay problems
		Solve related rates
9	Application of Derivatives	Find minimum and maximum values of a function

		Apply Rolle's Theorem
		Apply the Mean Value Theorem
		Graph using first and second derivatives
		Solve optimization problems
		Reading days/revision
10	Final Exam	**Final Exam: covers chapters 1-4**
11	Buffer	
12	Buffer	**Last date to complete final exam**

Optional supplementary resources

- Calculus: Single Variable Calculus Early Transcendentals; Stewart, 8th edition (2015)