暨南大學 JINAN UNIVERSITY

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JINAN UNIVERSITY
Calculus I

Lecturer: Sonja Sandberg
Time: Monday through Friday (July 2, 2018 - August 3, 2018)
Office hours: 2 hours (according to the teaching schedule)
Contact hours: 60 (50 minutes each)
Credits: 4
Location: School of Tourism
Office: School of Tourism 210
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Content
This course is the first part of a traditional two semester long sequence with a focus on differentiation. It will cover single variable differential calculus and its applications.

Required Textbook
"Calculus: Early Transcendentals", 10th edition by Anton, Bivens and David.
Coverage: Chapters 1-5, Select Sections

Course Description

Chapter	Sections	Topic
Chapter 1	1.1-1.6	Limits and Continuity
Chapter 2	2.1-2.6	The Derivative
Chapter 3	3.1-3.6	Topics in Differentiation
Chapter 4	4.1-4.8	The Derivative in Graphing and Applications
Chapter 5	5.1-5.6	Integration

Course Hours

The course has 25 sessions in total. Each class session is 120 minutes in length. The course meets from Monday to Friday.

Prerequisites:

Students are assumed to have taken and passed a pre-calculus course. In particular, students should be proficient in high school algebra and geometry, as well as trigonometry. Moreover, they should have studied exponential and logarithmic functions.

Calculators: No calculators may be used on tests. Cell phones must be turned off and put away during tests.

Assignments and Graded Work:

Homework: There will be regular homework assignments. Students are encouraged to work together on the homework problems, but the homework will not be graded. However it is very important to do all the homework

Attendance and in-class work: Students are expected to be in class every day for the full class period. Material will be covered very quickly; it will be difficult to catch up, should one fall behind. We will spend some time in class working on problems in groups. Some of this work may be presented or turned in.

Exams: There will be four exams and a comprehensive final exam.

Grading Policy

Homework, Attendance and In-class work	15%
Midterm exams	60% (15% each)
Final Exam	25%
Total	100%

Make-Ups:

There will be no make-ups, however the lowest test score will be replaced by the final exam score.

Grading Scale

The instructor will use the grading system as applied by JNU:

Definition	Letter Grade	Score
Excellent	A	90-100
Good	B	80-89
Satisfactory	C	70-79

Poor	D	60-69
Failed	E	Below 60

Approximate Day-to-Day Schedule: This syllabus is subject to change

	Topics	**Textbook Sections**
Week 1		
	Limits (Intuitive)	section 1.1
	Computing Limits	section 1.2
	More Limits	section 1.3
	Continuity	section 1.5
	Trig, Exponential and Inverse Continuity	section 1.6
	Tangent Lines, Rates of Change	section 2.1
	Derivative Function	section 2.2
	Differentiation Techniques	section 2.3
		Exam 1
Week 2		
	Product and Quotient Rules	section 2.4
	Trig Function Derivatives	section 2.5
	Chain Rule	section 2.6
	Implicit Differentiation	section 3.1
	Log Function Derivatives	section 3.2
	Exponential and Inverse Trig Derivatives	section 3.3
	Related Rates	section 3.4
	Local Linear Approximation	section 3.5
		Exam 2
Week 3		
	L'Hopital's Rule, Indeterminate Forms	section 3 6
	Increasing and Decreasing Functions	section 4.1
	Relative Extrema, Graphing Polynomials	section 4.2
	Rational Functions, Cusps, Tangents	section 4.3
	Absolute Max/Min Problems	section 4.4
	Applied Max/Min Problems	section 4.5
	Rectilinear Motion	section 4.6
	Newton's Method	section 4.7
		Exam 3
Week 4		
	Rolle's Theorem, Mean-Value Theorem	section 4.8
	Area Problem	section 5.1
	Indefinite Integral	section 5.2
	Integration by Substitution	section 5.3

Area as Limit, Sigma Notation	section 5.4
Definite Integral	section 5.5
Fundamental Theorem of calculus	section 5.6
	Exam 4

Week 5

Rectilinear Motion	section 5.7
Average Value of a Function	section 5.8
Definite Integrals and Substitution	section 5.9
Functions Defined by Integrals	section 5.10
Review	
	Final Exam

Academic Honesty

Jinan University defines academic misconduct as any act by a student that misrepresents the students' own academic work or that compromises the academic work of another scholastic misconduct includes (but is not limited to) cheating on assignments or examinations; plagiarizing, i.e. misrepresenting as one´s own work any work done by another; submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of the instructors concerned; sabotaging another´s work within these general definitions, however, Instructors determine what constitutes academic misconduct in the courses they teach. Students found guilty of academic misconduct in any portion of the academic work face penalties ranging from lowering of their course grade to awarding a grade of E for the entire course.