



**Mathematics Department**  
**Math1411-Calculus I**

**Course Outline**

**First Semester 2018/2019**

**Text Book: Thomas' Calculus 12<sup>th</sup> edition**, by Weir, Hass and Giordano.

This is the first course of the Calculus series, the course will be taught in the *Lecture- discussion* form, in which the material will be presented in the lecture classes, solving homework problems will be done in the discussion classes.

Attending classes and solving (at least trying to) the homework problems is essential for understanding the material.

In this course we will cover more or less 8 chapters (1-8) and appendix A7 of the text book, for details see the assigned problems attached, we have prepared a review material for chapters 1 to 5, you can find it on ritaj.

We have selected some problems from each section in the book; each student should try to do **AT LEAST** these problems before attending the discussion class. Students are expected to have a quiz in any discussion class. Solving other problems from our text book (or any other calculus book) will improve your understanding of the material.

**Grading policy for this course is as follows:**

Two hour exams **55%** (35% for the best mark and 20 % for the other)

Homework & Quizzes **5%**

Final Exam **40%**

**Remarks:**

- 1) **Attendance:** Regular attendance and participation is extremely important in this class. You will get the most benefit from the lectures and homework discussions. If you are absent from class, it is your responsibility to find out what material was covered. **If you miss 6 classes in total you will get a failing grade.**
- 2) **Internet:** Check your **personal Ritaj account** especially before the test or the homework deadline.
- 3) **Makeup Exams:** **No makeup exams will be given.** If you decide not to take a test, you should provide a written and documented excuse and then the university formula will be used to compute your grade in the test that you missed

**Teaching Assistants:** For any extra help, you can visit the teaching assistants daily in room SCI309.

## Topics Outline:

Chapter	Title	Sections
Appendix 7	Complex Numbers	A7
Ch.1-5	Review of functions, limits, continuity, differentiation, and integration.	
Ch.6	Applications of definite integrals	1,2,3,4
Ch.7	Transcendental functions	1-8
Ch.8	Techniques of integration	1,2,3,4,7

## Homework Problems

A7	2, 5, 6, 8, 15, 17, 18, 20, 21, 24
	<b>Chapter 6-Applications of integrals</b>
6.1	2,5,6,10,18,22,25,27,28,32,36,40,44,46,49,51
6.2	2,4,9,12,14,17,24,28,29,32,34,38,39
6.3	5,7,10,19,22
6.4	14,15,18,20,22,24
	<b>Chapter 7-Integrals and Transcendental Functions</b>
7.1	2,9,12,16,21,32,33,42,44
7.2	2,4,10,14,16,22,24,31,34,44,54,64,66,70,71
7.3	4,14,21,23,26,38,41,48,50,52,65,73,82,91,92,98,106,108,118
7.4	25,26,30,31,36
7.5	10,16,21,27,30,34,38,41,46,52,56,60,62,66,68,72
7.6	2(c),5(a),6(b),12,16,18,22,26,34,35,40,46,50,59,64,70,74,79,86,90
7.7	2,6,10,15,20,22,46,52,54,57,60
	<b>Chapter 8-Techniques of Integration</b>
8.1	6,11,16,22,25,30,33,36,39,46,50,58
8.2	5,11,18,20,22,28,36,38,42,47,51,64,67,69
8.3	10,14,18,24,26,29,33,38,45,46,54
8.4	12,14,18,20,23,29,30,37,42,47,49,54
8.7	1,4,7,13,20,25,32,35,40,47,50,56,62,65