MAS 101 **First-Day Handout for Calculus I** **Spring 2010**

Overview In the view that the first semester of calculus deals with differentiation and integration of functions of a single variable, it might be an extension of mathematics taught in high school but the treatment will be more precise and new subjects will be introduced. Using mathematically precise definitions of limits, derivatives, and definite integrals, we will be able to provide proofs for important results such as Mean Value Theorem and Fundamental Theorem of Calculus, which was impossible in high school. The list of new materials we will learn in this semester includes inverse trigonometric functions, hyperbolic functions and their inverses, integral technique using these functions, improper integrals, convergence of infinite series, power series, and Taylor's series.

Sec	Time & Place	Instructor
A	MWF 9-10, E11-304	Professor Ko, Ki Hyoung (khko@kaist.ac.kr, Ext 2719, E6-4408)
B	TTh 9-10:30, E11-410	Professor Kwak, Do Young (kdy@kaist.ac.kr, Ext 2720, E6-2405)
C	MWF 9-10, E11-410	Professor Kim, Jin Hong (jinkim@kaist.ac.kr, Ext 2730, E6-4405)
D	MWF 9-10, E11-412	Professor Jing, Qin (qjing@kaist.ac.kr, Ext 2791, E6-4409)
E	TTh 9-10:30, E11-412	Professor Jing, Qin (qjing@kaist.ac.kr, Ext 2791, E6-4409)
F	TTh 9-10:30, E11-304	Professor Oum, Sang-il (sangil@kaist.edu, Ext 2728, E6-3403)
G	TTh 9-10:30, N4-Hall	Professor Suh, Dong Youp (dysuh@math.kaist.ac.kr, Ext 2718, E6-3402)
H	MWF 9-10, E11-309	Professor Park, Heesook (hseapark@kaist.ac.kr, Ext 2747, E6-4401)
I	TTh 9-10:30, E11-309	Staff

Coordinator Professor Ko, Ki Hyoung (khko@kaist.ac.kr, Ext 2719, E6-4408)

Assistants Head TA: TBA
Maple TA: TBA

Textbook *University Calculus: Elements with Early Transcendentals-1st ed.*, by J. Hass, M.D. Weir, and G.B. Thomas, Jr, Pearson Addison Wesley, 2009

Web Sites Course Homepage: TBA

Maple Practice Homepage: http://maplesoft.kaist.ac.kr
Textbook Companion Page: http://wps.aw.com/aw_thomas_calculus_11

Weekly Schedule We will cover Chapters 1-7 and introduce some extra material on the last two weeks.

Week	Sections	Week	Sections
02/02 - 02/06	(1.1-4), 1.5	03/30 - 04/03	(5.5), 5.6, 5.7, (6.1), 6.2
02/09 - 02/13	1.6-8, (2.1-8)	04/06 - 04/10	6.3-4, (6.5), 6.6
02/16 - 02/20	2.9, (2.10), 2.11, (2.12)	04/13 - 04/17	7.1-4
02/23 - 02/27	2.13, (3.1), 3.2, (3.3-4), 3.5	04/20 - 04/24	7.5-7
03/02 - 03/06	(3.6), 3.7-9	04/27 - 05/01	7.8-10
03/09 - 03/13	(4.1-4), 4.5, (4.6-7)	05/04 - 05/08	Vectors and operations, Linear geometry
03/16 - 03/20	(5.1), 5.2-4, Review	05/11 - 05/15	Alternative coordinate systems, Review
03/23 - 03/27	Midterm exam period	05/18 - 05/22	Final exam period

Sections in parentheses are for brief review only and they carry less weight in exams or quizzes.

Exam There are a midterm and the final. The detail about the exams will be announced at the course web site.

Homework Exercise problems selected as homework will be posted at the course web site together with their solutions. You do not have to hand in your homework and instead you practice with them to prepare for quizzes and exams.

Recitation and Quiz There will be a one-hour recitation class on each week except the first week. Each recitation class is run by a TA and accommodates about 30 persons. No assignment for recitation classes was made in advance and therefore you can freely choose your recitation class on a first-come-first-serve basis. Schedules for all recitation classes will be posted at the course web site. Quizzes will be given in recitation classes to check whether you are doing homework.

Maple Practice In this computer age it is important to learn at least one CAS (computer algebra system) in a calculus course. MAPLE is one of popular CAS's and you will learn and practice how to use it via our maple web site. There is no homework to hand in and instead midterm and final exam will contain problems to test your knowledge on MAPLE. Sample problems to prepare exams will be available at the maple web site.

Course Grade Course Grade Your course grade will be given by considering your score in the total 500 points that consist of Midterm 200 points, Final 200 points, Quizzes 100. There will be neither makeup exams nor makeup quizzes. If you have to miss midterm exam due to imperative reason, it can be substituted by final exam. If you have to miss final exam, you should apply for an incomplete grade. Two worst quiz scores will be dropped. Course grades are in principle determined by an absolute scale. In each class, a TA will check your attendance. If you miss more than three classes without permission during the semester, your course grade will be lowered by one step. Being late for class twice is equivalent to one absence. Concerning grades for repeaters, please refer to the university regulation.