

Overview. Calculus in KAIST is divided into three semesters. In MAS100 College Calculus, differentiation of functions of a single variable is covered (Chap. 1-6, and Chap. 9 in Thomas's Calculus). MAS101 picks up from inverse trigonometric functions, hyperbolic functions, and their inverses and rigorously proves Fundamental Theorem of Calculus and covers topics such as integral technique, improper integrals, convergence of infinite series, power series, and Taylor's series. Furthermore, some of topics that used to be taught before 2012 in MAS102 such as vector spaces, matrices, and coordinate systems, will be covered from Vector Calculus.

Calculus 1 in the Fall Semester is open only to freshmen who entered KAIST in Fall 2015 and passed the qualification exam on August 29; this is to make sure that we have an adequate (number of, quality of) audience; our regular opening for Calculus 1 is in the spring semester.

Time & Place TTh 10:30AM–11:45AM, E11-201

Instructor. Oum, Sang-il (엄상일, sangil@kaist.edu, Ext 2728, E6-3403)

Textbooks.

- *Thomas' Calculus: Early transcendentals*, 12th ed., W.D. Weir, J. Hass, G.B. Thomas, Pearson (week 1–11)
- *Vector Calculus*, KAIST Edition, Susan Jane Colley, Pearson Custom Publishing (week 12–15)

Course Site. <http://klms.kaist.ac.kr/>

Weekly Schedule. We will cover the textbook as follows. (Section numbers of "Vector Calculus" are written in italic.)

Week	Sections	Week	Sections
Sep. 1	3.8, 7.1	Oct. 27, 29	10.6–10.7
Sep. 3, 8	3.9, 7.2	Nov. 3, 5	10.8
Sep. 10, 15	7.3–7.4	Nov. 10, 12	10.9–10.10
Sep. 17, 22	8.1–8.6	Nov. 17, 19	11.3–5
Sep. 24, Oct. 1	8.7, 10.1	Nov. 24, 26	11.6–7, <i>1.1–1.2</i>
Oct. 6, 8	10.2–10.5	Dec. 1, 3	<i>1.3–1.6</i>
Oct. 13, 15	No lecture	Dec. 8, 10	<i>1.7</i> , Review
Oct. 20	Midterm Exam	Dec. 15	Final Exam

No classes on Sep. 29 (Chuseok holiday), Oct. 13, 15 (conference trip).

Exams. There are two exams, midterm (Oct. 20, 7PM–9:45PM) and final (Dec. 15, 7PM–9:45PM). 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. 1 hour each week. The detailed schedule will be announced later.

Attendance and Attitude. In each class, your attendance and attitude will be checked. If you miss more than two weeks' worth of classes after the add-drop period, your course grade will automatically be lowered by one step. No excuse for absence will be accepted under any circumstance since tolerance limit is generous. Being late for class three times is equivalent to one absence.

Course Grade. Midterm Exam (40%), Final Exam (40%), Quizzes (20%). The course grade can be lowered by one step due to your *attendance penalty* as explained above. Concerning grades for repeaters, please refer to the university regulation.

There will be neither makeup exams nor makeup quizzes. If you have to miss one of the exams due to an imperative reason supported by documentation, it can be substituted by the standardized score of the other exam. Five best quiz scores out of six quizzes will be counted. If you do not take the final exam without reason or miss more than 1/3 of classes, you automatically fail the course.

Finally you are reminded that this course maintains zero tolerance policy against any academic dishonesty. All academic dishonesty will be reported.