

**Overview** During the first semester of calculus we have learned how to manipulate real-valued functions of a single variable to solve problems that can be described by such functions. But many other problems in sciences and engineering are more complex and often require vector-valued functions of several variables. In this semester, we will learn how to differentiate and integrate functions of vectors to extract useful information from them. In short we will learn Vector Calculus. Eventually the two concepts, differentiation and integration, will be brought together into a beautiful theorem of Stokes that generalizes Fundamental Theorem of Calculus.

Sec	Time & Place	Instructor
A	TTh 9-10:30, E11-203	Professor Ko, Ki Hyoung (khko@kaist.ac.kr, Ext 2719, E6-4408)
B	TTh 9-10:30, E11-309	Professor Shin, Sujin (sjs@kaist.ac.kr, Ext 2713, E6-3406)
C	TTh 9-10:30, E11-302	Professor Schweizer, Andreas (schweizer@kaist.ac.kr, Ext 2793, E2-2209)
D	TTh 9-10:30, E11-303	Professor Matsumura, Tomoo (tomoomatsumura@kaist.ac.kr, Ext 2736, E2-3210)
E	TTh 1-2:30, E11-412	Professor Koo, Ja Kyung (koojakyung@kaist.ac.kr, Ext 2722, E6-3409)
F	TTh 1-2:30, E11-201	Professor Lee, Yongnam (ynlee@kaist.ac.kr, Ext 7308, E6-4409)
G	TTh 1-2:30, E11-203	Professor Kwon, Soonsik (soonsikk@kaist.edu, Ext 7302, E6-3404)
H	TTh 1-2:30, E11-403	Professor Morabito, Filippo (morabito@kaist.ac.kr, Ext 7301, E6-4410)

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

**Head TA** Mr. Lee, Dongmin(2014calculus2@gmail.com, Ext 2753, E6-3420)

**Textbook** *Vector Calculus –KAIST Edition*, Susan Jane Colley, Pearson Custom Publishing

**Web Sites** Each student must register for the following two websites at <http://klms.kaist.ac.kr>

- (1) Course Site: general announcement, quiz, exam, and help desk.
- (2) Section Site: attendance.

**Weekly Schedule** Textbooks will be covered as follows.

Week	Sections	Week	Sections
09/01 – 09/05	2.1-2	10/27 - 10/31	5.1-3
09/08 - 09/12	2.3	11/03 - 11/07	5.4-5
09/15 - 09/19	2.4-6	11/10 - 11/14	5.6, 6.1
09/22 - 09/26	3.1-4	11/17 - 11/21	6.2-3
09/29 - 10/03	4.1-2	11/24 - 11/28	7.1-2
10/06 - 10/10	4.3	12/01 - 12/05	7.2-3
10/13 - 10/17	4.4, Review	12/08 - 12/12	7.4, Review
10/20 - 10/24	Midterm exam period	12/15 - 12/19	Final exam period

**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. Every week important homework problems will be solved by a TA on a “pencast” video uploaded at Course Site.

**Recitation and Quiz** There will be one-hour recitation class on each week except the first week. There are two time slots, 10am and 1pm on Friday. You can freely choose one of slots on a first-come-first-serve basis by using the interface at Course Site that opens at noon 9/3 till noon 9/5. If you do not choose one, the head TA will assign one for you. Each slot accommodates up to 200 students. Every other week, quizzes will be given to check whether you are doing homework and, on the following week, you can get a help from a TA and have a chance to recover some\* of lost points in a quiz problem. To do this, you need to make a reservation up to two quiz problems via the interface at Course Site by one day before the recitation class day. (\* up to 80% in the first help, up to 60% in the second help, and up to 40% thereafter.)

**Attendance and Attitude** In each class, a TA will check your attendance and attitude by taking photos. You must follow the instruction given by the TA in order to validate your attendance at your Section Site. No excuse for absence will be accepted under any circumstance since tolerance limit is generous. 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. Being late for class three times is equivalent to one absence. A bad attitude during lecture such as leaving the class prematurely, sleeping, wearing a hat including a hood, using mobile phone or laptop, and eating food, may cost you an attendance penalty equivalent to one tardiness to one absence depending on its seriousness.

**Course Grade** Your course grade will be assigned 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 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 four weeks’ worth of classes after add-drop period, you automatically fail the course. Your 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. Finally you are reminded that this course maintains zero tolerance policy against any academic dishonesty.