(Syllabus)

[1]	(Basic Information)		

(Course Information)

/ (Year/Semester)	2017 / 2	(Campus)	(Seoul Campus)
(Course No.)	41146	(Class No.) 02	(Credit) 3
(Course Title)	(2)(CALCULUS (2))	/ (Time/Room)	310 613 < > / B603 < > 1 / 1,2(310 613 < > / B603 < > WED1 / MON1,2)
(Course Classification)	(basic major course)	(Lecture Type)	(Lone-teaching course)
(Course Type)	(Theoretical course)	(Medium of Instruction)	
(Accreditation)		(Accreditation of Engineering Education)	MSC(MSC)
(College)	ICT (College of ICT Engineering)	( ) (Department)	ICT (School of Electrical and Electronics Engineering)
e-class (Usage of e-class)	Yes		

(Instructor Information)

(Name)	(Kang, Sooran)	(Department)	(College of General Education)
(Office Phone No.)		(Contact No.)	02-820-5247
E-mail (E-mail)	sooran09@cau.ac.kr	(Department Phone No.)	02-820-5247
(Office Hour)	11:00 -- 12:00 (or by appointment)	(Office Location)	305 810
(Course Web-site)			

[2]   /   (Learning Objectives/Outcomes)

(Course Description)

This course is the continuation of Calculus 1 (single variable calculus), and it covers vector functions and multi-variable calculus. Students will learn vector functions, partial derivative, double and triple integrals, and vector calculus in 2- and 3-dimensional spaces.

(Prerequisites and Co-requisites)

Calculus 1

(Learning Objectives)

Students will learn the followings: 1. Vector functions and parametric curves. 2. Gradients and their relation to directional derivatives and linear approximation. 3. Line integral, general surface integrals and volume integrals. 4. Multi-integrals in rectangular, polar, cylindrical and spherical coordinates. 5. Green's theorem, Stokes' Theorem and Divergence theorem (Gauss's theorem)

(Learning Outcomes)

After this course, students will have a clear understanding of the fundamental concepts of multivariable calculus and a range of methods and skills which allow them to work on (real-world) problems effectively in related concepts.

[3]   (Course Methods)

(Teaching and Learning Methods)

(Teaching and Learning Methods)	(Additional Description)
(Lecture)	
(Quiz)	4 (Quiz) .

(Assignments)

(Assignments)	(No.)	(, ,)(Assignments Description)
(Practice)	14	, . , , / .

(Textbooks, Reading, and other Materials)

(Textbook/Reference)	(Title)	(Author)	/ (Year of Publication/etc)	/ (Publisher/Name of Journal)	/ (No. of Edition)
(Main Textbook)	Calculus	James Stewart		CENAGE Learning	8th Edition

[4]   (Student Assessment)

(Assessment Item)	(%)(Assessment Ratio)	(Additional Description)
(Attendance)	5	1/4 37 , F . 34 . 1/2 . 10 .

(Assessment Item)	(%)(Assessment Ratio)	(Additional Description)
/ (Participation/Attitude)	5	4 . (, 1). . , 1 . / , . (5). 1 5 ( )
(Quiz)	20	47 , , , . .
(Mid-term Exam)	30	.
(Final Exam)	40	.

[5] (Course Schedule)

(Week)	(Instructor)	(Topic & Content)	(Student Assignment)	(Additional Description & Instructor Assignment)
1		Sections 12.1, 12.2, 12.3 (Three Dimensional Coordinate Systems, Vectors, Dot Products)		
2		Sections 12.4, 12.5, 12.6 (The Cross Product, Equations of Lines and Planes, Cylinders and Quadric Surfaces)		
3		Sections 13.1, 13.2 (Vector Functions and Space Curves, Derivatives and Integrals of Vector Functions)/ Quiz 1		1
4		Sections 13.3, 13.4, 14.1 (Arc Length and Curvature, Motion in Space, Functions of Several Variables)		
5		Sections 14.2, 14.3,14.4 (Limits and Continuity, Partial Derivatives, Tangent Planes and Linear Approximations)/ Quiz 2		2
6		Sections 14.5, 14.6, 14.7 (The Chain Rule, Directional Derivatives and the Gradient Vector, Maximum and Minimum Values)		(10 4 ,)
7		Sections 14.8 (Lagrange Multipliers)/ Review		(10 9 ,)
8		Midterm ( )		
9		Sections 15.1, 15.2 (Double Integrals over Rectangles/General Regions)		
10		Sections 15.3, 15.4, 15.5 (Double Integrals in Polar Coordinates, Applications of Double Integrals, Surface Area)		
11		Sections 15.6, 15.7 (Triple Integrals, Triple Integrals in Cylindrical Coordinates)/ Quiz 3		3
12		Section 15.8, 15.9, 16.1 (Triple Integrals in Spherical Coordinates, Change of Variables in Multiple Integrals, Vector Fields)		
13		Sections 16.2, 16.3, 16.4 (Line Integrals, The Fundamental Theorem for Line Integrals, Green`s Theorem)		
14		Sections 16.5, 16.6 (Curl and Divergence, Parametric Surfaces and Their Areas)/ Quiz 4		4
15		Sections 16.7, 16.8, 16.9 (Surface Integrals, Stoke`s Theorem, The Divergence Theorem)		
16		Final Exam ( )		

[6] **(Guide to Learning)**	

(Previous Exam Samples)

<   **>(<Download Additional Sample>)**
(Engineering Education)
(Learning Outcomes)
: 70   : 30
_____ (Title)

_____ (Objective)

_____ (Restrictions)

_____ (Assessment Method)

71   6   47   .   (In pursuant to the Article 71 "Discipline" of the Chung-Ang University Regulations, and Article 47 "Punishment for Cheating during Examination" under Chapter 6 of the Academic Affairs Management Rules, any student caught engaging in academic misconduct during an exam will be subject to disciplinary action.)

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3.   /   :   ,   ,
4.   ,
              : 02-820-6577~9(   ), 031-670-4816(   )
                              (cauable)

In this class, students with disabilities are eligible for reasonable accommodations depending on the type and severity of disability. If you wish to receive accommodations listed below, please contact the Support Center for Students with Disabilities.
1. Visual Impairment: Braille, large print, electronic class materials, volunteer note-taker, adjustments in assessment practices, etc.
2. Hearing Impairment: Volunteer note-taker, stenographer, adjustments in assessment practices, etc.
3. Physical Disabilities/Brain Lesions: Classrooms with wheelchair access, volunteer note-taker, adjustments in assessment practices, etc.
4. Accommodations for students with other psychiatric disabilities or health impairments can be arranged through the Support Center for Students with Disabilities after consultation.
  Inquiry: 02-820-6577~9 (Seoul Campus), 031-670-4816 (Anseong Campus)
 - KakaoTalk Plus Friend ID: @cauable