

Syllabus

Differential Geometry I

Course Name	Course type (credit/hours)	전선(3/3)			Course code	2018년 2학기
	Target students Division/major/grade	/			Opening semester	
	Class time and classroom	수B(팔621) 금B(팔621)(팔621)				
Reference to this course	Related basic courses					
	Recommended concurrent courses					
	Related advanced courses					
Instructor	Name (title/division)					
	Office Room Number		Office phone Number	3322	e-mail	schoi@ajou.ac.kr
	Office hours			Homepage address		
Teaching Assistant	Name (title/division)					
	Office Room Number		Office phone Number		e-mail	

1. Introduction

We study the differential structures of differential manifolds, and their properties. We will cover the following:

- Differential manifolds
- Generalized Stokes' Theorem
- Poincare Lemma
- de Rham cohomology

2. Course Objectives

3. Class types and activities

4. Teaching Method

Lecture and exam

5. Knowledge and ability required for taking this course

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6. Method of Evaluation

Evaluation Item	The Number of Times	Evaluation Proportion	Remarks
Attendance			
midterm exam			
final exam			
quiz			
presentation			
discussion			
homework			
etc			

Midterm 40% Fina exam 50% Att. 10%
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7. Textbooks

Main/Sub	Title	Writer	Publisher	Publication year
주교재	Differential Forms and Applications	Manfredo P. do Carmo	Springer	1998
부교재	A comprehensive Introduction to Differential Geometry, vol.I	Michael Spivak	Publish or Perish, Inc., Wilmington, Del	1979

8. Lecture Schedule

Week	Lecture contents	Lesson type	Remark
1	Differential Form in the Euclidean space	lecture	
2	Differential Form in the Euclidean space	lecture	
3	Line Integral	lecture	
4	Differentiable manifold	lecture	
5	Differentiable manifold	lecture	
6	Stokes Theorem	lecture	
7	Poincare Lemma	lecture	
8	Midterm exam	Midterm exam	
9	Structure Equations	lecture	
10	Surfaces	lecture	
11	Intrinsic Geometry of Surfaces	lecture	
12	Intrinsic Geometry of Surfaces	lecture	
13	Gauss-Bonnet Theorem	lecture	
14	Gauss-Bonnet Theorem	lecture	
15	Moore Theorem	lecture	
16	Final exam	Final exam	

9. Others

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