Syllabus

미분기하II (Differential Geometry II)

Professor			Course	Major		
	Name	Suyoung Choi			Department	Mathematics
	Position	Professor			Major	Mathematics
	Department	Mathematics				

1. Overview of the Subject

The following basic concepts of differential geometry are learned: smooth manifolds, smooth maps, submersions, immersions, embeddings, Sard theorem, Lie groups, vector fields, integral curves and flows.

2. Overview of Teaching Method

Lectures based on the chosen topics from the textbook.

3. Grading

Midterm: 20%
Final exam: 20%
Discussion: 10%
Homework: 50%

4. Textbooks and References

	Textbook	Author	Publisher	Year
Supplementary	Differential Forms and Applications	Manfredo P. do Carmo	Springer	1998
Supplementary	A comprehensive Introduction to Differential Geometry, vol.I	Michael Spivak	Publish or Perish, Inc., Wilmington, Del	1979

4. Textbooks and References

	Textbook	Author	Publisher	Year
Main	Introduction to smooth manifolds	John M. Lee	Springer	2012

5. Class Plan

Week	Content	Method	Note
1	Smooth manifolds	lecture	
2	Smooth maps	lecture	
3	Tangent vectors	lecture	
4	Tangent bundles	lecture	
5	Submersions and immersions	lecture	
6	Embeddings	lecture	
7	Submanifolds	lecture	
8	Midterm exam	Midterm exam	
9	Sard Theorem	lecture	
10	Whitney Embedding Theorem	lecture	
11	Vector fields	lecture	
12	Lie brackes and Lie algebras	lecture	
13	Integral curves	lecture	
14	Flows and Flowouts	lecture	
15	Lie derivatives	lecture	
16	Final exam	Final exam	

6. Others