2016-1

Syllabus

Course No. : 011036-81

Course	Modern Geometry (1)	Credit	3	Hours	3	Instructor	Won-Kwang Park
Department/ Grades	Mathematics / 3rd year			Lecture Schedule Lecture Room			Everyday during 6/22~7/13 except weekend
Office Hours	Anytime except the lecture			Office Telephone			Room D-714 Huirang Building
E-mail							

Objectives	We study the fundamental concepts of the differential geometry of curves and surfaces in three-dimensional Euclidean Space. Specially we focus on the understanding of the curvature and torsion in curve, and first and second fundamental forms in surface.
Method/ Materials	Lecture Note
Grading	Attendance (20%) Midterm exam including reports (40%) Final exam including reports (40%).
Textbook	Lecture note
Auxiliary textbook	
Reference book	M. M. Lipschutz, Differential Geometry, McGraw-Hill, 1969

Assignment	Remarks

Weekly Schedule

Week	Date	Description	Assignment/ Reference
1	6.22	Review on vector calculus	
2	6.23	Review on vector funcions of a real variable	
3	6.24	Concept of a curve	
4	6.27	Concept of a curve, curvature and torsion	
5	6.28	Curvature and torsion	
6	6.29	The theory of curves	
7	6.30	The theory of curves	
8	7.1	Midterm exam	
9	7.4	Review on vector functions of a vector variable	
10	7.5	Review on vector functions of a vector variable	
11	7.6	Concept of a surface	
12	7.7	Concept of a surface	
13	7.8	First and second fundamental forms	
14	7.11	First and second fundamental forms	
15	7.12	First and second fundamental forms	
16	7.13	Final exam	