--- 讲义计划书							

科目编码	教科区分	课目名	学分	课时	对象		选科人数	教授名
					学部			
107169	D	线性代数	3	3	学科			李 仁 淑
					年级	16		

评价方法	Mid exam 30%, Final exam 30%, quiz 20%, Homework & Attendance 20%
教学目标与概要	Studies on matrix theory, vector space, and linear transform that is required in the fields of electrical engineering such as telecommunication, signal processing, coding theory, cryptography, control and etc. Topics include Vector, Matrix, Linear system, Matrices, Linear Transform, Eigenvalues and Eigenvectors, Vector Space, Orthogonality, Gram-Schmidt Process. This course will teach students improved skills how to solve engineering problems by using mathematics and by using Matlab tool.
先修课程	
讲课语言	韩国语
主要教材	教材编码 ： Linear Algebra, 3e 编辑者 ： David Poole 出版社 ： Thomson Brooks/Cole 年度 ： 2012
参考教材	教材名 ： 著作 ： 出版社 ： 年度 ： 教材名 ： 著作 ： 出版社 ： 年度 ： 教材名 ： 著作 ： 出版社 ： 年度 ：

周	日期	教学内容	教学要求
1	9/12	Ch.1 Vectors(向量) - Vector ： Length, Angle - Inner Product(内积), Cross Product, Orthogonal vectors(正交向量)	- Homework
2	9/19	- Line and Plane - Code Vector and Modular Arithmetic	- Homework
3	보충	Ch.2 Systems of Linear Equations - Systems of Linear Equation(线性方程) - Elementary row operation(初等行运算, 기본행연산)	- Homework
4	9/26	- Spanning sets and Linear Independence(线性独立) - Iterative Methods for Solving Linear Systems Ch.3 Matrices(矩阵, 행렬) - Matrix Operation(矩阵运算) - Inverse of a Matrix(矩阵的逆)	- Homework
5	10/3	**Holiday**	-
6	10/10	Ch.3 Matrices(矩阵, 행렬) - LU factorization(上下三角分解, LU 분해) - Linear Spaces, Subspaces	- Homework
7	10/17	- Linear Independece, Basis(基础), Dimension(维), Rank(秩)	- Homework
8	10/24	- Linear Transforms(线性变换, 선형변환)	- Homework
9	10/31	**Midterm Examination**	
10	11/7	Ch.4 Eigenvalues(特征值) and Eigenvectors(特征向量)	- Homework

		- Eigenvalue(고유값), Eigenvector(고유벡터) - Determinant(行列式, 행렬식) - Eigenvalue and Eigenvectors of n x n Matrices	
11	보충	- Similarity(相似) and Diagonalization(对角化) - Iterative Methods for Computing Eigenvalues	- Homework
12	11/14	Ch.5 Orthogonality(正交) - Orthogonality - Orthogonal Complements and Orthogonal Projections - Gram-Schmidt Process	- Homework
13	11/21	- QR factorization(QR 分解) - Orthogonal Diagonalization of Symmetric Matrice (对称矩阵的正交对角化) - Quadratic Forms	- Homework
14	11/28	Ch6. Vector Spaces - Change of basis Ch.7 Distance and Approximation - Least squares approximation(最小二乘逼近)	- Homework
15	12/5	- Single Value Decomposition(单值分解) - Linear Programming	- Homework
16	12/12	**Final exam**	