

# SYLLABUS

<b>Classification</b>	Selective	<b>Course No.</b>	15655	<b>Cr. Hrs.</b>	3:0:3	<b>Instructor</b>	Wang, Se Myung
<b>Course Title</b>	<b>Korean</b>	최적설계					
	<b>English</b>	Optimal Design					
<b>Course Outline</b>							
This course covers problem formulation and concepts of optimum design , mathematical programing including linear and nonlinear ; design sensitivity analysis ; trade off analysis ; recent research topics in design optimization							
<b>Prerequisite</b>		Linear Algebra, Calculus of Variation					
<b>Textbook and References</b>		Text book : J. S. Arora, Introduction to Optimum Design, McGraw-Hill, 1989.					
		References : 1. E. J. Hang and J. S. Arora, Applied Optimal Design, Wiley, 1979. 2. G. N. Vanderplaats, Numerical Optimization Techniques for Engineering Design with Applications, McGraw-Hill, 1984. 3. G. Strang, Linear Algebra and Its Applications, Academic Pres, 1976. 4. E. J. Hang, K. K. Choi, and V. KomKov, Design Sensitivity Analysis of Structural Systems, Academic Press, 1986.					
<b>Weekly Course Schedule</b>							
<b>Calendar</b>	<b>Description</b>					<b>*Remarks</b>	
<b>1st week</b>	Introduction to Concurrent Design						
<b>2nd week</b>	Optimum Design Problems Formulation						
<b>3rd week</b>	"						
<b>4th week</b>	Optimum Design Concepts						
<b>5th week</b>	"						
<b>6th week</b>	Linear Programming						
<b>7th week</b>	"						
<b>8th week</b>	Unconstrained Optimum Design						
<b>9th week</b>	"						
<b>10th week</b>	Constrained Optimum Design						
<b>11th week</b>	"						
<b>12th week</b>	Interactive Design						
<b>13th week</b>	Practical Design						
<b>14th week</b>	Design Sensitivity Analysis						
<b>15th week</b>	"						
<b>16th week</b>	Recent Research Topics						

\* If there will be experiments, mark it in the "Remarks".

**Instructor** Wang Se Myung (Seal)  
**Dept. Chair** Wang Se Myung (Seal)