Syllabus

Infomation of Course

Career	Integrated master's/doctoral program (master's) [석박사통합과정]	Course Type	Elective(Graduate) [선택(석/박사)]
Course Number	34.696	System Number	MS696
Section		English	Korean
L:L:C(AU)	3:0:3.0(0)	Exam Hours (classroom)	
Course Title	Special Topic in Advanced Materials Ⅰ <Advanced Semiconductor Integrated Process Design> [신소재공학특론 Ⅰ <고급 반도체공정 설계>]		
Hours of instruction (classroom)	Wed: 15:00~18:00 / (W1)BLDG. of Applied Engineering [(W1)응용공학동] (2427)		
Notice			

Information of Professor

Name	이정용(JeongYong Lee)
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Plan of Lecture

Syllabus File	
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Summary of Lecture	The memory semiconductor process, device and design will be discussed from an industrial perspective. In the semiconductor processing, lithography, etch technology, diffusion technology, thin film technology, cleaning and CMP technology and flash process technology will be reviewed. In the device, DRAM technology and flash technology will be talked. Finally, in the design, DRAM design and flash design will be discussed.
Material for Teaching	- Main textbook : Hand out - Auxiliary textbook : References 1. Semiconductor Physics and Devices: Basic Principles, 3rd edition, Donald A. Neamen, McGraw-Hill 2. Semiconductor Device Fundamentals, Robert F. Pierret, Addison Wesley
Evaluation Criteria	Grading: 9% Homework, 45.5% Midterm, 45.5% Final Exam
Lecture Schedule	Week 1: Overview Memory Tech. Overview Week 2: Process Lithography Technology Process Week 3: Process Etch Technology Week 4: Process Diffusion Technology Week 5: Process Thin Film Technology Week 6: Process Cleaning & CMP Technology Week 7: Process Flash Process Technology Week 8: Midterm Week 9: Analysis Failure Analysis Technology Week 10: Device DRAM Technology Week 11: Device Flash Technology Week 12: Memory Test Memory Test Technology Week 13: Design DRAM Design Week 14: Design Flash Design Week 15: Packaging Packaging Technology Week 16: Final
Memo	