<EE404 - Device Fabrication Process for Nanotechnology>

- 강의 개요
The purpose of this course is to provide students with technical background on device fabrication process technology for Nanodevices. It covers all issues involved in manufacturing micro and nano electronic devices, including thin film process, lithography, and etching process as well as unit cell design rule. Students are introduced to both the theory and the practice of all basic manufacturing concepts.

- 수업방법
Lecture

- 평가방법
Class participation (10%) / Homework (15%) / Mid-term exam (30%) / Final exam (45%)

- 강의계획 (주별)
1. Overview of Micro/Nano fabrication process
2. Essential electrical concepts & basic structure of transistor
3. Lithography process
4. Oxidation process
5. Diffusion process
6. Etching (I)
7. Etching (II)
8. Mid-term exam
9. Thin film deposition (I)
10. Thin film deposition (II)
11. Ion implantation
12. Process integration (I)
13. Process integration (II)
14. Other processes
15. Applications
16. Final exam

-교재
주교재 : “Fundamentals of Semiconductor Fabrication,” Gray S. May & Simon M. Sze
부교재 : “VLSI Technology,” Simon M. Sze
“Handbook of thin film deposition process and technology,” Krishna Seshan
"Micro-machined Transducers: Source Book," Kovacs
“Introduction to Microelectronic fabrication,” R. C. Jaeger
"Fundamental of Micro-fabrication," Madou