AP4120
Microelectronic Materials & Processing
Professor Paul K. Chu
Course Objectives

• Simple microelectronic devices and building blocks of integrated circuits

• Techniques to fabricate integrated circuits

• Processing related issues
Recommended Textbooks

- VLSI Technology (2nd Edition), S. M. Sze (Editor), McGraw Hill, 1988
- ULSI Technology, C. Y. Chang & S. M. Sze (Editors), McGraw Hill, 1996
Covered Topics (1)

(1) Semiconductor Materials & Physics
(2) Crystal Growth and Wafer Preparation
(3) Epitaxy
(4) Oxidation
(5) Lithography
(6) Etching

Website - http://personal.cityu.edu.hk/~appkchu/AP4120/Notes.htm
Covered Topics (2)

(7) Thin Film Deposition
(8) Diffusion
(9) Ion Implantation and Annealing
(10) Metallization
(11) Testing, Assembly, and Packaging

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Grading Methodology

- **Continuous Assessment (30%)**
  - Homework
  - Mid-Term Examination
  - Mini-Project

- **Final Examination (70%)**