

Checksheet
Minor in Microelectronics Engineering
Effective for Students Graduating in 2006

Offered By:

The Bradley Department of Electrical and Computer Engineering (Home Department)
 Materials and Science and Engineering Department
 Physics Department

(The minor is a true cross-list among the three departments.)

The minor in Microelectronics Engineering requires 21 credit hours and is open to all students in the University who meet the following requirements. Students may "double count" courses in the Minor with those required for graduation in their Major degree provided the Major has no restrictions to the contrary. For successful completion of the Minor, students must maintain a 2.0 GPA and a grade of C- or better in all courses in the Minor.

The courses listed below may have prerequisites not found on the list. It is the student's responsibility to meet all prerequisite requirements. New courses will be added periodically. Students are free to petition the Minor Curriculum Committee¹ for exceptions and substitutions.

1. Students shall complete the following course²
 - MSE/ECE 4234: Semiconductor Processing (3)
2. Students shall complete at least six (6) credits selected from the following courses:
 - ECE 4214: Basic Semiconductor Devices (3)
 - ISE 4984: Modeling and Analysis of Semiconductor Manufacturing (3)
 - PHYS 3455/MSE 3255: Foundations of Modern and Solid State Physics (4)
3. Students shall perform a capstone design project by completing at least three (3) credits from the following courses:
 - ECE 4994: Undergraduate Research³ (3)
 - MSE 4085: Senior Design Project³ I (2)
 - MSE 4086: Senior Design Project³ II (2)
 - MSE 4095: Honors Senior Design Project³ I (3)
 - MSE 4096: Honors Senior Design Project³ II (3)
 - PHYS 4994: Undergraduate Research³ (3)
 - UH 4994: Honors Thesis⁴ (6)
4. Students shall complete the balance of twenty-one (21) credits as selected from the following courses:
 - ECE/MSE 4235: Electronic Packaging I (3)
 - ECE/MSE 4236: Electronic Packaging II (3)
 - ECE/MSE 4274: Electronic Packaging Laboratory (1)
 - ECE 4514: Digital Design II (3)
 - ECE 4540: VLSI Circuit Design (3)
 - ECE 4984: Analog VLSI Design (3)
 - ECE 5205: Basic Semiconductor Devices I (3)
 - ECE 5206: Basic Semiconductor Devices II (3)
 - ECE 5220: RF IC Technology and Design (3)
 - ESM 4156: Non-Destructive Evaluation in Microelectronics (3)
 - ISE 4404: Statistical Quality Control (3)
 - MSE 4254: Science and Technology of Thin Films (3)
 - MSE/ECE 5200: Solid State Materials and Devices (3)
 - PHYS 4554: Introduction to Solid State Physics (3)
 - PHYS/ECE 4984: Nanotechnology (3)
 - STAT 4604: Statistical Methods for Engineers (3)
 - STAT 4714: Statistical Methods for Electrical Engineers (3)

APPROVED

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COMMISSION ON UNDERGRADUATE
STUDIES AND POLICIES

CORRECTED

¹ This Committee is composed of representatives from each participating Department's Curriculum Committee. See your academic advisor for contact information.

² MSE/ECE 4234 should be completed during the spring semester of the Junior year.

³ Research projects must be approved by the Minor Curriculum Committee prior to beginning the research.

⁴ Honors thesis credits may be accumulated by multiple registrations for this course.