

ELECTRONICS & MICROELECTRONICS (SM)

For additional information contact the Industrial Technology Department at 503-594-3318.

SM-136 Photolithography

2 credits, Winter

The course covers the relationship between theoretical and practical aspects of current methods and equipment used in photolithography. It also includes troubleshooting common process and equipment-related problems.

Recommended Prerequisites: SM-150

SM-150 Semiconductor Processing I

2 credits, Not Offered Every Term

Provides general background knowledge on the processes required to manufacture integrated circuit devices, beginning with silicon material preparation and ending with final assembly and test of a completed device. Micro-contamination is also covered.

SM-160 Semiconductor Processing II

2 credits, Not Offered Every Term

Provides an overview of basic processes involved in the fabrication of finished silicon wafers, oxidation and deposition processes.

Troubleshooting of common equipment is emphasized.

Recommended Prerequisites: SM-150

SM-170 Semiconductor Processing III

2 credits, Not Offered Every Term

Covers the essential process and equipment issues related to the etching, diffusion and ion implantation. Troubleshooting of common equipment and process related problems are emphasized.

Recommended Prerequisites: SM-150

SM-229 Vacuum Technology

2 credits, Spring

Focuses on elementary theory and practice of vacuum equipment for microelectronics processing. Students study vacuum fundamentals, pumps, and equipment used in vacuum systems.

Recommended Prerequisites: SM-150

SM-280 Electronics & Microelectronics/CWE

1-6 credits, Fall/Winter/Spring/Summer

Cooperative work experience. Practical experience in the high-tech industry. Coordination of instruction will occur with industry and the manufacturing and cooperative work departments. Variable Credit: 1-6 credits. Required: Student Petition.

Corequisites: CWE-281