

Integrated Circuit Mask Design

2008–2009 Chemeketa Community College Catalog

Chemeketa offers a Certificate of Completion in Integrated Circuit (IC) Mask Design.

Graduates of the IC Mask Design program are employed by firms who design and manufacture the subminiature electronic circuits that are at the nucleus of all electronic and computerized equipment. Integrated circuit mask designers use computer-aided design systems to design the templates or masks that are used to manufacture microelectronic circuits. Graduates of this program may also be employed as electronic circuit board designers and layout specialists.

The IC Mask Design program includes courses in computer-aided-design (CAD), CMOS layout, electronics, and the semiconductor manufacturing process, as well as the communication and human relations skills needed for career advancement.

Program outcomes

Students completing the certificate will:

- Use computer-aided design systems to design the templates or masks that are used to manufacture microelectronic circuits.
- Identify and solve technology problems related to electronic circuits and devices and mechanical systems.
- Read and interpret written materials, including manuals, technical bulletins, schematics, and procedures.
- Use standard terminology and clarifying language to communicate orally and in writing with customers, suppliers, supervisors, and co-workers.
- Practice skills and attitudes—individually and as a member of a team—that reflect quality management procedures and professional standards in the workplace.
- Apply professional and environmental safety practices associated with the workplace.

Integrated Circuit Mask Design Certificate of Completion

If you already have an associates or bachelor's degree in Electronics, you may enroll in Chemeketa's online IC Mask Design certification program. This program is offered entirely online and can be completed from anywhere in the world. Students entering this program need to contact the program chair at 503.399.6254 or visit educationwithafuture.com to have their previous coursework evaluated before registering. To register, go to online.chemeketa.edu.

Students entering this program must have an Intel compatible computer (Pentium IV or better), Internet access, and be computer literate (type approximately 20 wpm, and be familiar with the Windows operating system, word processing, spreadsheets, and basic CAD).

In addition to tuition, estimated costs for students who complete the entire program listed below are books, \$490; class fees, \$80; student services fee, \$9.50; universal fee, \$114; Intel-compatible computer, \$1,000; and equipment and supplies, \$100. Contact the Financial Aid Office at 503.399.5018 to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing the following required 19 credit hours with a grade of "C" or better in all courses.

Required courses:

Term 1

MT250	CMOS 1	4
MT110	Microelectronics.....	3

Term 2

MT251	CMOS 2	3
PSY104	Psychology in the Workplace+	3

Term 3

CIS140U	Unix/Linux	3
MT252	CMOS 3	3

+Meets related instruction requirement.

