

Computer-Integrated Manufacturing and Technology

The Faculty
Dwight Collins
Constante Manapsal

School of Mathematics, Computer Science and Engineering

The Curriculum

The Computer-Integrated Manufacturing and Technology program is part of the college's curriculum in industrial technology. It emphasizes certain aspects of manufacturing, focusing particularly on the application of contemporary computer technology to the manufacturing process. The curriculum stresses contemporary theory and technology, immediate practical experience, adaptability to changing job requirements, and formal study of the various social, environmental, and ethical implications of manufacturing processes. In addition, the curriculum provides a strong grounding in general skills widely required within the manufacturing industry, including writing, analysis, speaking, and various business skills.

The Associate Degree/Occupational Certificate Major

Students may pursue an Associate in Science degree or an Occupational Certificate in Computer-Aided Manufacturing or Manufacturing Process Planning and Control. Upon graduation, computer-integrated manufacturing and technology majors are fully trained and prepared to assume careers in industry within their area of specialization.

If you intend to transfer:

Courses that fulfill major requirements for an associate degree at Irvine Valley College may not be the same as those required for completing the major at a transfer institution offering a baccalaureate degree. If you plan to transfer to a four-year college or university, you should (1) refer to the transfer section of this catalog, (2) consult the catalog of your prospective transfer institution (see the IVC Transfer Center for assistance), and (3) schedule an appointment with an IVC counselor to develop a plan of study before you begin your program. In addition, it may be helpful to meet with the appropriate department faculty at IVC.

If you plan to complete an associate degree or occupational certificate:

You must complete the following set of courses to fulfill the requirements for the Occupational Certificate or the Associate in Science (A.S.) degree major. For the A.S. degree, you must also meet the general education requirements listed on page 21. Refer to page 16 for additional options for fulfilling the major requirement for the A.S. degree.

COMPUTER-INTEGRATED MANUFACTURING AND TECHNOLOGY MAJOR

Computer-Aided Manufacturing Emphasis (A.S. Degree or Occupational Certificate)

		Units
DR 201	Interpretation of Industrial Drawings	3
ENGR 23	Engineering Graphics and Descriptive Geometry	3
ENGR 183	Computer-Aided Design Techniques	3
ENT 130	Industrial Automation	3
ENT 140	Manufacturing Processes— Systems Introduction	3
MATH 124	Trigonometry	3
MGT 103	Business English	(3)
<i>or</i>	<i>or</i>	
WR 102	Technical Writing	(3)
	Total units:	21

Recommended Electives: CIS 1.

Manufacturing Process Planning and Control Emphasis (A.S. Degree or Occupational Certificate)

		Units
CIS 1	Introduction to Computer Information Systems	3
ENGT 140	Manufacturing Processes— Systems Introduction	3
WR 102	Technical Writing	(3)
<i>or</i>	<i>or</i>	
MGT 103	Business English	(3)
CIM141	Introduction to CIM (Computer-Integrated Manufacturing)	2
CIM 144	Building/Using a Basic Manufacturing Database	3
CIM 145	Order Tracking	3
CIM 146	Materials Management: Purchasing and Inventory Control	3
	Total units:	20

Recommended Electives: CIS 30A, 33, 34; ENGR 21;
MATH 2, 3A, 3B, 9, 10, 252; PHYS 2A, 2B, 20;
ET 101; CWE 168.

Computer-Integrated Manufacturing and Technology Courses

Computer-Integrated Manufacturing 189 0.5-5 units

SPECIAL TOPICS IN COMPUTER-INTEGRATED MANUFACTURING

The Special Topics course is a grouping of short seminars designed to provide students with the latest concepts in the field of computer-integrated manufacturing. The course content is thematic in nature, and each seminar topic within the course differs from other offerings in the same course. R-E

Lecture hours: 0.5-5 Lab hours: 0.5-5

Computer-Integrated Manufacturing 199 0.5-5 units

SEMINAR IN COMPUTER-INTEGRATED MANUFACTURING

Computer-Integrated Manufacturing 199 is a lower-division seminar given over to the study of a specific topic, issue, or problem within computer-integrated manufacturing which is not part of the regular college curriculum. R-E

Lecture hours: 0.5-5 Lab hours: 0.5-5

Computer-Integrated Manufacturing 289 0.5-5 units

SPECIAL TOPICS IN COMPUTER-INTEGRATED MANUFACTURING

The Special Topics course is a grouping of short seminars designed to provide students with the latest concepts in the field of computer-integrated manufacturing. The course content is thematic in nature, and each seminar topic within the course differs from other offerings in the same course. R-E

Lecture hours: 0.5-5 Lab hours: 0.5-5

Manufacturing Technology Courses

Manufacturing Technology 189 0.5-5 units

SPECIAL TOPICS IN MANUFACTURING TECHNOLOGY

The Special Topics course is a grouping of short seminars designed to provide students with the latest concepts in the field of manufacturing technology. The course content is thematic in nature, and each seminar topic within the course differs from other offerings in the same course. R-E

Lecture hours: 0.5-5 Lab hours: 0.5-5

Manufacturing Technology 199 0.5-5 units

SEMINAR IN MANUFACTURING TECHNOLOGY

Manufacturing Technology 199 is a lower-division seminar given over to the study of a specific topic, issue, or problem within manufacturing technology which is not part of the regular college curriculum. R-E

Lecture hours: 0.5-5 Lab hours: 0.5-5

Manufacturing Technology 289 0.5-5 units

SPECIAL TOPICS IN MANUFACTURING TECHNOLOGY

The Special Topics course is a grouping of short seminars designed to provide students with the latest concepts in the field of manufacturing technology. The course content is thematic in nature, and each seminar topic within the course differs from other offerings in the same course. R-E

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