

CURRICULUM STANDARD

Effective Term
Fall 2007
[2007*03]

Curriculum Program Title

Manufacturing Technology

Code

A50320

Concentration

(not applicable)

Curriculum Description

The Manufacturing Technology curriculum provides an introduction to the principles and practices of manufacturing in today's global marketplace. The student will be exposed to valuable high-tech concepts applicable in a variety of industries such as plastics, metals, furniture, textiles, and electronics.

Students will gain real-world knowledge in manufacturing management practices, manufacturing materials and processes, research and development, and quality assurance. Course work will include machining processes, CAD/CAM, CNC principles, and other computerized production techniques.

Graduates should qualify for employment as a manufacturing technician, quality assurance technician, CAD/CAM technician, team leader, or research and development technician. The student will be able to advance in the workplace and develop with new technologies.

Curriculum Requirements*

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

- I. General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.
- II. Major Hours.** AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*
- III. Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	AAS	Diploma	Certificate
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit (SHC)	64-76	36-48	12-18

**Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.*

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

- A. Core.** The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.
- B. Concentration** *(if applicable)*. A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.
- C. Other Major Hours.** Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

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	AAS	Diploma	Certificate
Minimum Major Hours Required	49 SHC	30 SHC	12 SHC
A. CORE <i>Courses required for the diploma are designated with *</i> Required Courses: Required Subject Areas: *Safety. Select one: ISC 112 Industrial Safety 2 SHC ISC 121 Envir Health & Safety 3 SHC *Quality Control. Select one: ISC 132 Mfg Quality Control 3 SHC ISC 221 Statistical Qual Control 3 SHC *Materials. Select one: MEC 145 Manufacturing Materials I 3 SHC MEC 180 Engineering Materials 3 SHC *Drafting/CAD. Select one: BPR 111 Blueprint Reading 2 SHC DFT 111 Technical Drafting I 2 SHC DFT 119 Basic CAD 2 SHC DFT 170 Engineering Graphics 3 SHC EGR 120 Eng and Design Graphics 3 SHC MAC 131 Blueprint Reading/Mach I 2 SHC *ISC/MAC. Select one: ISC 128 Industrial Leadership 2 SHC ISC 133 Mfg Management Practices 2 SHC MAC 114 Intro to Metrology 2 SHC ISC 212 Metrology 2 SHC	12-14 SHC	12-14 SHC	
B. CONCENTRATION <i>(Not applicable)</i>			

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<p>C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i></p> <p>ATR, BPR, CIS, COE, CSC, DDF, DFT, EGR, ELC, ELN, FUR, HYD, ISC, MAC, MEC, NOS, OMT, PLA, TEX, and WLD</p> <p><i>Foreign language courses (including ASL) that are not designated as approved other major hours may be included in all programs up to a maximum of 3 semester hours of credit.</i></p>			
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