

CURRICULUM STANDARD

Effective Term
Fall 2003
[2003*03]

Curriculum Program Title

Chemical Process Technology

Code

A50110

Concentration

(not applicable)

Curriculum Description

The Chemical Process Technology curriculum is designed to provide training for both entry-level personnel and those already employed in chemical process and manufacturing industry to become competent in performing the duties of chemical process operators and chemical laboratory technicians.

Course work includes industrial applications of chemical principles, environmental health and safety, process control, industrial maintenance, and chemical analysis.

Graduates of the program should qualify for a variety of jobs in the chemical process and related industries, such as pilot plant operator, process operator, chemical engineering technician, operator, lab technician, chemical technician, chemical technologist, or analytical technician.

*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 Hour

[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 Required Courses: CHM 131 Introduction to Chemistry 3 SHC CHM 131A Intro to Chemistry Lab 1 SHC CPT 115 Process Operations I 4 SHC CPT 116 Process Operations II 4 SHC ISC 121 Environmental Health & Safety 3 SHC Required Subject Areas: <i>Select a set of courses from one of the following subject areas :</i> Process: ELC 112 DC/AC Electricity 5 SHC PCI 162 Instrumentation Controls 3 SHC PHY 131 Physics-Mechanics 4 SHC or Laboratory: BIO 175 General Microbiology 3 SHC BTC 181 Basic Laboratory Techniques 4 SHC CHM 132 Organic and Biochemistry 4 SHC | 26-27 SHC | | |
| B. CONCENTRATION (Not applicable) | | | |
| C. OTHER MAJOR HOURS <i>To be selected from the following prefixes:</i> BIO, BTC, CHM, CIS, COE, CPT, CSC, CTC, ELC, HYD, ISC, MNT, PCI, and PHY <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> | | | |