

**Proposal to Revise the Associate in Applied Science
in Chemical Technology**

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Effective Semester: Fall 2013

September 13, 2012

Revision and Rationale

It is proposed that the Chemical Technology Program be revised to reflect the change in credits that were approved for PTEC 101: Introduction to Process Technology. The course was changed from 2-2-3 to 2-3-4 credits. This change of credits for the course and the program is reflected in the “revised” catalog page below. This change raises the minimum number of credits needed for graduation from 62 to 63.

In addition the titles of two courses have been changed on the Chemical Technology Program Grid to match the official course titles in the Course Descriptions section of the catalog. The official title of ASET 130 is Quality Control/Quality Assurance (the Chemical Technology Program Grid lists the course as Quality Control) and the official title of ASET 110 is Safety, Health and the Environment (the Chemical Technology Program Grid lists the course as Health and the Environment).

Catalog Pages

Current Catalog 2011-2012

Chemical Technology

Students in the Chemical Technology curriculum receive a balanced program of practical laboratory training and theoretical concepts in inorganic, organic and analytical chemistry for the Associate in Applied Science (A.A.S.) degree. Graduates of the curriculum will have laboratory skills that will enable them to adjust quickly to industrial laboratory work. They will also have the basic foundation for further professional growth.

Students have an opportunity to use a variety of analytical instruments such as infrared, visible and ultraviolet spectrographs, vapor and liquid phase chromatography and polarography. Most of the instruments are computer interfaced. Exercises in routine instrumental analyses, as well as more challenging problems in such topics as structure determinations, are given.

Student Learning Outcomes:

Upon completion of this program graduates will be able to:

- Enter the workforce as entry-level technicians in industrial, research and governmental settings.
- Demonstrate a foundational knowledge of general inorganic and organic chemistry principles and concepts and be able to apply this knowledge to the solution of problems and performance of experiments.
- Demonstrate a basic understanding of analytical and instrumental concepts and techniques and develop complementary practical laboratory skills related to the science of chemistry.
- Effectively collect, interpret, evaluate and communicate scientific data in multiple formats using computer technology as needed.

Entrance Requirements:

This program is open to interested students, assuming space is available. The curriculum is well aligned with the courses required of students who are planning on a bachelor's degree in chemistry. Students are required to take the College's placement tests at their time of entry. Students identified as needing developmental course work must satisfactorily complete the appropriate English and mathematics courses as a part of their degree program.

PROGRAM OF STUDY AND GRADUATION REQUIREMENTS:

A minimum of 62 credits and a grade point average of 2.0 ("C" average) are required for graduation.

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
FIRST SEMESTER			
ENGL-101 English Composition I		3	ENGL-101
MATH-118 Intermediate Algebra ¹		3	Mathematics
CIS-103 Applied Computer Tech.		3	Tech Comp
CHEM-121 College Chemistry I	Chem-110 or Dept. approval	4	
Natural Sci. Elective with Lab ²		4	Natural Science
SECOND SEMESTER			
ENGL-102 English Composition II		3	Engl-102 & Info Lit
MATH-251 Stat. for Science ¹	MATH-118	4	
Humanities Elective		3	Humanities
CHEM-122 College Chemistry II		4	
Natural Sci. Elective with Lab ²		4	
THIRD SEMESTER			
Social Science Elective		3	Social Science
ASET-130 Quality Control		3	
CHEM-221 Organic Chemistry I	CHEM-122	5	
PTEC-101 Intro to Process Tech. ³		3	
FOURTH SEMESTER			
CHEM-214 Instrumental Analysis	CHEM-122	5	
CHEM-222 Organic Chemistry II	CHEM-221	5	
ASET-110 Health and the Environment	CHEM-122	3	
Minimum Credits Needed		62 ⁴	

GENERAL EDUCATION REQUIREMENTS:

All General Education requirements are met through required courses (as indicated above) except for the American/Global Diversity requirement, the Interpretive Studies requirement and the Writing Intensive requirement. Therefore, in order to graduate, students in this program must choose one course that is designated American/Global Diversity, one course that is designated Writing Intensive and one course that is designated Interpretive Studies. The same course may be used to fulfill all three requirements. View the courses that fulfill all degree requirements and receive a more detailed explanation of the College's general education requirements to help in your selection.

¹ Students who qualify are encouraged to take Math-161 or higher courses in a calculus related sequence.

² Chem-110, Chem-101, or Chem-102 may not be used to meet the Lab Science Elective.

³ Experienced students may replace PTEC-101 with an elective to be selected with the approval of the Department Chair.

⁴ Students who are required to take Chem-110 prior to Chem-121 will need 66 credits to graduate.

Revised Catalog 2012-2013

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For More Information Contact the Division of Math, Science and Health Careers, Room W2-7, or the Chemistry Department Chair, Room W4-46, or the College Information Center (215) 751-8010.