

CHEMISTRY, Associate in Science Degree - 3026

Science Department

CIP Code: 40.0501

The Chemistry AS program provides students with the necessary foundation in mathematics, science and liberal arts to transfer and succeed in a baccalaureate degree program in Chemistry. This program also permits students to complete the pre-requisite courses for application to institutions offering degrees/programs in biochemistry, chemical engineering, environmental science, molecular-life science or teaching. Because the requirements of transfer institutions and their degree programs may vary widely, it is recommended that students carefully review the program requirements of their chosen transfer institution and align their HACC course sequence with the program outlined in that institution's catalog. Students who complete HACC's Chemistry AS degree will be admitted at the Junior-level in Chemistry to any institution participating in Pennsylvania's statewide college credit transfer system. This program can be completed entirely at the Harrisburg and Lancaster campuses through on-campus/in-person instruction. Students may also complete 75% of this program at the York Campus through on-campus/in-person instruction (with a few required courses taken on-campus at either the Harrisburg or Lancaster campuses). The remainder of the required coursework can be completed through various modalities (e.g., hybrid, synchronous remote instruction or asynchronous instruction).

Transfer Opportunities

This transfer curriculum is provided as a guide for students planning to transfer to a baccalaureate degree granting institution. Courses in chemistry and related subjects are offered for students, who expect to transfer to four-year college or university programs in chemistry, biochemistry, chemical engineering, environmental science, molecular-life science or teaching.

Competency Profile

This curriculum is designed to prepare graduates of the program to:

- Communicate effectively using scientific language
- Explain atomic and molecular structure, bonding and periodic trends
- Predict the outcome of chemical reactions
- Solve computational chemical problems using appropriate analysis, strategy and calculations
- Use appropriate laboratory skills and instrumentation to collect and interpret experimental data in order to formulate conclusions

PROGRAM REQUIREMENTS (TOTAL CREDITS = 61)

General Education		Major Requirements		Other Required Courses	
ENGL 101 English Composition I	3	CHEM 102 General Inorganic/Qual. Analysis	4	Transfer Electives**	12
ENGL 102 English Composition II (or)	3	CHEM 203 Organic Chemistry I	4		
ENGL 104 Technical Writing	(3)	CHEM 204 Organic Chemistry II	4		
COMM 101 Effective Speaking	3	PHYS 211 Physics for Engineers & Scientists I	4		
Humanities & Arts Core Elective*	3	PHYS 212 Physics for Engineers & Scientists II	4		
Mathematics Core Elective - MATH 121	4		20		
Mathematics or Science Core Elective - MATH 122	4				
Science w/ a Laboratory Core Elective - CHEM 101	4				
Social & Behavioral Science Core Elective	3				
First-Year-Seminar Elective (Rec: SCI 100)	1				
Wellness Elective	1				
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*Students are to select courses from the following: ART 181 or 182; ENGL 206; FMTH 101; HUM 101, 115 or 201; MUS 104; PHIL 200; or a foreign language course.

**Students are to select their transfer electives based upon their intended transfer institution.

Note: Students must complete the following courses with a minimum grade of C: CHEM 102, 203, 204; PHYS 211, 212.

RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part-time students can complete this program by taking one or more courses each semester.

Fall Semester I		Spring Semester I		Fall Semester II		Spring Semester II	
COMM 101	3	CHEM 102	4	CHEM 203	4	CHEM 204	4
CHEM 101	4	ENGL 102 or 104	3	PHYS 211	4	PHYS 212	4
ENGL 101	3	Humanities/Arts Core Elective*	3	Transfer Electives**	6	Transfer Electives**	6
FYS Elective	1	MATH 122	4			Wellness Elective	1
MATH 121	4	Social/Behavioral Science Core Elective	3				