

# Bachelor of Science, Chemistry

Butler County Community College to Clarion University of Pennsylvania

# TRANSFER GUIDE

This guide lists the BC3 courses in the right column that fulfill the Clarion University requirements in the left column. To transfer courses, you will need a grade of "C" or higher. The chemistry B.S. degree requires a minimum of 120 credit hours and a 2.0 QPA for degree completion.

## CLARION REQUIREMENTS

### General Education Requirements (48 credits)

See General Education Transfer Guide for requirements.

### Chemistry Proficiencies

Credits will apply in general education.

Complete three courses in:

MATH 270      Calculus I  
MATH 271      Calculus II  
MATH 272      Calculus III

Complete one of the following:

Complete two courses in:

PH 251          General Physics I  
PH 252          General Physics II  
or

Complete four courses in:

PH 258/268    Introductory Physics Lecture I and Lab  
PH 259/269    Introductory Physics Lecture II and Lab

### Chemistry Major (54 credits)

Complete 22 courses in:

CHEM 141      Freshman Seminar  
CHEM 151/161    Chemical Principles I and Lab  
CHEM 152/162    Chemical Principles II and Lab  
CHEM 251/261    Organic Chemistry I and Lab  
CHEM 252/262    Organic Chemistry II and Lab  
CHEM 257      Organic Spectroscopy  
CHEM 270      Chemical Information  
CHEM 271      Introductory Organic Chemistry  
CHEM 353/363    Analytical Chemistry I and Lab  
CHEM 354/364    Physical Chemistry I and Lab  
CHEM 355/365    Physical Chemistry II and Lab  
CHEM 358/368    Analytical Chemistry II and Lab  
CHEM 456      Advanced Inorganic Chemistry  
CHEM 470      Chemistry Seminar

Complete 12 hours credit in:

Biology, Computer Science, Earth Science,  
Mathematics, Physics

### ACS Certification Requirements

Complete six hours of advanced courses that include sufficient lab work to bring the total lab hours to 500.

## BC3 EQUIVALENT COURSES

MATH 221  
MATH 222  
MATH 223

PHYS 101  
PHYS 102

PHYS 221  
PHYS 222

No BC3 equivalent  
CHEM 101  
CHEM 102  
CHEM 221  
CHEM 222  
No BC3 equivalent  
No BC3 equivalent  
No BC3 equivalent  
CHEM 230  
No BC3 equivalent  
No BC3 equivalent  
CHEM 231  
No BC3 equivalent  
No BC3 equivalent

BIOL 103, 120, 121, 131, 132, 201, 203, 205, 207,  
209; COMP 101, 210, 228, 230, 231, 241, 242;  
ELEC 221 & 222, 225 & 240; MATH 224, 230;  
METR 212; PHSC 114, 120, 123

No BC3 equivalent

### Residency Requirement

A minimum of 30 of  
the last 45 credits  
must be taken  
through Clarion  
University with at  
least 50 percent of  
major credits taken  
through Clarion.

EFFECTIVE FALL 2010

Clarion University is an affirmative action equal opportunity employer. 8/10

