

CHEMISTRY, A.C.S. CERTIFIED, COMPREHENSIVE MAJOR: 100-007

In Workflow

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Approval Path

1. Tue, 14 Sep 2021 03:07:07 GMT
James Phillips (phillija): Rollback to Initiator
2. Tue, 14 Sep 2021 03:08:02 GMT
James Phillips (phillija): Approved for CHEMISTRY Chair
3. Fri, 24 Sep 2021 15:12:19 GMT
Margaret Cassidy (cassidml): Approved for AS Dean PreCurrComm (PIM)
4. Wed, 06 Oct 2021 17:34:28 GMT
Margaret Cassidy (cassidml): Approved for AS Dean (PIM)

History

1. Jan 8, 2021 by barniejm
2. Feb 10, 2021 by barniejm
3. Mar 8, 2021 by Karen Cauble (caubleks)

Date Submitted: Tue, 14 Sep 2021 03:07:32 GMT

Viewing: 100-007 : Chemistry, A.C.S. Certified, Comprehensive Major

Last approved: Mon, 08 Mar 2021 22:45:14 GMT

Last edit: Fri, 17 Sep 2021 22:57:02 GMT

Changes proposed by: James Phillips (phillija)

Preparer(s)

Preparer Name:

Jim Phillips

Program Level

Undergraduate

Program Type

Emphasis, Major

Degree Type

BA/BS

Type of Change

Modification

Name of Program

Chemistry, A.C.S. Certified, Comprehensive Major

Major Type

Comprehensive

College

Arts and Sciences

Effective Catalog Year

2022-2023

Is this content intended to be shared across multiple programs/catalog pages?

No

Program Requirements (Includes Course Lists):**Program Requirements (Includes Course Lists):****Core Requirements for A.C.S. and Liberal Arts Chemistry Majors**

A minimum of 63-semester credits, including:

Code	Title	Credits
Chemistry Core		
Select one of the following: ¹		6
CHEM 115	Chemical Principles	
CHEM 105 & CHEM 106 & CHEM 109	General Chemistry I Lecture and General Chemistry I Laboratory and General Chemistry II with Lab	
Required:		
CHEM 213	Quantitative Analysis	4
CHEM 218	Introduction to Inorganic Chemistry	3
CHEM 325	Organic Chemistry I with Laboratory	4
CHEM 326	Organic Chemistry II with Laboratory	4
Additional Required Courses		
PHYS 231 & PHYS 232	University Physics I and University Physics II	10
MATH 114 & MATH 215	Calculus I and Calculus II	8
Total Credits		39

¹
Only six credits of the CHEM 105/CHEM 106/CHEM 109 sequence are credited to the major.

Capstone Experience for Chemistry Majors

The capstone experience is met by completing CHEM 411 for chemistry with business emphasis majors, and by CHEM 420, CHEM 438, CHEM 453 or CHEM 497 for other chemistry majors.

Comprehensive Major: Chemistry, A.C.S., General Emphasis**Requirements**

In addition to the chemistry core and required mathematics/physics courses, students must complete the following course work:

Code	Title	Credits
CHEM 344	Modern Applied Separations and Spectrometry	2
CHEM 352	Fundamentals of Biochemistry	4
CHEM 433	Physical Chemistry I	4
CHEM 434	Physical Chemistry II	4
Two of the following:		4-5
CHEM 420	Advanced Synthesis Laboratory	
CHEM 438	Physical Analysis Laboratory	
CHEM 453	Biochemistry Laboratory	

Electives

Take 2 courses from the following. At least one of the courses must be CHEM 318, CHEM 401, CHEM 426, or CHEM 491		6
CHEM 304	Environmental Chemistry	
CHEM 318	Bioinorganic Chemistry	
CHEM 361	Molecules and Medicine	
CHEM 401	Inorganic Chemistry	
CHEM 411	Survey of Industrial Chemistry	
CHEM 426	Modern Organic Chemistry	
CHEM 460	Polymer Chemistry	

CHEM 491	Special Topics
CHEM 497	Independent Study (ACS)
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Total Credits	24-25

Additional Program Requirements (If Applicable)**Additional Admission Requirements Unique to Program (If Applicable)****Other Catalog Notes/Restrictions (If Applicable)****Rationale****Brief Change Rationale**

We are adding "certified" to send a clear message to students that the degree is certified by our professional society so as to make the major more attractive to students concerned with employability (surprisingly, many students and parents fail to see the applicability and employability of the chemistry/biochemistry degree).

We are removing the "general emphasis" language because we no longer need as much distinction from other options; we deleted two "tracks" a few years ago during the program array contraction, leaving only the "pure" ACS chemistry degree and its "Biochemistry Emphasis" counterpart for comprehensive chemistry majors. The tag "general emphasis" is somewhat contradictory, and seems to lack appeal for recruiting students to the major program.

CHEM 103 and CHEM 104 have been deleted from the curriculum.

Reviewer Comments

James Phillips (phillija) (Tue, 14 Sep 2021 03:07:07 GMT): Rollback: typos

Key: 366