



Course Approval Form

For instructions see: <http://registrar.gmu.edu/facultystaff/catalog-revisions/course/>

Action Requested:

Create new course Inactivate existing course

Modify existing course (check all that apply)

Title Credits Repeat Status Grade Type

Prereq/coreq Schedule Type Restrictions

Other: _____

Course Level:

Undergraduate

Graduate

College/School: COS Department: CHEMISTRY & BIOCHEMISTRY

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Subject Code: CHEM Number: 446 Effective Term: Fall Spring Summer Year 2016

(Do not list multiple codes or numbers. Each course proposal must have a separate form.)

Title: Current Bioinorganic Chemistry Fulfills Mason Core Req? (undergrad only)

Banner (30 characters max w/ spaces) _____ Currently fulfills requirement

New _____ Submission in progress

Credits: Fixed _____ or _____ Variable _____ to _____ Repeat Status: Not Repeatable (NR) Repeatable within degree (RD) Repeatable within term (RT) Maximum credits allowed: _____

Grade Mode: Regular (A, B, C, etc.) Satisfactory/No Credit Special (A, B, C, etc. +IP) Schedule Type: Lecture (LEC) Lab (LAB) Recitation (RCT) Internship (INT) Independent Study (iND) Seminar (SEM) Studio (STU)

Prerequisite(s): CHEM 331, CHEM 336, CHEM 463 or BIOL 483 Corequisite(s): _____ Instructional Mode: 100% face-to-face Hybrid: ≤ 50% electronically delivered 100% electronically delivered

Restrictions Enforced by System: Major, College, Degree, Program, etc. (include code) C* grade or higher in CHEM 331, CHEM 336 and CHEM 463 OR BIOL 483. Equivalencies: (check only as applicable)

*****NOTE—Removing CHEM 464 as a prereq and from hard coding.** YES, course is 100% equivalent to: _____

YES, course is being renumbered to/will replace the following: _____

Catalog Copy for NEW Courses Only (Consult University Catalog for models)

Description (No more than 60 words, use verb phrases and present tense)	Notes (List additional information for the course)
Indicate number of contact hours: _____	Hours of Lecture or Seminar per week: _____
When Offered: (check all that apply) <input type="checkbox"/> Fall <input type="checkbox"/> Summer <input type="checkbox"/> Spring	Hours of Lab or Studio: _____

Approval Signatures

D. [Signature] 5/12/16 College/School Approval Date

If this course includes subject matter currently dealt with by any other units, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

For Graduate Courses Only

Graduate Council Member _____ Provost Office _____ Graduate Council Approval Date _____

Course Proposal Submitted to the College of Science Curriculum Committee (COSCC)

The form above is processed by the Office of the University Registrar. This second page is for the COSCC's reference. Please complete the applicable portions of this page to clearly communicate what the form above is requesting.

FOR ALL COURSES (required)

Course Number and Title: CHEM 446 --- Bioinorganic Chemistry

Date of Departmental Approval: Dec. 4, 2015

FOR INACTIVATED/REINSTATED COURSES (required if inactivating/reinstating a course)

FOR MODIFIED COURSES (required if modifying a course)

- Summary of the Modification: CHEM 463 (Biochemistry 1) and CHEM 464 (Biochemistry 2) are currently listed as prerequisites for CHEM 446. CHEM 464 is being removed as a prerequisite to enroll in CHEM 446 since the required material is covered in the first semester CHEM 463 course. Concurrent enrollment in CHEM 463 is also being removed.
- Text before Modification (title, repeat status, catalog description, etc.):
 - CHEM 446 – Bioinorganic Chemistry (3:3:0); Not Repeatable
 - Application of inorganic coordination chemistry and physical methods in study of structure and function of metal ion sites in biomolecules. Properties of transition metal ions, ligand field theory. Topics include iron cytochromes, zinc and copper enzymes, cobalamins, iron sulfur proteins, oxygen transport, iron storage, electron transfer, inorganic model compounds, metals in medicine, and toxicity of inorganic species.
 - Prerequisite(s): Grade of C or better in CHEM 463, CHEM 464, CHEM 331 and CHEM 336. CHEM. Prerequisite enforced by registration system.
 - Notes: Students may take this course concurrently with CHEM 463 or after taking CHEM 463.
 - Hours of Lecture or Seminar per week: 3
 - Hours of Lab or Studio per week: 0
- Text after Modification (title, repeat status, catalog description, etc.):
 - CHEM 446 – Bioinorganic Chemistry (3:3:0); Not Repeatable
 - Application of inorganic coordination chemistry and physical methods in study of structure and function of metal ion sites in biomolecules. Properties of transition metal ions, ligand field theory. Topics include iron cytochromes, zinc and copper enzymes, cobalamins, iron sulfur proteins, oxygen transport, iron storage, electron transfer, inorganic model compounds, metals in medicine, and toxicity of inorganic species.
 - Prerequisite(s): Grade of C or better in CHEM 331, CHEM 336 and CHEM 463 or BIOL 483. Prerequisites enforced by registration system.
 - Notes:
 - Hours of Lecture or Seminar per week: 3
 - Hours of Lab or Studio per week: 0
- Reason for the Modification:
 - CHEM 464 is only offered during the spring semester.
 - Students that follow the progression of CHEM 463 (fall semester) and CHEM 464 (spring semester), with passing grades of course, will qualify to enroll in CHEM 446 when it is offered during the fall semester.

HOWEVER, students that enroll in CHEM 463 during the spring semester (taught by Polayes) or summer (Erb and Polayes both teach during the summer....different sessions) would not be eligible to enroll in CHEM 446 until a year later (after having passed CHEM 464.....major delay).

- More students are opting to take CHEM 463 during the summer session.
 - The material covering proteins, which is necessary for CHEM 446, is covered in the first semester course – CHEM 463.
 - Eliminating CHEM 464 as a prerequisite will increase the number of students eligible to enroll in CHEM 446 during the fall semester.
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FOR NEW COURSES (required if creating a new course)

- a. Reason for the New Course:
 - b. Relationship to Existing Programs:
 - c. Relationship to Existing Courses:
 - d. Semester of Initial Offering:
 - e. Proposed Instructors:
 - f. Insert Tentative Syllabus Below
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