

## Checklist for Curriculum Proposals

- ☒ 1. Are all **signatures on the hard copy of the proposal**?
- ☒ 2. Is the **effective date** correct?
- ☒ 3. Is the **rationale** for the proposal consistent with the changes proposed?
- ☒ 4. Does the proposed **number of credits** match the stated number?
- ☐ NA. 5. Have affected units been identified and contacted? Are required **support letters** attached?
- ☐ NA. 6. Is a resolution necessary? If so, is it attached?
- (Necessary for: establishing a major; disestablishing a major; a name change to any program with permanent status; a name change to a department or college; a transfer or creation of any department; request for permanent status).
- ☒ 7. Are all **courses (required or referenced)** in the UDSIS Inventory or in the approval process? courses being proposed Challenge List
- ☒ 8. Are all **university requirements** correctly specified?
- \_\_\_\_. A. Breadth requirements.
- \_\_\_\_. B. Multicultural requirement.
- \_\_\_\_. C. Writing requirement.
- \_\_\_\_. D. DLE requirement.
- ☒ 9. Are all **college requirements** correctly specified?
- ☒ 10. Is a side-by-side comparison provided?

# UNIVERSITY FACULTY SENATE FORMS

## Academic Program Approval

This form is a routing document for the approval of new and revised academic programs. Proposing department should complete this form. A [checklist](#) is available to assist in the preparation of a proposal. For more information, call the Faculty Senate Office at 831-2921.

**Submitted by:** John L. Burmeister \_\_\_\_\_ **phone number** 1130 \_\_\_\_\_

**Department:** Chemistry & Biochemistry \_\_\_\_\_ **email address** jlburn@udel.edu

**Date:** May 30, 2012 \_\_\_\_\_

**Action:** Revise major \_\_\_\_\_  
(Example: add major/minor/concentration, delete major/minor/concentration, revise major/minor/concentration, academic unit name change, request for permanent status, policy change, etc.)

**Effective term** 12F \_\_\_\_\_  
(use format 04F, 05W)

**Current degree: B.S. in Biochemistry**  
**(BS/BIOC)** \_\_\_\_\_  
(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

**Proposed change leads to the degree of: B.S. in Biochemistry**  
**(BS/BIOC)** \_\_\_\_\_  
(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

**Proposed name:** \_\_\_\_\_  
Proposed new name for revised or new major / minor / concentration / academic unit  
(if applicable)

**Revising:**

**Undergraduate major / Concentration: B.S. in Biochemistry**  
**(BS/BIOC)** \_\_\_\_\_  
(Example: Applied Music – Instrumental degree BMAS)

**Undergraduate minor:** \_\_\_\_\_  
(Example: African Studies, Business Administration, English, Leadership, etc.)

**Graduate Program Policy statement change:** \_\_\_\_\_  
(Must attach your Graduate Program Policy Statement)

**Graduate Program of Study:** \_\_\_\_\_  
(Example: Animal Science: MS Animal Science: PHD Economics: MA Economics: PHD)

**Graduate minor / concentration:** \_\_\_\_\_

**Note: all graduate studies proposals must include an electronic copy of the Graduate Program Policy Document, highlighting the changes made to the original policy document.**

**List new courses required for the new or revised curriculum. How do they support the overall program objectives of the major/minor/concentrations)? No new courses required**

(Be aware that approval of the curriculum is dependent upon these courses successfully passing through the [Course Challenge](#) list. If there are no new courses enter “None”) No new courses required.

**Supply support letter from the Library, Dean, and/or Department Chair if needed**  
(all new majors/minors will need a support letter from the appropriate administrator.) No letter needed

**Supply a resolution for all new majors/programs; name changes of colleges, departments, degrees; transfer of departments from one college to another; creation of new departments; requests for permanent status. [See example of resolutions.](#)** No resolution needed

**Explain, when appropriate, how this new/revised curriculum supports the 10 goals of undergraduate education: <http://www.ugs.udel.edu/gened/>** No explanation needed

**Identify other units affected by the proposed changes:**  
(Attach permission from the affected units. If no other unit is affected, enter “None”) None

**Describe the rationale for the proposed program change(s):**  
(Explain your reasons for creating, revising, or deleting the curriculum or program.)

When the FYE requirement was first instituted in 05F, most departments opted to rely on UNIV-101 to satisfy the requirement. We, instead, created our Freshman Majors Seminar. In 09F, we decided to incorporate the Freshman Majors Seminar as a 1-credit component in a 3-credit offering of CHEM-115 Introduction to Chemical Sciences course for all of our majors (BA/CHEM, BA/XCE, BS/CHEM and BS/BIOC). This has proved to be both a pedagogical and administrative mistake. Our majors’ peers were taking FYE courses that were almost invariably P/F, and sometimes zero credit, courses. Accordingly, a significant number of CHEM-115 registrants have treated the course as though it were P/F, rather than a standard graded 3-credit course. We have therefore decided to go back to square one, i.e., reinstitute CHEM-164-Freshman Majors Seminar as our FYE course and cut back CHEM-115 Introduction to Chemical Sciences to a required 2-credit course for our BS/Chemistry and BS/Biochemistry majors. (CHEM-115 was initially approved as a variable (1-3) credit course.)

**Program Requirements:**  
(Show the new or revised curriculum as it should appear in the Course Catalog. If this is a revision, be sure to indicate the changes being made to the current curriculum and **include a side-by-side comparison** of the credit distribution before and after the proposed change.) [See example of side by side.](#)

**DEGREE: BACHELOR OF SCIENCE**  
**MAJOR: BIOCHEMISTRY**

CURRICULUM	CREDITS
<b>UNIVERSITY REQUIREMENTS</b>	
<a href="#">ENGL 110</a> Critical Reading and Writing (minimum grade C-)	3
<a href="#">First Year Experience</a> (FYE)	0-4



<a href="#">University Breadth Requirement</a>	12
<a href="#">Discovery Learning Experience (DLE)</a>	3
<a href="#">Multi-cultural Course</a>	3

## COLLEGE REQUIREMENTS

Writing: (minimum grade C-) 3

A second writing course involving significant writing experience including two papers with a combined minimum of 3,000 words to be submitted for extended faculty critique of both composition and content. This course must be taken after completion of 60 credit hours. Appropriate writing courses are normally designated in the semester's Registration Booklet. (See list of courses approved for [Second Writing Requirement](#).) [ENGL 410](#) is highly recommended.

Foreign Language: 0-12

Completion of the intermediate-level course (107 or 112) in a modern foreign language. Number of credits needed and initial placement depends on number of years of high school study of foreign language. Students with four or more years of high school work in a single modern foreign language may attempt to fulfill the requirement in that language by taking an exemption examination.

## COLLEGE OF ARTS AND SCIENCES BREADTH REQUIREMENTS (minimum grade C-)

The College Breadth Requirements are in addition to the University Breadth Requirement. Up to 3 credits from each of the University Breadth Requirement categories may be used to simultaneously satisfy these College of Arts and Sciences Breadth Requirements.

A total of twenty-one credits from Groups A, B and C is required with a minimum of six credits<sup>21</sup> in each group. The six credits from each group could be from the same area.

Group A Creative Arts and Humanities

Group B History and Cultural Change

Group C Social and Behavioral Sciences

## MAJOR REQUIREMENTS

Minimum 47 credits total in CHEM

<a href="#">CHEM 111/CHEM 112</a>	General Chemistry	6
<a href="#">CHEM 115</a>	Introduction to Chemical Sciences	3 2
<a href="#">CHEM 120</a>	Quantitative Chemistry	3
<a href="#">CHEM 164</a>	Freshman Majors Seminar (FYE)	1
<a href="#">CHEM 331/CHEM 332</a>	Organic Chemistry	6
<a href="#">CHEM 333/CHEM 334</a>	Organic Chemistry Majors Laboratory I and II	4
<a href="#">CHEM 342</a>	Introduction to Biochemistry	3
<a href="#">CHEM 418</a>	Introductory Physical Chemistry I	3
or		
<a href="#">CHEM 443</a>	Physical Chemistry	3
<a href="#">CHEM 437/CHEM 438</a>	Instrumental Methods and Laboratory	4
<a href="#">CHEM 641</a>	Biochemistry	3
<a href="#">CHEM 419</a>	Introductory Physical Chemistry II	3
or		
<a href="#">CHEM 444</a>	Physical Chemistry	3
<a href="#">CHEM 445</a>	Physical Chemistry Laboratory	1
<a href="#">CHEM 642</a>	Biochemistry	3
<a href="#">CHEM 643</a>	Intermediary Metabolism	3

Two Advanced Chemistry courses at 600-level 6-8

or

Two Biology courses selected from the following:

<a href="#">BISC 300</a>	Introduction to Microbiology	4
<a href="#">BISC 306</a>	General Physiology	3
<a href="#">BISC 401</a>	Molecular Biology of the Cell	3
<a href="#">BISC 403</a>	Genetic and Evolutionary Biology	3
<a href="#">BISC 601</a>	Immunochemistry	4

<a href="#">BISC 654</a>	Biochemical Genetics	3
<a href="#">BISC 679</a>	Virology	3
<a href="#">CHEM 465</a>	Seminar (two semesters, fall and spring)	2
<a href="#">CHEM 468</a>	Undergraduate Research	3
or		
One Biology laboratory course selected from the following:		2-4
<a href="#">BISC 300</a>	Introduction to Microbiology	4
<a href="#">BISC 315</a>	Experimental Cell Biology	2
<a href="#">BISC 316</a>	Experimental Physiology	2
<a href="#">BISC 411</a>	Experimental Molecular Biology	2
<a href="#">BISC 413</a>	Advanced Genetics Laboratory	2
<a href="#">BISC 601</a>	Immunochemistry	4
Related Work		
<a href="#">MATH 241</a>	Analytic Geometry and Calculus A	4
<a href="#">MATH 242</a>	Analytic Geometry and Calculus B (strongly recommended)	4
<a href="#">BISC 207/BISC 208</a>	Introductory Biology I and II	8
<a href="#">PHYS 201/PHYS 202</a>	Introductory Physics I and II	8

### ELECTIVES

After required courses are completed, sufficient elective credits must be taken to meet the minimum credit requirement for the degree.

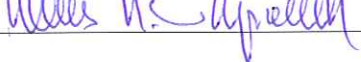
CREDITS TO TOTAL A MINIMUM OF

124

Candidates for a BS in biochemistry must achieve a cumulative GPA of at least 2.00 for all chemistry courses taken. Repeated Chemistry courses are counted only once in the calculation of the Chemistry GPA. The calculation of the chemistry course GPA (2.00 minimum required for graduation) for candidates for the BS degree in Chemistry or Biochemistry will not include grades earned for lower level subdisciplinary courses taken after a higher level course in the same subdiscipline has been taken and passed with a grade of C or higher. Likewise, freshman-level courses may not be used by upperclassmen as GPA enhancers after those required for graduation has been taken. [CHEM 342](#) and [CHEM 100](#) will be regarded as exceptions to the foregoing prohibitions, since their subject matter coverage is considerably different than that found in higher level courses.

Example: A grade earned in [CHEM 214](#) subsequent to a C or better grade earned in [CHEM 527](#) (or [CHEM 641/CHEM 642](#)) would not be counted in the chemistry GPA calculation for BS chemistry or biochemistry majors.

### ROUTING AND AUTHORIZATION: (Please do not remove supporting documentation.)

Department Chairperson  Date 5/31/12

Dean of College \_\_\_\_\_ Date \_\_\_\_\_

Chairperson, College Curriculum Committee \_\_\_\_\_ Date \_\_\_\_\_

Chairperson, Senate Com. on UG or GR Studies \_\_\_\_\_ Date \_\_\_\_\_

Chairperson, Senate Coordinating Com. \_\_\_\_\_ Date \_\_\_\_\_

Secretary, Faculty Senate \_\_\_\_\_ Date \_\_\_\_\_

Date of Senate Resolution \_\_\_\_\_ Date to be Effective \_\_\_\_\_

Registrar \_\_\_\_\_ Program Code \_\_\_\_\_ Date \_\_\_\_\_

Vice Provost for Academic Affairs & International Programs \_\_\_\_\_ Date \_\_\_\_\_

Provost \_\_\_\_\_ Date \_\_\_\_\_

Board of Trustee Notification \_\_\_\_\_ Date \_\_\_\_\_