


Serial Number #19-20-7C

TO: President David Dooley

FROM: Bahram Nassersharif, Chairperson of the Faculty Senate

1. The attached BILL titled, the Curricular and Standards Committee Report #2019-20-2: BS in Chemistry, with Tracks of General Chemistry and Forensic Chemistry, is forwarded for your consideration.
2. This BILL was adopted by vote of the Faculty Senate on October 24, 2019.
3. After considering this bill, will you please indicate your approval or disapproval. Return the original, completing the appropriate endorsement below.
4. In accordance with Section 10, paragraph 4 of the Senate's By-Laws, this bill will become effective November 14, 2019 three weeks after Senate approval, unless: (1) specific dates for implementation are written into the bill; (2) you return it disapproved; or (3) the University Faculty petitions for a referendum.



Bahram Nassersharif  
Chairperson of the Faculty Senate

October 24, 2019

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ENDORSEMENT

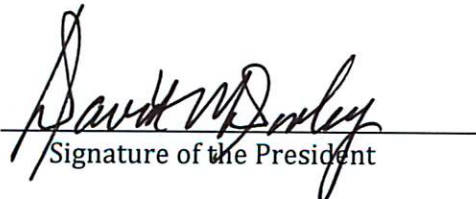
TO: Chairperson of the Faculty Senate

FROM: President of the University

a. Approved ☒.

b. Approved subject to Notice of the Council on Postsecondary Education \_\_\_\_.

c. Disapproved \_\_\_\_.

  
Signature of the President

11.7.19  
(date)

**UNIVERSITY OF RHODE ISLAND FACULTY SENATE**  
**October 17, 2019**

**Faculty Senate Curriculum and Standards Committee**  
**Report 2019-2020-02**

At the September 26, 2019 meeting of the Curriculum and Standards Committee, the following matters were considered and are now presented to the Faculty Senate.

**SECTION II**  
**Curricular Matters Which Require Confirmation by the**  
**Faculty Senate**

**PROGRAMS CHANGES (9)**

**Chemistry Department:**

**(Appendix F)**

**BS in Chemistry with two tracks - General Chemistry and Forensic Chemistry:**

We propose to combine two majors currently being offered, a B.S. in chemistry and a B.S. in forensic chemistry, into two different tracks within the same major. The new major would be called Chemistry, and the two tracks for the major would be a general chemistry track and a forensic chemistry track. This change would require no additional resources, including budgetary resources. It would provide advantages for the students compared to the current situation of two separate majors. Currently, students who start their college career with a major in forensic chemistry need to switch majors if they decide they are no longer interested in the forensic component of their studies. This major switch requires more paperwork, and potentially more hassle for students, faculty, and administrators. Under the new proposed system, such students would simply have to switch tracks, and minimal paperwork would be required.

Currently, students in the forensic chemistry major and students in the chemistry major generally take the same classes, with differences in the seminar required (chemistry students are required to take chemistry seminar while forensic chemistry students take a specialized forensic chemistry seminar) as well as in the independent research requirements (forensic chemistry students do research in forensic chemistry, whereas general chemistry students do research in general chemistry). Moreover, the third semester of physics is not required for forensic chemistry majors but is required for general chemistry majors. We propose to keep all these differences, but simply classify the two options for students as differences in tracks rather than differences in majors

**Modified Form**  
**For New Interdisciplinary Minors, and New**  
**Tracks/Options/Sub-plans/Concentrations**

**A Proposal for:** Combination of B.S. in Chemistry and B.S. in Forensic Chemistry into one degree, a B.S. in Chemistry, with two tracks: General Chemistry track and Forensic Chemistry track

**Date:** November 4, 2018

**A. PROGRAM INFORMATION**

**A1. Name of institution:** University of Rhode Island

**A2. Name of department, division, school or college**

**Department** Chemistry

**College** Arts and Sciences

**A3. Title of proposed program and Classification of Instructional Programs [\(CIP\) code](#)**

**Program title** Forensic Chemistry Track

**Classification code (CIP)** 40.0510

**A4. Intended initiation date of program change. Include anticipated date for granting first degrees or certificates, if appropriate.**

**Initiation date** September 2019

**First degree date** May 2023

**A5. Intended location of the program** Beaupre Center for Chemistry and Forensic Sciences, 140 Flagg Road, Kingston, RI 02881

**A6. Description of institutional review and approval process**

**Department**

Approval Date

Fall 2017

College

CAC/Graduate Council

Faculty Senate

President of the University

**A7. Summary description of proposed program (not to exceed 2 pages)**

We propose to combine two majors currently being offered, a B.S. in chemistry and a B.S. in forensic chemistry, into two different tracks within the same major. The new major would be called Chemistry, and the two tracks for the major would be a general chemistry

track and a forensic chemistry track. This change would require no additional resources, including budgetary resources. It would provide advantages for the students compared to the current situation of two separate majors. Currently, students who start their college career with a major in forensic chemistry need to switch majors if they decide they are no longer interested in the forensic component of their studies. This major switch requires more paperwork, and potentially more hassle for students, faculty, and administrators. Under the new proposed system, such students would simply have to switch tracks, and minimal paperwork would be required.

Currently, students in the forensic chemistry major and students in the chemistry major generally take the same classes, with differences in the seminar required (chemistry students are required to take chemistry seminar while forensic chemistry students take a specialized forensic chemistry seminar) as well as in the independent research requirements (forensic chemistry students do research in forensic chemistry, whereas general chemistry students do research in general chemistry). Moreover, the third semester of physics is not required for forensic chemistry majors but is required for general chemistry majors. We propose to keep all these differences, but simply classify the two options for students as differences in tracks rather than differences in majors.

**A8. Signature of the President**

Rebecca  
Romanow

Digitally signed by Rebecca Romanow  
Date: 2019.07.03 16:21:07 -04'00'

Nedra  
Reynolds

Digitally signed by Nedra Reynolds  
Date: 2019.07.05 09:50:11 -04'00'

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David M. Dooley

**A9. Person to contact during the proposal review**

Name: Mindy Levine  
Title: Associate Professor of Chemistry  
Phone: 401-874-4243  
Email: m\_levine@uri.edu

**A10. List and attach any signed agreements for any cooperative arrangements made with other institutions/agencies or private companies in support of the program.**

N/A

**B. RATIONALE: There should be a demonstrable need for the program.**

**B1. Why is the new program being developed?**

Our current system of having two separate majors, one for a B.S. in chemistry and one for a B.S. in forensic chemistry, creates unnecessary paperwork and logistical barriers to moving between the two majors. This kind of movement is relatively common, as often students come in interested in forensic chemistry and then switch their focus to other areas of chemistry. The course requirements for the two majors are largely identical, with relatively minor differences, and therefore it makes sense to combine the two majors into one major, Chemistry, with two tracks, a general Chemistry track and a forensic Chemistry track. No resources are required to do this, and we expect that this would substantially ease the burden on faculty, administrators, and students under the new proposed organizational system.

**B2. What is the economic need and workforce data related to the program?**

**a. Provide information on jobs available as a result of successfully completing the certificate or degree: job titles, job outlook/growth, and salaries.**

Chemistry students who successfully complete degrees in either chemistry or forensic chemistry have significant opportunities to attend graduate school and/or to obtain employment in the field of chemistry. Substantial opportunities exist for these students, independent of whether their focus is on chemistry or forensic chemistry, and we expect that to remain the same with the proposed combination of the two majors into one major with two distinct tracks.

**B3. What entities are advocating for this program? Was an advisory board used to develop the curriculum?**

The Chemistry department faculty, who teach classes for both chemistry and forensic chemistry students, strongly advocate for this program, as do supporting administrators in chemistry and the students themselves.

**C. INSTITUTIONAL ROLE: The program should be clearly related to the published role, scope, and mission of the institution and be compatible with other programs and activities of the institution.**

**C1. Explain how the program is consistent with the published role, scope, and mission of the institution and how it is related to the institution's Academic Plan.**

Establishing a strong presence in chemistry and forensic chemistry is consistent with the institution's academic plan, and is particularly consistent with the vision of the new home for both of these programs, the Beaupre Center for Chemistry and Forensic Sciences. We recognize that students can move between these two fields while maintaining their interest in the overall field, and seek to ease that burden on the students, faculty, and staff through this combination.

## **D. INTER-INSTITUTIONAL CONSIDERATIONS:**

### **D1. What are the similar programs in the state and region?**

There are few other forensic chemistry programs available in the region, with the forensic chemistry program at the University of Rhode Island one of the pre-eminent programs in the country. We expect that this program of a chemistry major with a forensic chemistry track would continue that record of excellence in this field, with no change to the status anticipated.

#### **a. If similar programs exist, how is this program different or why is duplication necessary?**

N/A.

#### **b. Have you communicated with other institutions about the development of this program and have any concerns been raised related to role, scope, and mission or duplication?**

Not to date, but we do not expect any concerns from other institutions because our course requirements for the degree have remained unchanged, and the difference is merely in the branding of these requirements as two different tracks rather than two different degrees.

### **D2. How do courses in this program transfer to other schools?**

We expect courses to transfer from this program in much the same way that courses currently transfer, with the current system of two different majors. Having one umbrella major with two different tracks rather than two different majors would not change the course load or course descriptions, and as such we do not expect it to change the way that courses in this program can transfer to other schools.

### **D3. How does this program align to academic programs at other institutions?**

It is standard practice not to differentiate chemistry students who are studying substantially the same topics, with only slightly different specialties and foci, into separate majors.

### **D4. Are recipients of this credential accepted into programs at the next degree level without issue?**

Yes. The students who graduate with these degrees would be employed either in the chemistry industry or in the forensic sciences field. Alternatively, they would be admitted to graduate programs in either of these two subdisciplines.

### **D5. How does this program of study interface with degree programs at the level below them?**

Interfacing is expected to be identical with the new classification system of two tracks compared to the old system of two majors, because course content and requirements are to remain unchanged.

### **D6. Are cooperative agreements or affiliations established? If so, what?**

None noted.

**E. PROGRAM:**

**E1. Are there pre-requisite courses? If so, please explain/list?**

No pre-requisites would be required prior to starting each major field of study, but a cumulative average of 2.0 would be required to continue to advance towards the degree, as well as a grade of C- or better in the class that immediately precedes the one in which a student is interested in taking. This would be true for the general chemistry track of the B.S. and for the forensic chemistry track. No changes to curricula for either major are proposed, only a rebranding of the two majors into two distinct tracks within the same major.

**E2. Curriculum**

**a. How many credit hours are required to graduate (include all general education and pre-requisites)?**

120 credits are required for the B.S. degree in either the general track or in the forensic sciences track, of which 55 credits must be towards the chemistry major.

**b. What courses are required for the program?**

**B.S. in chemistry, general track would require the following courses:**

*Freshman Year First semester: 16-18 credits*

CHM 191 (5) (or CHM 101, 102 [4]); MTH 141 (4), General Education requirements (5-6).

*Second semester: 16-18 credits*

CHM 192 (5) (or CHM 112, 114 [4]); MTH 142 (4), General Education requirements (5-6).

*Sophomore Year First semester: 17 credits*

CHM 212 (4); CHM 227 or 291 (3); MTH 243 (3); PHY 203, 273 (4), General Education requirements (3).

*Second semester: 18 credits*

CHM 292 (5) (or CHM 226, 228 [5]); MTH 244 (3); PHY 204, 274 (4), General Education requirements (6).

*Junior Year First semester: 15 credits*

CHM 335 (2), 431 (3); PHY 205, 275 (4); General Education requirements (6).

*Second semester: 17 credits*

CHM 412 (3), 414 (2), 432 (3); General Education requirements (9).

*Senior Year First semester: 14-19 credits*

CHM 353 (3), 401 (3), 425 (2), 427 (3), curriculum requirements (3-6), General Education requirements (3-5).

*Second semester: 15 credits*

CHM 353 (3), 492 [capstone] (1), 402 (2), 441 (3), curriculum requirements, free electives (9).

**B.S. in chemistry, forensic track would require the following courses:**

*Freshman and sophomore years follow the same program as the B.S. in chemistry.*



*Freshman Year First semester: 16-18 credits*

CHM 191 (5) (or CHM 101, 102 [4]); MTH 141 (4), General Education requirements (5-6).

*Second semester: 16-18 credits*

CHM 192 (5) (or CHM 112, 114 [4]); MTH 142 (4), General Education requirements (5-6).

*Sophomore Year First semester: 17 credits*

CHM 212 (4); CHM 227 or 291 (3); MTH 243 (3); PHY 203, 273 (4), General Education requirements (3).

*Second semester: 18 credits*

CHM 292 (5) (or CHM 226, 228 [5]); MTH 244 (3); PHY 204, 274 (4), General Education requirements (6).

*Junior Year:*

*First semester: 15 credits*

CHM 335 (2), 354 (3), 391 (1), 431 (3), General Education requirement (3), free elective (3).

*Second semester: 17 credits*

CHM 392 (3), 412 (3), 414 (2), 432 (3), General Education requirement (6).

*Senior Year:*

*First semester: 15 credits*

CHM 391 (1), 401 (3), 425 (2), 427 (3), free electives (6).

*Second semester: 16 credits*

CHM 354 (3), 391 (1), 441 (3), free electives (9).

**c. What are the new courses and descriptions that will go into the course catalog?**

No new courses would go into the catalogue. No new course requirements are expected. The new descriptions would indicate that the B.S. in chemistry degree has two tracks, a general chemistry track and forensic chemistry track, and that minor differences in requirements between those two tracks exist, especially in the area of focus of research seminars and independent studies.

**d. Are there specializations and options? If so, please describe.**

Options exist in both tracks regarding how much independent study each student would complete, as well as how often they can repeat the seminar course for credit.

**e. Is the program content guided by program-specific accreditation standards or other outside guidance?**

Accreditation by the American Chemical Society would continue for the B.S. in chemistry, general chemistry track.

**f. What are the learning goals (what students are expected to gain, achieve, know, or demonstrate by completion of the program)?**

Competence in a broad range of chemistry sub-disciplines, combined with an awareness of the relevance to forensic sciences (for the forensic track) or more depth in any of the traditional subdisciplines (for the general track)

- F. FACULTY AND STAFF:** The faculty and support staff for the program should be sufficient in number and demonstrate the knowledge, skills, and other attributes necessary to the success of the program.

**F1. What are the number of each needed?**

No new faculty or staff members would be required. There would be no new course offerings, no new degree requirements, and no expected changes in the numbers of students accessing these courses. This change would merely make things easier for students to move within the field of chemistry by putting these two majors under one umbrella major with its two distinct tracks.

**F2. Are these new positions or reassignments?**

N/A. No new positions and no reassignments.

**F3. What are the minimal degree level and academic/technical field requirements and certifications required for teaching in this program?**

Ph.D. in chemistry or a related discipline.

## STUDENTS:

### **G1. How are students selected for the program?**

Students would generally self-select based on their declared major and would have the option of choosing their desired track within the major. Options for switching between the two tracks would also be greatly simplified.

### **G2. Are there admission requirements?**

The same requirements that have previously existed for the two majors would continue to exist for this new organizational system. These requirements primarily focus on math competency as a way to increase the likelihood of student success in these courses.

### **G3. What is the primary source of students?**

#### **a. New students or drawn from other programs?**

Our primary source would be students who would otherwise select a B.S. in chemistry or a B.S. in forensic chemistry, based on the previous classification system. These students would now select a track within the B.S. in chemistry major, either as a general track or as a forensic chemistry track.

#### **b. Industry sponsored students/ employees? Describe.**

We do not expect substantial numbers of industry-sponsored students and/or employees to join this program, much in the same way that few if any industry-sponsored students/employees are enrolled in our current chemistry major program options.

### **G4. What is the estimated number of students in the program?**

50-100 students, which is about the same as what we currently have between the two majors of B.S. in chemistry and B.S. in forensic chemistry.

**PLEASE NOTE: Students who are currently enrolled in the B.S. in chemistry or the B.S. in forensic science, would be moved to one of the new tracks within the existing B.S. in chemistry. We would inform the students of this proposed change and request their permission to do so. We expect that the students are highly likely to agree to this change because it would mean no difference in their coursework and requirements.**

**We would further work with the undergraduate admissions office to ensure that new students are not admitted to the B.S. in forensic sciences degree while this transition is occurring.**

**In cases where the students decline to move to the new track, we will work with the department to ensure that all courses remain available for the student to complete their declared major. This will ensure minimal disruption to the students and provide them with maximum choice in decision making about their college experience.**

### **G5. What is the estimated number of annual graduates?**

10-20 students per year.

## **H. EVALUATION:**

### **H1. How will the program be evaluated?**

#### **a. Performance measures to evaluate the program.**

We would evaluate the number of students enrolled in both tracks, the general chemistry and forensic chemistry track, and track how many of those students successfully complete the degree. We would compare these numbers to the numbers of students who successfully completed their degree before the majors were combined, to understand how the track combination affects the total number of enrolled students and supports their academic pathway to success.

#### **b. Will the program be accredited? If so, when? How?**

The American Chemical Society would continue to accredit the B.S. in chemistry, general chemistry track, much in the same way that they have been accrediting and evaluating the current B.S. in chemistry. The forensic track within the B.S. in chemistry degree would not have track-specific accreditation at this time.

**I. WHAT SPECIAL EQUIPMENT OR RESOURCES ARE NEEDED?**

**I1. Special instructional resources and services needed? (Clinical space, internships, proctors)**

None.

**I2. Facilities and capital equipment?**

None.

J. IS THE PROGRAM FINANCIALLY VIABLE?

**J1. ALL PROPOSALS: Complete the Rhode Island Office of Postsecondary Commissioner [Budget Form](#) demonstrating either**

**a. the need for additional resources or**

No additional resources are required.

**b. that existing funds are sufficient for carrying out the program.**

Existing funds are sufficient. See attached budget form.

**The completed proposal with Budget Form requires review by the URI Budget and Financial Planning Office. If no new funds are requested, proposers shall request a Statement of No Financial Impact from the URI Budget and Financial Planning Office.**



**BUDGET AND FINANCIAL PLANNING**

Adams House, 85 Upper College Road, Kingston, RI 02881 USA p: 401.874.2509 web.uri.edu/budget



DATE: May 15, 2019

TO: Margaret Benz  
Coordinator, Faculty Senate

FROM: Linda Barrett  
Director, Budget and Financial Planning

SUBJECT: Proposal for a Combination of B.S. in Chemistry and B.S. in Forensic Chemistry into one degree, a B.S. in Chemistry, with two tracks: General Chemistry track and Forensic Chemistry track

As requested in an email from Mary Michelini, Assistant to the Associate Deans in the College of Arts and Sciences, dated April 17, 2019, the Budget and Financial Planning Office has reviewed the revised proposal related to the proposal for a Combination of B.S. in Chemistry and B.S. in Forensic Chemistry into one degree, a B.S. in Chemistry, with two tracks: General Chemistry track and Forensic Chemistry track.

The Budget and Financial Planning Office, including communication with Enrollment Services, concurs that the revised proposal for a Combination of B.S. in Chemistry and B.S. in Forensic Chemistry into one degree, a B.S. in Chemistry, with two tracks: General Chemistry track and Forensic Chemistry track is not anticipated to have an impact on the Fund 100 unrestricted budget as it has been presented.

Please let us know if you require any further information.

cc: Donald DeHayes  
Laura Beauvais  
Jeannette Riley  
Cheryl Hinkson  
Joanne Lawrence  
Nedra Reynolds

Dean Libutti  
Matthew Bodah  
Mindy Levine  
Colleen Robillard  
John Humphrey  
Nancy Eaton

Office/BudgetImpactStatements/consolidationofBSinchemistryandforensicchemistry/BudgetImpactStatementLetter.final



## ACADEMIC PROGRAM BUDGET FORM

Use this form for programs that can be pursued on a full-time basis, part-time basis, or through a combination of full-time and part-time attendance. **Page 1 of 3**

Choose one: ☐ Full-time    ☐ Part-time    ☐ Combination of full- and part-time

### REVENUE ESTIMATES

	Year 1		Year 2		Year 3		Year 4	
	2020		2021		2022		2023	
Tuition: In-State	\$12,590		\$12,948		\$12,948		\$12,948	
Tuition: Out-State	\$29,710		\$30,466		\$30,466		\$30,466	
Tuition: Regional	\$22,032		\$22,658		\$22,658		\$22,658	
Mandatory fees per student	\$1,976		\$2,020		\$2,020		\$2,020	
FTE # of New Students: In-State	\$0		\$0		\$0		\$0	
FTE # of New Students: Out-State	\$0		\$0		\$0		\$0	
# of In-State FTE students transferring in from the institution's existing programs	\$0		\$0		\$0		\$0	
# of Out-State FTE students transferring in from the institution's existing programs	\$0		\$0		\$0		\$0	
<b>TUITION AND FEES</b>	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs	Newly Generated Revenue	Revenue from existing programs
<b>First Year Students</b>								
In-State tuition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Out-of-State tuition	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Regional tuition								
Mandatory fees	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Second Year Students</b>								
In-State tuition			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Out-of-State tuition			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Regional tuition								
Mandatory fees			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Third Year Students</b>								
In-State tuition								
Out-of-State tuition								
Regional tuition								
Mandatory fees								
<b>Fourth Year Students</b>								
In-State tuition								
Out-of-State tuition								
Regional tuition								
Mandatory fees								
<b>Total Tuition and Fees</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>GRANTS</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>CONTRACTS</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>OTHER (Specify)</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Grants, Contracts, Other</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>TOTAL</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

NOTE: All of the above figures are estimates based on projections made by the institution submitting the proposal.

## ACADEMIC PROGRAM BUDGET FORM

Use this form for programs that can be pursued on a full-time basis, part-time basis, or through a combination of full-time and part-time attendance. **Page 2 of 3**

### EXPENDITURE ESTIMATES

	Year 1 20__		Year 2 20__		Year 3 20__		Year 4 20__	
	Additional resources required for program	Expenditures from current resources	Additional resources required for program	Expenditures from current resources	Additional resources required for program	Expenditures from current resources	Additional resources required for program	Expenditures from current resources
<b>PERSONNEL SERVICES</b>								
Administrators								
Faculty								
Support Staff								
Others								
Fringe Benefits %								
<b>Total Personnel</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>OPERATING EXPENSES</b>								
Instructional Resources								
Other (specify)								
<b>Total Operating Expenses</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>CAPITAL</b>								
Facilities								
Equipment								
Other								
<b>Total Capital</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>NET STUDENT ASSISTANCE</b>								
Assistantships								
Fellowships								
Stipends/Scholarships								
<b>Total Student Assistance</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>TOTAL EXPENDITURES</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

NOTE: All of the above figures are estimates based on projections made by the institution submitting the proposal.

## ACADEMIC PROGRAM BUDGET FORM

Use this form for programs that can be pursued on a full-time basis, part-time basis, or through a combination of full-time and part-time attendance. **Page 3 of 3**

	Year 1 20__	Year 2 20__	Year 3 20__	Year 4 20__
<b>BUDGET SUMMARY OF COMBINED EXISTING AND NEW PROGRAM</b>				
Total Revenue	\$0.00	\$0.00	\$0.00	\$0.00
Total Expenses	\$0.00	\$0.00	\$0.00	\$0.00
<b>Excess/Defecency</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>BUDGET SUMMARY OF EXISTING PROGRAM ONLY</b>				
Total Revenue	\$0.00	\$0.00	\$0.00	\$0.00
Total Expenses	\$0.00	\$0.00	\$0.00	\$0.00
<b>Excess/Defecency</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>BUDGET SUMMARY OF NEW PROGRAM ONLY</b>				
Total of Newly Generated Revenue	\$0.00	\$0.00	\$0.00	\$0.00
Total of Additional Resources Required for	\$0.00	\$0.00	\$0.00	\$0.00
<b>Excess/Deficiency</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>

NOTE: All of the above figures are estimates based on projections made by the institution submitting the proposal.

## APPENDIX 1: UPDATED LANGUAGE IN THE COURSE CATALOGUE

### Chemistry

The Department of Chemistry offers a Bachelor of Arts (B.A.) degree and a Bachelor of Science (B.S.) degree. The department also offers the Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in chemistry.

*Faculty:* Professor Smith *chairperson*. Professors DeBeof, Euler, Freeman, Kirschenbaum, Lucht, Oxley, and S. Yang; Associate Professors Dwyer, Levine; Assistant Professors Hayes, Kiesewetter, and Kim; Professors Emeriti C. Brown, Cheer, Dain, Nelson, Rosen, and Traficante.

### BACHELOR OF ARTS

Students in this program must complete a minimum of 31 credits (maximum 45) in chemistry by taking either 10 credits as CHM 191, 192 or 8 credits as CHM 101, 102, 112, 114; and 20 credits as CHM 212, 226, 227, 228, 335, 431, and 432 or 20 credits as CHM 212, 291, 292, 335, 431, and 432. One additional course must be chosen from CHM 401, 412, 427, or 441. CHM 229 and 230 may be substituted for CHM 226.

MTH 141 and 142 and one year of physics (PHY 111, 112, 185, and 186, or PHY 203, 204, 273, and 274) are required.

A total of 120 credits is required for the B.A. At least 42 of these must be in courses numbered 300 or above.

### BACHELOR OF SCIENCE

The Bachelor of Science Degree is offered in two different tracks: the General Track, and the Forensic Sciences Track. The General Track is designed to prepare the student for a career in chemistry. As such, this curriculum provides a thorough training in both theory and practice in the fields of analytical, physical, organic, biochemistry, and inorganic chemistry. Those who complete this curriculum are prepared to practice as a chemist, pursue graduate studies in chemistry, or enroll in a professional school in a related area such as medicine, dentistry, or pharmacy. Preprofessional studies can be focused through the use of electives.

The B.S. degree, General Track, is accredited by the American Chemical Society Committee on Professional Training of Chemists. Graduates receive a certification card issued by the society and are eligible for senior membership after two years of experience in the field of chemistry. It is strongly recommended that WRT 104 or 106 be taken in the freshman year. CHM 425, 427 should be taken in the junior year by students planning research or advanced course work in organic chemistry. Six credits of "curriculum requirements" shall include either CHM 353 or any 500-level courses with department approval.

B.S. students desiring the American Chemical Society option in chemistry/biochemistry must take BCH 581, 582. Six additional credits in undergraduate research (CHM 353) are also required to satisfy requirements for advanced laboratory. CHM 353 will be supervised by faculty with expertise in biochemistry. Students electing the chemistry/biochemistry option may wish to take additional courses in molecular biology as electives.

A total of 120 credits is required for the B.S. degree. Accreditation guidelines require chemistry majors to take 55 credits toward the chemistry major.

*Freshman Year First semester: 16-18 credits*

CHM 191 (5) (or CHM 101, 102 [4]); MTH 141 (4), General Education requirements (5-6).

*Second semester: 16-18 credits*

CHM 192 (5) (or CHM 112, 114 [4]); MTH 142 (4), General Education requirements (5-6).

*Sophomore Year First semester: 17 credits*

CHM 212 (4); CHM 227 or 291 (3); MTH 243 (3); PHY 203, 273 (4), General Education requirements (3).

*Second semester: 18 credits*

CHM 292 (5) (or CHM 226, 228 [5]); MTH 244 (3); PHY 204, 274 (4), General Education requirements (6).

*Junior Year First semester: 15 credits*

CHM 335 (2), 431 (3); PHY 205, 275 (4); General Education requirements (6).

*Second semester: 17 credits*

CHM 412 (3), 414 (2), 432 (3); General Education requirements (9).

*Senior Year First semester: 14-19 credits*

CHM 353 (3), 401 (3), 425 (2), 427 (3), curriculum requirements (3-6), General Education requirements (3-5).

*Second semester: 15 credits*

CHM 353 (3), 492 [capstone] (1), 402 (2), 441 (3), curriculum requirements, free electives (9).

~~The B.S. degree, Forensic Track, will provide students who The Department of Chemistry offers a Bachelor of Science degree in chemistry and forensic chemistry.~~

~~Coordinator: Professor Smith~~

~~Students who~~ earn a degree in ~~chemistry and forensic chemistry~~ havethis track with a number of potential career opportunities. Most forensic chemists work in government laboratories, typically affiliated with a medical examiner's office. The degree is accredited by the American Chemical Society.

The course sequence given below is the typical curriculum for majors in chemistry and forensic chemistry, but modifications in the timing of upper level courses are acceptable. The degree emphasizes a strong preparation in chemistry supplemented by an introduction to the field of forensic science. In addition to the required courses, students are encouraged to take SOC 230, Crime and Delinquency.

A total of 120 credits is required for graduation.

*Freshman and sophomore years follow the same program as the B.S. in chemistry.*

*Freshman Year First semester: 16-18 credits*

CHM 191 (5) (or CHM 101, 102 [4]); MTH 141 (4), General Education requirements (5-6).

*Second semester: 16-18 credits*

CHM 192 (5) (or CHM 112, 114 [4]); MTH 142 (4), General Education requirements (5-6).

*Sophomore Year First semester: 17 credits*

CHM 212 (4); CHM 227 or 291 (3); MTH 243 (3); PHY 203, 273 (4), General Education requirements (3).

*Second semester: 18 credits*

CHM 292 (5) (or CHM 226, 228 [5]); MTH 244 (3); PHY 204, 274 (4), General Education requirements (6).

*Junior Year:*

*First semester: 15 credits*

CHM 335 (2), 354 (3), 391 (1), 431 (3), General Education requirement (3), free elective (3).

*Second semester: 17 credits*

CHM 392 (3), 412 (3), 414 (2), 432 (3), General Education requirement (6).

*Senior Year:*

*First semester: 15 credits*

CHM 391 (1), 401 (3), 425 (2), 427 (3), free electives (6).

*Second semester: 16 credits*

CHM 354 (3), 391 (1), 441 (3), free electives (9).

For more information see [chm.uri.edu](http://chm.uri.edu).

## **APPENDIX 2: UPDATED COURSE MAPS**

### **BACHELOR OF ARTS**

Students in this program must complete a minimum of 31 credits (maximum 45) in chemistry by taking either 10 credits as CHM 191, 192 or 8 credits as CHM 101, 102, 112, 114; and 20 credits as CHM 212, 226, 227, 228, 335, 431, and 432 or 20 credits as CHM 212, 291, 292, 335, 431, and 432. One additional course must be chosen from CHM 401, 412, 427, or 441. CHM 229 and 230 may be substituted for CHM 226.

MTH 141 and 142 and one year of physics (PHY 111, 112, 185, and 186, or PHY 203, 204, 273, and 274) are required.

A total of 120 credits is required for the B.A. At least 42 of these must be in courses numbered 300 or above.

### **BACHELOR OF SCIENCE**

#### **General Track:**

*Freshman Year First semester: 16-18 credits*

CHM 191 (5) (or CHM 101, 102 [4]); MTH 141 (4), General Education requirements (5-6).

*Second semester: 16-18 credits*

CHM 192 (5) (or CHM 112, 114 [4]); MTH 142 (4), General Education requirements (5-6).

*Sophomore Year First semester: 17 credits*

CHM 212 (4); CHM 227 or 291 (3); MTH 243 (3); PHY 203, 273 (4), General Education requirements (3).

*Second semester: 18 credits*

CHM 292 (5) (or CHM 226, 228 [5]); MTH 244 (3); PHY 204, 274 (4), General Education requirements (6).

*Junior Year First semester: 15 credits*

CHM 335 (2), 431 (3); PHY 205, 275 (4); General Education requirements (6).

*Second semester: 17 credits*

CHM 412 (3), 414 (2), 432 (3); General Education requirements (9).

*Senior Year First semester: 14-19 credits*

CHM 353 (3), 401 (3), 425 (2), 427 (3), curriculum requirements (3-6), General Education requirements (3-5).

*Second semester: 15 credits*

CHM 353 (3), 492 [**capstone**] (1), 402 (2), 441 (3), curriculum requirements, free electives (9).

**Forensic Track:**

*Freshman Year First semester: 16-18 credits*

CHM 191 (5) (or CHM 101, 102 [4]); MTH 141 (4), General Education requirements (5-6).

*Second semester: 16-18 credits*

CHM 192 (5) (or CHM 112, 114 [4]); MTH 142 (4), General Education requirements (5-6).

*Sophomore Year First semester: 17 credits*

CHM 212 (4); CHM 227 or 291 (3); MTH 243 (3); PHY 203, 273 (4), General Education requirements (3).

*Second semester: 18 credits*

CHM 292 (5) (or CHM 226, 228 [5]); MTH 244 (3); PHY 204, 274 (4), General Education requirements (6).

*Junior Year:*

*First semester: 15 credits*

CHM 335 (2), 354 (3), 391 (1), 431 (3), General Education requirement (3), free elective (3).

*Second semester: 17 credits*

CHM 392 (3), 412 (3), 414 (2), 432 (3), General Education requirement (6).

*Senior Year:*

*First semester: 15 credits*

CHM 391 (1), 401 (3), 425 (2), 427 (3), free electives (6).

*Second semester: 16 credits*

CHM 354 (3), 391 (1), 441 (3), free electives (9).



### APPENDIX 3: NEW CURRICULUM SHEETS

There are no new curriculum sheets associated with this proposed change because no new coursework is being proposed. The degree of a B.S. in Chemistry and Forensic Chemistry is simply being reclassified into a B.S. in Chemistry, Forensic Track