

MEMORANDUM

TO: James Mower, Senate Chair
FROM: Havidán Rodríguez, President
DATE: March 11, 2019
SUBJECT: Senate Bill Approval

I am pleased to approve the following Senate Bill, which was recommended following approval by the University Senate at its meeting of February 25, 2018:

Senate Bill 1819-08: PROPOSAL TO ESTABLISH AN UNDERGRADUATE
MINOR IN FORENSIC SCIENCE

Approved: _____

Havidán Rodríguez, President

UNIVERSITY SENATE
UNIVERSITY AT ALBANY
STATE UNIVERSITY OF NEW YORK

Introduced by: The Undergraduate Academic Council
 University Policy and Planning Council

Date: February 25, 2019

Proposal to Establish an Undergraduate Minor in Forensic Science

IT IS HEREBY PROPOSED THAT THE FOLLOWING BE ADOPTED:

1. That the University Senate approves the attached program proposal as submitted by the College of Arts and Sciences and approved by UAC and UPPC
2. That this takes effect for the Fall 2019 semester.
3. That this proposal be forwarded to President Havidán Rodríguez for approval.

University at Albany – State University of New York	
College of Arts and Sciences	Course and Program Action Form
Proposal No. <u>18-177</u>	
Please check one: <input type="checkbox"/> Course Proposal <input checked="" type="checkbox"/> Program Proposal REVISED 1/17/19 and 1/22/19	
Please mark all that apply:	
<input type="checkbox"/> New Course	Revision of: <input type="checkbox"/> Number <input type="checkbox"/> Description
<input type="checkbox"/> Cross-Listing	<input type="checkbox"/> Title <input type="checkbox"/> Prerequisites
<input type="checkbox"/> Shared-Resources Course	<input type="checkbox"/> Credits
<input type="checkbox"/> Deactivate/Activate Course (boldface & underline as appropriate)	<input checked="" type="checkbox"/> Other (specify): <u>New Minor in Forensic Science</u>
Department: <u>Biological Sciences</u> Effective Semester, Year: <u>Fall 2019</u>	
Course Number Current: _____ New: _____ Credits: _____	
Course Title: _____	
Course Description to appear in Bulletin:	
<p>The Minor in Forensic Science offers the required foundational scientific coursework to understand and perform some of the common methodologies and analyses commonly used in today's Forensic Science laboratories. The proposed Minor provides an attractive option for students with declared majors in the natural and physical sciences, law, computer science, and homeland security, and includes a minimum of 24 graduation credits, including ABIO 130, 131, 201, 202Z, 212, 175, and 477 plus ACHM 120 and 121. All interested students must have completed ABIO175 and ABIO 212 Genetics (or an equivalent) with at least a final grade of a C before applying for the Minor in Forensic Science. Each student must apply through the Forensic Science Program. The Director of the Forensic Science Program will then review interested applicants for possible acceptance into the Minor with no more than twenty students being enrolled into the program each year. A student enrolled as BS or BA in Biology, BS in Biochemistry/Molecular Biology or BS in Human Biology degree programs cannot declare a Minor in Forensic Science.</p> <p>Admission Declaration of the Minor in Forensic Science must be made by application to the Department of Biological Sciences Forensic Science Program. Admission into the Minor in Forensic Science will be determined from applications received on or before a February 15 deadline.</p> <p>Admission Criteria</p> <ul style="list-style-type: none"> • The student must have completed or enrolled in at least 56 credits • The student's cumulative grade point average for all coursework at the University at Albany must be 3.00 or higher at the time of evaluation • The courses ABIO 175 and ABIO 212 must have been completed prior to applying to the minor. ABIO 212 must have been completed with a minimum grade of C or better <p>If qualified applications exceed the number of available spaces, the following criteria will be used sequentially to select students to the program:</p> <ul style="list-style-type: none"> • Overall GPA • GPA in the required program courses (ABIO 175 and 212) • Student's Written Statement of reason for seeking to undertake a Minor in Forensic Science 	
Prerequisites statement to be appended to description in Bulletin:	
Prerequisite(s): <u>ABIO 175</u> <u>ABIO 212 must have been completed with a minimum grade of C or better</u>	
If S/U is to be designated as the only grading system in the course, check <input type="checkbox"/>	
This course is (will be) cross listed with (i.e., CAS ###): _____	
This course is (will be) a shared-resources course with (i.e., CAS ###): _____	
Explanation of proposal: (Undergraduate Course/Program proposals: please address the effect on the department's General Education competency plan)	

In today's world of ever-changing state-of-the-art technology, learning basic concepts and techniques in Forensic Science and the Forensic Scientist's role during an investigation is extremely important, especially understanding the connection of applied Forensic Science with the criminal justice system and various governmental agencies such as Homeland Security, Federal Bureau of Investigation, Drug Enforcement Administration, etc. The proposed Minor in Forensic Science will introduce students to the proper procedures and practices for processing different types of crime scenes and the various technology used in Forensic Science laboratories. More importantly, this minor will discuss several controversial topics such as ethics, law, policy, etc. and their impact on the field of Forensic Science.

The resources to fund this minor are from a 2017-2018 Compact Plan awarded to the Department of Biological Sciences Forensic Science Initiative. With the support of the University and CAS, the 2017-2018 Compact Plan provided the much-needed resources to support the programs current and future needs in first hiring two full time lecturers (Drs. Arati Iyengar and Ryan Thurman), and then upgrading the Forensic Science laboratories with state-of-art equipment and software.

Currently, the University at Albany Department of Biological Sciences offers a specialty M.S. in Forensic Biology program. The M.S. in Forensic Biology program has been very successful in attracting, retaining, and graduating some of the best and brightest students. For example, we have graduated since 2003 over one hundred and fifteen students from our graduate-level Forensic Biology program with most being employed as full-time forensic scientists in public or private accredited laboratories throughout the world.

There continues to be a heightened interest in the Department of Biological Science Forensic Science program and coursework. For instance, resources from the Compact Plan were used to design and then instruct a new non-majors course ABIO 175 (3 credits) *Forensic Science Investigation*. Many of the two hundred students enrolled in ABIO 175 each semester over the past two years have declared majors in criminal justice, digital forensic, business administration, forensic accounting, homeland security and cybersecurity, psychology, etc. This lecture-based course was developed to introduce campus-wide students to the various methodologies and applications used in the forensic science with discussion on various topics that include analyses of physical evidence, principles of serology and DNA analysis, crime scene, pattern analysis, drug chemistry, quality assurance and the law. Furthermore, students enrolled in the Minor in Forensic Science will complete the laboratory course ABIO 477 *Forensic Science* (3). ABIO 477 Forensic Science will provide each student in the minor the hands-on experience to commonly used Forensic Science methodology and state-of-the-art instrumentation and software.

Other departments or schools which offer similar or related courses and which have certified that this proposal does not overlap their offering:

N/A

If this proposal is for an interdisciplinary program, please indicate the Department where the major/minor will be

Department of Biological Sciences

Chair of Proposing Department (TYPE NAME)	Administrative Manager or Department Secretary (TYPE NAME)	Date	
Richard Cunningham	Caren Stark	11/15/18	
Approved by Chair(s) of Departments having cross-listed course(s) [Copy of e-mail approval(s) on following page.]	Date	Dean of College	Date
		Kathleen Gersowitz	12/21/18
Chair of Academic Programs Committee	Date	Dean of Undergraduate or Graduate Studies	Date
Oliver Elison Timm	12/5/18		

Minor in Forensic Science (24 credits)

Required Coursework:

ABIO 130 General Biology I (3)
ABIO 131 General Biology II (3)
ABIO 175 Forensic Science Investigation (3)
ABIO 201 Introduction to Biological Investigations I (1)
ABIO 202Z Introduction to Biological Investigations II (1)
ABIO 212 Genetics (4)
ABIO 477 Forensic Science (3)
ACHM 120 General Chemistry I (3)
ACHM 121 General Chemistry II (3)

A BIO 130 (formerly A BIO 121) General Biology: Molecular and Cell Biology and Genetics (3)
Formerly A BIO 121. First course in a two semester sequence which offers a comprehensive survey of the structures and functions common to all living systems at the molecular, cellular, organismal, and population levels. This course emphasizes molecular and cell biology, and genetics. May not be taken for credit by students who have credit for A BIO 111 or A BIO 121.

A BIO 131 (formerly A BIO 120) General Biology: Ecology, Evolution, and Physiology (3)
Formerly A BIO 120. Second course in a two semester sequence which offers a comprehensive survey of the structures and functions common to all living systems at the molecular, cellular, organismal, and population levels. This course emphasizes evolutionary principles, ecology, anatomy and physiology. May not be taken for credit by students who have credit for A BIO 110 or A BIO 120. Students must complete A BIO 131 with a C- or better to register for A BIO 212Y or A BIO 217. Prerequisite(s): A BIO 130 or A BIO 121.

ABIO 175 (3) Forensic Science Investigation (Approved)

This course will introduce various methodologies and applications used in the forensic science. Topics discussed will include analyses of physical evidence, principles of serology and DNA analysis, crime scene, ballistics, fingerprint analysis, drug analysis, and quality assurance.

A BIO 201 (formerly A BIO 122) Introduction to Biological Investigations I (1)

First course in a two-semester laboratory sequence designed for biology majors. Students will learn the process of scientific investigation, collaborate in designing, conducting and analyzing experiments, develop the ability to communicate in scientific format and gain expertise in a variety of laboratory instrumentation, techniques, skills and procedures. One laboratory period per week. May not be taken by students with credit for A BIO 110 or A BIO 122. Prerequisite(s): A BIO 130 or 121, A BIO 131 or 120, and A CHM 120, 121, 124, 125. Offered fall semester only. Course fee applies. Consult the Schedule of Classes.

A BIO 202Z (formerly A BIO 123Z) Introduction to Biological Investigations II (1)

Second course in a two-semester laboratory sequence designed for biology majors. Students will learn the process of scientific investigation, collaborate in designing, conducting and analyzing experiments, develop the ability to communicate in scientific format and gain expertise in a variety of laboratory instrumentation, techniques, skills and procedures. One laboratory period per week. May not be taken by students with credit for A BIO 111 or 123Z. Prerequisite(s): A BIO 130 or 121, A BIO 131 or 120, A BIO 201, and A CHM 120, 121, 124, 125. Offered spring semester only.

A BIO 212Y Introductory Genetics (4)

Genetics from the classical Mendelian Laws of inheritance to molecular genetics. Topics will include DNA structure and replication; Mendelian genetics and recombination; population, fungal, somatic cell, and bacterial genetics; gene organization; the genetic code; mechanisms of gene expression and regulation; and applications of genetic technology. Three class periods and one discussion section. Prerequisite(s): A BIO 130 or 121 and A BIO 131 or 120, with a grade of C- or better in A BIO 121 or A BIO 131. Students must complete A BIO 212Y with a C or better to register for A BIO 365.

ABIO 477(3) Forensic Science (Approved)

Forensic Science (ABIO 477) will introduce students to commonly used forensic science techniques. Topics covered in this laboratory course will include pattern evidence, microscopy, ballistics, forensic chemistry, forensic biology, toxicology, crime scene collection, laboratory safety and quality assurance. Students will follow standard operating procedures with regard to documentation, sample preparation, data collection and analysis and reporting (junior standing or permission of instructor).

A CHM 120 General Chemistry I (3)

Atomic theory, quantitative relationships in chemical change, electronic structure of atoms and chemical periodicity, chemical bonding, and states of matter.

A CHM 121 General Chemistry II (3)

Elementary principles of chemical equilibrium, thermodynamics, and kinetics; electrochemistry; descriptive chemistry of the elements and their compounds. Prerequisite(s): A CHM 120 or 130.

The required 9 credits of advanced coursework (coursework requiring at least one pre-requisite for the Minor in Forensic Science [24 credits]) will include the following: ABIO 201 (1), ABIO 202Z (1), ABIO 212 (4), and ABIO 477 (3).

From: Gervasi, Christine
Sent: Tuesday, November 6, 2018 7:31 AM
To: Orokos, Donald D <dorokos@albany.edu>
Subject: proposed Forensic Science minor

Hi Don,
As discussed, Forensic Science minors will be able to take ABIO201 and ABIO202 and I am happy to arrange a seat in a lab upon request.
Christine

Christine Gervasi, PhD
Department of Biological Sciences, 109
State University of New York at Albany
cgervasi@albany.edu

From: Niu, Li
Sent: Thursday, November 15, 2018 3:00 PM
To: Orokos, Donald D <dorokos@albany.edu>
Cc: Cunningham, Richard P <rcunningham@albany.edu>; Stark, Caren <cstark@albany.edu>
Subject: RE: A New Minor in Forensic Science

Don,

I support your proposal.

Li

Li Niu
Professor and Chair
Dept. Chemistry
University at Albany, SUNY
Albany, NY 12222

Phone (518) 591-8819
Fax (518) 442-3462
Lab website <http://www.albany.edu/niulab/>

From: Orokos, Donald D
Sent: Tuesday, November 13, 2018 10:55 AM
To: Niu, Li <lniu@albany.edu>
Cc: Cunningham, Richard P <rcunningham@albany.edu>; Stark, Caren <cstark@albany.edu>; Orokos, Donald D <dorokos@albany.edu>
Subject: A New Minor in Forensic Science

Dear Li—

I hope your semester is going well. The Department of Biological Sciences is planning to submit to CAS/University Governance a proposal for a 24-credit Minor in Forensic Science. Two of the required courses for this minor include ACHM 120 and 121. For this proposal to move forward, I would need an e-mail from you stating the Department of Chemistry's approval and willingness to support the two General Chemistry course requirements for this minor. We are creating a restricted minor so we anticipate no more than 20 students accepted into the minor each year. The Department will seek future approval from you before we consider going above the maximum twenty enrollment. Please see the attached Course Action Form for additional information.

Many thanks Li,
Don

When submitting a program proposal please submit this form to indicate the resource implications of the proposal.

Proposal Title: Minor in Forensic Science**College or School** CAS **Department** Biology**Program Director or Sponsor** Donald Orokos/Richard Cunningham **Email** dorokos@albany.edu**Action Category** Program Proposal Other (describe) Does this proposal include any space resource implications? Approx. sq. ft. needed: _____ Yes No**Action Type** New Revision Deactivation Other (describe) Does the Office of Financial Aid identify this as a **Gainful Employment Program (GEP)**? Yes No

Brief Description of Proposal: *(attach additional pages if necessary)*

The Minor in Forensic Science (24 credits) offers the required foundational scientific coursework to understand and perform some of the common methodologies and analyses used in today's Forensic Science laboratories. The Forensic Science minor provides an attractive option for students with declared majors in the natural and physical sciences, law, computer science, and homeland security. Each student must complete 24 credits of required coursework.

Required Coursework:

ABIO 130 General Biology I (3)
ABIO 131 General Biology II (3)
ABIO 175 Forensic Science Investigation (3)
ABIO 201 Introduction to Biological Investigations I (1)
ABIO 202Z Introduction to Biological Investigations II (1)
ABIO 212 Genetics (4)
ABIO 477 Forensic Science (3)
ACHM 120 General Chemistry I (3)
ACHM 121 General Chemistry II (3)

The required 9 credits of advanced coursework (coursework requiring at least one pre-requisite) for the Minor in Forensic Science (24 credits) will include the following: ABIO 201 (1), ABIO 202Z (1), ABIO 212 (4), and ABIO 477 (3).

The Minor is funded by a 2017-2018 Compact Plan awarded to the Department of Biological Sciences Forensic Science Initiative.

Is there an impact on other service units? Please attach documentation that you have consulted with each unit listed below:

Yes	No	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	ITS
<input type="checkbox"/>	<input checked="" type="checkbox"/>	University Libraries
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Scientific Core Facilities
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other services (i.e., advisement, parking, facilities, security), please list:

Is there an impact on other academic programs? Please list all academic departments consulted regarding impact and attach documentation.

Chemistry Department
 ACHM 120 (3) General Chemistry I
 ACHM 121 (3) General Chemistry II

Faculty and Staff (*attach additional pages if necessary*)

- (a) Describe new faculty hiring needed during the next 3 years
 (b) Explain how program will be administered for the purposes of admissions, advising, course offerings, etc. Discuss the available support staff.

The Department of Biological Sciences proposed Minor in Forensic Science Program does not anticipate any new hires for the purposes of admission, advising, course offerings, etc. over the next three years. The Department of Biological Sciences recently hired two full-time lecturers (Drs. Arati Iyengar and Ryan Thurman) assigned to instruct the required courses and work with the current Director in providing advisement, admissions, and other assigned duties for the Forensic Science Programs.

Additional Department of Biological Sciences Support: The Minor in Forensic Science will have access to all administrative support offered through the Department of Biological Sciences.



Program Expenses

List all resources that will be engaged specifically as a result of the proposed program (e.g., a new faculty position or additional library resources). If they represent a continuing cost, new resources for a given year should be included in the subsequent year(s), with adjustments for inflation or negotiated compensation.

Program Expense Categories	Expenses (in dollars)					
	Prior to implementation	Academic Year 1:	Academic Year 2:	Academic Year 3:	Academic Year 4:	Academic Year 5:
<i>(a) Personnel (including faculty and all others)</i>	0					
<i>(b) Library</i>						
<i>(c) Equipment</i>						
<i>(d) Laboratories</i>						
<i>(e) Supplies</i>						
<i>(f) Capital Expenses</i>						
<i>(g) Student stipends or scholarships</i>						
<i>(h) Other (specify):</i>						
Sum of Rows Above	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

Explanatory Notes (add additional pages as needed):



APPROVALS

		 12/4/18

	Kathleen Gersowitz <hr style="border: 0; border-top: 1px solid black;"/> Dean	12/21/18 <hr style="border: 0; border-top: 1px solid black;"/> Date
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UPPC Chair	<hr style="border: 0; border-top: 1px solid black;"/> UPPC Chair	<hr style="border: 0; border-top: 1px solid black;"/> Date
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- It is the sponsoring department’s responsibility to request and attach all required documentation and to obtain all required signatures (with the exception of the chair of UPPC’s) **before** presenting the documentation.

- Completed forms should be sent to the **Office of Undergraduate Education**, the **Office of Graduate Education**, or **both** as appropriate.

- When the Chair of UPPC has received the proposal from the appropriate office(s), s/he will notify you that it has been placed on the UPPC agenda and invite you to attend the meeting.