

BOARD OF HIGHER EDUCATION
REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Academic Affairs

NO: AAC 14-01

COMMITTEE DATE: October 22, 2013

BOARD DATE: October 29, 2013

APPLICATION OF FITCHBURG STATE UNIVERSITY TO AWARD THE BACHELOR OF SCIENCE DEGREE IN CHEMISTRY

MOVED: The Board of Higher Education hereby approves the application of **Fitchburg State University** to award the **BS in Chemistry**.

Upon graduating the first class for these programs, the University shall submit to the Board a status report addressing its success in reaching program goals as stated in the application and in the areas of enrollment, curriculum, faculty resources, and program effectiveness.

Authority: Massachusetts General Laws Chapter 15A, Section 9(b)

Contact: Dr. Carlos Santiago, Senior Deputy Commissioner for Academic Affairs

BOARD OF HIGHER EDUCATION

October 2013

Fitchburg State University Bachelor of Science in Chemistry

INTENT AND MISSION

The proposed chemistry degree program at Fitchburg State University (FSU) contributes to the institution's mission through its commitment to excellence in teaching and learning. The proposed program blends liberal arts with the sciences and with professional programs. As a community resource, the proposed program serves to provide leadership and support for the economic, environmental, social, and cultural needs of North Central Massachusetts and the Commonwealth. Adding the proposed Chemistry major will also address one of the strategic goals of the University, to modernize and improve the science facilities and science programs. The start of the proposed new major is designed to coincide with the opening of the new science center.

The proposed program has obtained all necessary governance approvals on campus and was approved by the Fitchburg State University (FSU) Board of Trustees on April 30, 2013. The required letter of intent was circulated on June 5, 2013. No comments were received.

NEED AND DEMAND

National and State Labor Market Outlook

During the last two decades Massachusetts has seen an increase in chemical, biotechnology, and pharmaceutical industries and the demand for qualified chemists to accept professional positions. Graduate chemistry departments of the universities in the New England area are increasingly looking for qualified students to enter their M.S. and Ph.D. programs. Additionally, the demand for teachers certified to teach chemistry and other physical science subjects is also increasing.

According to the Life Sciences Talent Initiative (LSTI) the demand for life sciences workers in MA is expected to grow nearly 45% faster than the demand for employment in other areas of the state economy. The LSTI also reports that almost 80% of the new life sciences jobs in the Commonwealth will require the minimum of a 4-year degree. The Commonwealth of Massachusetts Employment Projections 2004-2014 indicate a 10.9% growth rate in chemist positions and a 17.7% growth rate in the need for post-secondary chemistry teachers. Scientific research and development service jobs are expected to increase 35% for the period 2008-2018.

Student Demand

A survey conducted in spring 2012 to assess the interest in a chemistry major among FSU students with a major in biology and/or a minor in chemistry showed that out of 113 students who completed the survey many science majors had a strong interest in chemistry. 30 students indicated they would have considered a chemistry major or minor had it been offered and 21 students indicated an interest in a dual major that would include chemistry. 42 students had already declared chemistry as a minor and 18 additional students indicated that they were likely to declare chemistry as a minor. Since resuming the chemistry minor in 2008-2009, 51 students have graduated with a minor in chemistry. 73% of the students surveyed thought that implementing a major in chemistry was a good idea.

Duplication

State universities in nearby areas including Worcester, Salem, Bridgewater and Framingham offer a chemistry major. The 2011-12 enrollment data show 149, 84, 101 and 48 students declared chemistry majors respectively. All programs have seen growth in their chemistry major indicating an increase in demand. During the past five years, Worcester graduated 74 chemistry majors, Salem had 64

chemistry graduates, and Bridgewater graduated 68 chemistry majors. The annual enrollment in General Chemistry, the feeder course for majors, has seen significant increases in state universities, with Salem and Framingham enrollment numbers at 192 and 195 respectively. Fitchburg enrollment in General Chemistry ranges from 90-110 students per year. Westfield State University and the Massachusetts College of Liberal Arts have small chemistry programs that started within the last three years. The College of the Holy Cross and Assumption College were the only private institutions that responded to Fitchburg's request for information about their chemistry degree programs. Holy Cross graduated an average of 24 chemistry majors during the last five-year period with an average of 220 students enrolled in the General Chemistry course during the last three years. The Assumption College enrollment for General Chemistry courses steadily increased from 100 students in 2007 to 150 in fall 2012.

ACADEMIC AND RELATED MATTERS

Admission

FSU's general admission policies will apply to the proposed major. Additional work in mathematics and sciences during high school level will be strongly recommended for students intending to enter the proposed program. The General Chemistry course will require Math 200 or a math placement exam score of 82 or higher as a pre-requisite or co-requisite.

Admission requirements for transfer students from community colleges require students to have a grade point average of 2.0 or better with 24 or more transferable credits from a regionally accredited college or university or a grade point average of 2.5 or better with 12 to 23 transferable credits. If a prospective transfer student has 23 or fewer transferable credits and a GPA between 2.5 and 2.0, the student's high school work must also satisfy admission requirements for freshmen applicants.

Associate degree holders from Mount Wachusett Community College, Quinsigamond Community College and Middlesex Community College will be able to transfer to the FSU Chemistry degree program as juniors if the required math courses and the introductory coursework in chemistry have been completed. FSU and MWCC faculty have been collaborating to offer the organic chemistry sequence and a prescribed curriculum for students who intend to transfer to the FSU BS Chemistry major.

Program Enrollment Projection

| | # of Students Year | # of Students Year | # of Students Year | # of Students Year |
|----------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| New Full Time | 8 | 10 | 12 | 12 |
| Continuing Full Time | | 8 | 18 | 30 |
| New Part Time | - | - | - | - |
| Continuing Part Time | - | - | - | - |
| Totals | 8 | 18 | 30 | 42 |

Program Effectiveness

| Goal | Measurable Objective | Strategy for Achievement | Timetable |
|---|---|--|---|
| Generate publicity for the new major; actively recruit students to the program. | Obtain a total of 50 chemistry majors (all years of study) in 5 years | Promote the program through admissions and University websites; host meetings of area guidance counselors and chemistry faculty from feeder high schools and community colleges; publicity through NEACT and local sections of ACS | Five years from program implementation |
| To increase the number of potential science teachers in MA schools | Achieve the number of students seeking Secondary Education option in the chemistry major – 2 students per year. | Same strategy as above and also work with the Teacher Education program faculty at the University. | Five years from program implementation |
| Program implementation – Phase I | Hire one additional faculty member needed to cover existing courses and additional courses | Advertise, organize search committee, evaluate resumes, conduct interviews and recommend candidates to VPAA | March 2015 for Fall 2015 appt. |
| Program Implementation – Phase II | Begin offering the additional courses needed for the major | Routine schedule development | Spring 2015 - Fall 2015 |
| Program Implementation – Phase III | Continue offering the upper division core courses and electives | First graduating class expected as some students would start as juniors in fall 2014 | Spring 2016 |
| Continued Program implementation | Annual review of progress of the major | Department Chair prepares the annual review in consultation with program faculty for submission to the VPAA | Spring 2016 |
| Continued Program implementation | Comprehensive 5-Year Program Review | Program faculty and department chair prepare self- study for submission to the Associate VPAA and VPAA | Initial Program Review in 2019; every 5 years, thereafter |

Curriculum (Attachment A)

The chemistry degree program will require the completion of 120 credit hours that includes 11 courses in chemistry, 6 courses in related disciplines (biology, mathematics, and physics), 10 liberal arts and sciences courses, and 8-9 free electives. Most of the science courses carry 4 credits while the non-science courses are typically 3 credits.

The chemistry program for secondary Initial Teacher Licensure will require 1 upper-division chemistry elective, 5 courses in the chemical education field, 1 additional English course, and 9 credit hours of practicum. This will reduce the number of free electives to 6 credit hours to make up a total of 120 credit hours for the major.

RESOURCES AND BUDGET

Fiscal (Attachment B)

Anticipated revenue projections were generated by FSU's use of 2012-13 tuition and fee rates, and calculated with eight students entering in year one, 10 entering in year two, increasing to 12 per year in years three and four. The start of the proposed major has been designed to coincide with the opening of the new Science Center.

Costs

FSU anticipates needing only one additional full-time faculty member to staff the program once fully implemented and enrolled. A significant increase in the operational budget is not anticipated. FSU plans to conduct a national search for one new faculty member during the 2014-15 academic year to begin full time in the Fall of 2015. Other staff and administrative responsibilities will be assumed by existing personnel. FSU has maintained adequate instrumentation to support most of the coursework. This instrumentation along with the recent purchases that were part of the new building construction will meet the needs of the proposed program. Additional resources will be required for the library. The University has budgeted additional funds to implement a marketing plan for the new major, anticipating approval by the Board.

Existing faculty members can teach the majority of the courses that will become part of the proposed program. A significant increase in the operational budget is not expected. Additional funds are expected for the purchase of a service contract for the new Atomic Absorption spectrometer and some start-up costs are anticipated for the purchase of equipment for the Physical Chemistry I and Chemical Instrumentation laboratories. These costs may potentially be covered through the annual equipment budget and/or submission of Extraordinary Budget Requests proposals. The laboratory supplies budget would then be adjusted to purchase the needed chemicals and supplies for the 1-2 additional lab courses being offered each year in the proposed program.

Faculty and Administration (Attachment C)

Currently there are 5 faculty members who will teach in the proposed program. FSU purports faculty expertise is sufficient to teach current courses and proposed new courses. A self-analysis of teaching needs for the next five years indicated that by the year 2015-2016 the proposed major will need one more chemist to cover both the existing chemistry offerings and new courses to be added to the major. This would increase the number of chemistry faculty to six, adding a member with a Ph.D. in chemistry and expertise in inorganic chemistry.

Facilities, Library and Information Technologies

The FSU Science department has a reasonable complement of basic instrumentation to support the proposed course work. Major instruments include an Anasazi FT-NMR spectrometer with 2D capabilities, Perkin-Elmer FT-IR spectrometer, Agilent Gas Chromatograph–Mass Spectrometer, Agilent HPLC system with photodiode array detector, Buck Scientific gas chromatographs (4), several UV-Visible spectrophotometers, fluorometers, pH meters (probes), Mac Books with Data Studio, Spartan and Stella software and Pasco sensors. An atomic absorption spectrometer and an Ultra Performance Liquid Chromatography instrument have been purchased along with other lab equipment, such as rotary evaporators, heating/cooling baths, vacuum lines, freeze dryer and vacuum oven, as part of the university's new science laboratories.

Construction of a new science center was just completed and the existing science building is being renovated, resulting in a net increase of laboratory and instructional space for the sciences. The new building houses the laboratories for chemistry and biology. The chemistry program will have three laboratories dedicated to teaching – one designated organic, another general chemistry, and a third for the chemistry courses for non-science majors. The organic lab will also be used for analytical, physical, and other upper-division chemistry courses. An instrument room occupies the space between the organic and general chemistry labs and has glass walls so the instructors in either lab are able to supervise the students using the instruments. Instrumentation is heavily utilized by the students in organic and analytical chemistry. A separate instrument room is built with specifications to house the current NMR spectrometer and any future acquisitions, including a spectrometer with a superconducting magnet. Two faculty/student research labs are also part of the new science building and they will provide the facilities and space for collaborative research involving undergraduate students.

Existing technical help includes two lab technicians who spend part of their time setting up the equipment and preparing reagents for all the chemistry courses. They also assist the faculty in ordering equipment and supplies, servicing the instruments and overall management of the laboratories. They have work-study students to assist in some tasks. Additionally, the Department of Biology and Chemistry has a full-time administrative assistant who provides all the secretarial and administrative support for both biology and chemistry programs. A University Laboratory Safety Officer oversees the chemical hygiene program, waste collection and disposal, and compliance with established safety standards. The officer conducts annual safety training for all employees including student workers, and is assisted in this task by the lab technicians.

FSU's Amelia V. Gallucci-Cirio Library houses books, journals, compendia, periodicals, and electronic databases. The Library had approximately 15,000 printed books as of July 2012 in areas that will support the proposed chemistry major. The total number of books classified for science is 13,000 and the total number classified for chemistry is 700. The approximate number of related books is 1400. The 13 key databases for chemistry include Academic Search Premier, Academic Onefile, Biomed Central, DOAJ, Health Source, Medline/Pubmed, ProQuest Central, and ProQuest Complete. These include aggregators that provide indexing and access to full text journals, indexing/abstracting services, web-based open-access journals and one science-based curriculum guide. In addition, students and faculty have access to over 330 chemistry journals through various databases available through the Library. The chemistry faculty worked with the library director to identify additional books, monographs, compendiums and journal subscriptions to support the new major.

An action plan has been developed to enhance the holdings to fully support the proposed program by 2016. Initially, a subscription to *ChemistrynetBase* will be obtained to update the FSU chemistry book collection. Adding *SciFinder Scholar* is expected to provide access to *Chemical Abstracts* as well as additional chemistry and biochemistry journals.

The Science Department has adequate computer technologies to support state of the art teaching and research. The general chemistry laboratory is equipped with a set of 12 MacBook computers that are used extensively. Other chemistry laboratory PC's will be replaced with Windows lap-top computers. An institutional license for ChemDraw software is being purchased to support molecular modeling and structure drawing applications.

Affiliations and Partnerships

Students in the proposed Chemistry program will have the opportunity to voluntarily sit for the Certified Professional Chemist exam administered by the American Institute of Chemists. Experts from the industry may be invited to teach as adjunct faculty in the program. An advisory committee established in spring 2012 provided input during the program development process and reviewed the completed proposal before it was submitted to the University's governance approval process. Request for membership was sent to the chairs of the Northeast Section and the Central Massachusetts Section of the American Chemical Society who in turn recommended industrial chemists. Current members are listed below:

- Dr. Liming Shao, Chair NE Section of the American Chemical Society
- Dr. Kostas Saranteas, Executive Director, Process Chemistry and Engineering, Sunovian, Inc. Marlborough, MA
- Dr. Michael P. Filosa, Senior Manager, ZINK Imaging, Waltham
- Dr. Dan Montville, Senior Analytical Chemist at Xtallic Corporation, Marlborough, MA
- Dr. Mark Turnbull, Professor of Chemistry, Clark University, Worcester, MA
- Mr. Shaun Grier LSDL Purification Manager, Shire Human Genetic Therapies, Lexington, MA.

The proposed chemistry major is planned to also offer students a program for Initial Teacher Licensure in Secondary Education. Chemistry faculty have received input from biology faculty members involved with the teacher education licensure programs of the Department of Biology and Chemistry and from the Dr Pamela Hill, Dean of Education during the proposal development process. Dr. Hill has thoroughly reviewed the curriculum and the entire proposal in her capacity as the Dean of Education as well as a member of the University's Curriculum Committee. Department of Biology and Chemistry faculty will supervise student clinical placements for both Biology and Chemistry Initial Teacher Licensure in Secondary Education programs. The procedure for placement will include faculty work with the Education Unit Field Placement Coordinator who makes sure the supervising practitioners meet the criteria set by the state, NCATE and the FSU Education Unit.

If the major is approved for fall 2014, FSU will begin the state approval and NCATE/CAEP approval process. The planned timeline is for the proposal to be submitted to the state and NCATE/CAEP by January 2015. FSU anticipates approval by September 1, 2015. Because no data for the licensure track will be available, it is expected that the approval will be with conditions. This category of approval will allow FSU to endorse chemistry teacher candidates for licensure. The plan is to submit a Report to Conditions with the necessary data by September 2016. Final approval is expected by March 2017.

EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

The external review team for this proposal included Nayan Amin, Ph.D., Director, R&D/ Site Manager, PCI Synthesis, Devens, MA and Kutty Pariyadath, Ph.D., Retired Associate Professor and department chair, Department of Chemistry, University of South Carolina, Aiken, S.C., and Harold W. Pinnick, Ph.D., Professor of Chemistry and former department head, Purdue University at Calumet, Hammond, IN.

The committee conducted a campus visit, interviewed faculty and administrators, and reviewed all materials pertaining to the proposed chemistry degree program, including the plans of study and the syllabi of courses currently taught. The reviewers concluded that the proposed degree program is characterized by breadth, depth, sequential progression and synthesis of learning. The committee reported satisfaction with the prerequisites for all of the chemistry courses offered in the program. The reviewers noted that the proposed program includes 8-10 free elective courses, which a student in the program may use to pursue knowledge in one or more additional areas, enabling the student to graduate with a second major.

The reviewers found that the majors in the proposed program are designed to increase understanding of the methods of chemistry through classroom and lab experiences, and undergraduate research. They also found that students would be encouraged to participate in internships at chemical industries in the area and that students seeking initial licensure in chemical education will be trained through practical experience in the field of chemical education through two semesters of practicum in chemistry during which they will teach chemistry under the direct supervision of an expert teacher.

The Review Committee strongly supports the FSU BS in Chemistry program. The reviewers found the timing of offering a chemistry degree well planned to coincide with the opening of a state-of-the-art science building. The reviewers tour of the campus and the town of Fitchburg led them to conclude that the program emphasizes a new vibrancy at the university and increases the engagement of FSU in the community as a significant player in Fitchburg and neighboring areas.

STAFF RECOMMENDATION

Staff thoroughly reviewed all documentation submitted by the Fitchburg State University and external reviewers. Staff recommendation is for approval of the baccalaureate program in Chemistry.

Curriculum Outline (Attachment A)

| Required (Core) Courses in the BS in Chemistry Major (# of courses | | |
|---|---|---------------------|
| <i>Course Number</i> | <i>Course Title</i> | <i>Credit Hours</i> |
| CHEM 1300 | General Chemistry I | 4 |
| CHEM 1400 | General Chemistry II | 4 |
| CHEM 2000 | Organic Chemistry I | 4 |
| CHEM 2100 | Organic Chemistry II | 4 |
| CHEM 2400 | General Analytical Chemistry | 4 |
| CHEM 3200 | Physical Chemistry I | 4 |
| CHEM 3600 | Advanced Inorganic Chemistry | 3 |
| CHEM 4100 | Biochemistry | 4 |
| CHEM 4750 | Chemistry Seminar | 3 |
| | Sub Total Required Credits | 34 |
| Required Courses in Related Disciplines (# of Courses = 6) | | |
| PHYS 2300 | General Physics I | 4 |
| PHYS 2400 | General Physics II | 4 |
| MATH 1300 | Pre-Calculus | 3 |
| MATH 2300 | Calculus I | 4 |
| MATH 2400 | Calculus II | 4 |
| BIOL 1800 | General Biology I | 4 |
| | <i>Subtotal of Required Related Courses</i> | 23 |
| Elective Courses (# courses required = 2) | | |
| CHEM 3300 | Physical Chemistry II | 4 |
| CHEM 4000 | Natural Products Chemistry | 3 |
| CHEM 4020 | Medicinal Chemistry | 3 |
| CHEM 4040 | Advanced Synthetic Methods | 4 |
| CHEM 4200 | Polymer Chemistry | 4 |
| CHEM 4400 | Forensic Chemistry | 4 |
| CHEM 4500 | Organic Spectroscopy | 3 |
| CHEM 4600 | Chemical Instrumentation | 4 |
| CHEM 4940 | Internship | 3 |
| CHEM 4900 | Independent Study | 1-3 |
| | Sub Total Elective Credits | 6-8 |
| The Arts Cluster – must include one course in art or music and one course in Literature | | 15 |

| | | |
|--|--|-------------------|
| Science, Mathematics and Technology Cluster (most requirements met in the major) | 3 | |
| Citizenship of the World Cluster – History, Human Behavior | 9 | |
| Sub Total General Education Credits | 27 | |
| Curriculum | | |
| Total number of courses required for the degree | 26 | |
| Free elective courses | 8-10 (depending on 4 or 3 credit) | |
| Total credit hours required for degree | 120 | |
| Prerequisite, Concentration or Other Requirements: | | |
| <p>There will be no pre-requisites to enter the Chemistry B.S. degree program except for the requirement that the students have passed the mathematics placement exam or completed the equivalent Basic Mathematics course in order to enroll in General Chemistry I.</p> <p>Those who choose B.S. in Chemistry concentration with Initial Teacher Licensure in Secondary Education will be required to take the following additional courses in the chemistry education, which will replace the free electives in the above curriculum.</p> | | |
| CHEM 2860 | Introduction to Secondary School Teaching | 3 |
| CHEM 4850 | Science Teaching Methods | 3 |
| CHEM 4860 | Chemistry Practicum I | 4.5 |
| CHEM 4870 | Chemistry Practicum II | 4.5 |
| CHEM 4012 | Practicum Seminar | 3 |
| SPED 3800 | Secondary Programs for Adolescents | 3 |
| ENGL 4700 | Teaching Reading and Writing Across the Content Area | 3 |
| | subtotal | 24 credits |

Program Budget (Attachment B)

| One Time/ Start | Cost Categories | Annual Expenses | | | |
|----------------------------|--|------------------------|---------------|---------------|---------------|
| | | Year 1 | Year 2 | Year 3 | Year 4 |
| | Full Time Faculty (Salary & Fringe) | | \$80,000 | \$80,000 | \$80,000 |
| | Part Time/Adjunct Faculty (Salary & Fringe) | | | | |
| | Staff | | | | |
| | General Administrative Costs | | | | |
| | Instructional Materials, Library Acquisitions | \$5,500 | \$9,000 | \$9,000 | \$9,000 |
| | Facilities/Space/Equipment | | | | |
| | Field & Clinical Resources | | | | |
| \$2,500 | Marketing | | | | |
| | Other (Specify) | | | | |
| \$2,500 | TOTALS | \$5,500 | \$89,000 | \$89,000 | \$89,000 |

| One Time/Start- Up Support | Revenue Sources | Annual Income | | | |
|---------------------------------------|------------------------|--------------------------|---------------|---------------|---------------|
| | | Year 1 | Year 2 | Year 3 | Year 4 |
| | Grants | | | | |
| | Tuition | \$69,680 | \$156,780 | \$261,300 | \$365,820 |
| | Fees | | | | |
| | Departmental | | | | |
| \$2,500 | Reallocated Funds | | | | |
| | Other (specify) | | | | |
| | TOTALS | \$69,680 | \$156,780 | \$261,300 | \$365,820 |

Faculty Form (Attachment C)

Proposed Degree: B.S. in Chemistry

**Faculty
Form**

| Summary of Faculty Who Will Teach in Proposed Program | | | | | | | |
|---|------------------|---|-----------------------|-----------------------------------|-------------------------------|--|---|
| Please list full-time faculty first, alphabetically by last name. Add additional rows as necessary. | | | | | | | |
| Name of faculty member (Name, Degree and Field, Title) | Check if Tenured | Courses Taught Put (C) to indicate core course. Put (OL) next to any course currently taught online. | Number of sections | Division of College of Employment | Full- or Part-time in Program | Full- or part-time in other department or program (Please specify) | Sites where individual will teach program courses |
| Ciottone, Judith Ph.D. in Chemistry Professor | | <ul style="list-style-type: none"> • General Chemistry I and II (C) Chemistry for the Health Sciences | 2 each 2 | Day | Full | No | <ul style="list-style-type: none"> • Main Campus |
| Govindan, Meledath Ph.D. in Chemistry Professor | | <ul style="list-style-type: none"> • Organic Chemistry I and II (C) • Chemistry Seminar (C) • Natural Products • Organic Spectroscopy | 2 each 1 1 1 | Day | Full | No | <ul style="list-style-type: none"> • Main Campus |

| | | | | | | | |
|--|--|---|-----------------------------|-----|------|----|---------------|
| Krishnamurthy, Mathangi Ph.D. in Medicinal Chemistry Assistant Professor | | <ul style="list-style-type: none"> • Organic Chemistry I and II (C) • Medicinal Chemistry • Advanced Synthetic Methods | 2 each 1 1 | Day | Full | No | • Main Campus |
| Lu, Da-Hong Ph.D. in Chemistry Professor | | <ul style="list-style-type: none"> • General Chemistry I and II (C) • Physical Chemistry I (C) • Physical Chemistry II • Advanced Inorganic Chem. | 2 each 1 | Day | Full | No | • Main Campus |
| O'Connor, Aisling Ph.D. in Chemistry | | <ul style="list-style-type: none"> • General Chemistry I and II (C) | Varies (based on demand) | Day | Full | No | • Main Campus |

Institution: Fitchburg State University

Proposed Degree: B.S. in Chemistry

| | | | | | | | |
|---|---|---|--|-----|---------------------|----|---------------|
| Assistant Professor | | <ul style="list-style-type: none"> • General Analytical Chemistry (C) • Forensic Chemistry • Instrumental Analysis | Varies (based on demand) 1 1 | | | | |
| <i>to be appointed</i> Ph.D. in Chemistry - inorganic preferred Assistant Professor | n.a. <input checked="" type="checkbox"/> | <ul style="list-style-type: none"> • General Chemistry (C) • Adv. Inorganic Chemistry (C) • Adv. Synthetic Methods | Varies (based on demand) 1 1 | Day | Full | No | • Main Campus |
| Nosek, Michael Ph.D. in Biology Associate Professor | | <ul style="list-style-type: none"> • Biochemistry (C) | 1 | Day | Part-time (in Chem) | No | • Main Campus |