



Department of
Biology and Chemistry

<http://www.fitchburgstate.edu/academics/academic-departments/biology-chemistry/>

Undergraduate Student
Handbook

August 2017

1. Vision, Mission & Student Outcomes

1.1 Vision Statement

The Department of Biology and Chemistry provides undergraduate and graduate students with the opportunity to learn in the physical and life sciences. Focusing on processes, concepts, and critical thinking skills, we build the foundation students need to actively participate in scientific inquiry and the discovery of knowledge. Our approach to education and research imparts students with a way of thinking about and understanding our natural world that will guide them throughout their professional and public lives.

The Department places a high value on interdisciplinary research, collaboration, and partnerships with other educators on and off campus. A rich collaborative community is fostered through internships, independent studies, and student collaborations with active faculty research programs; an environment that mirrors the diverse world that we share. As a department we work diligently to incorporate innovations in technology, research, and education that build upon our current strengths and meet the demands of a dynamic environment.

1.2 Mission Statement

Fitchburg State University is committed to excellence in teaching and learning and blends liberal arts and sciences and professional programs within a small college environment. Our comprehensive public university prepares students to lead, serve, and succeed by fostering lifelong learning and civic and global responsibility. The Department of Biology and Chemistry is central to this mission because it contains two basic science majors on campus - biology and chemistry, along with minors in biology, chemistry, and neuroscience and behavior. In our role as one of the core academic departments that has traditionally constituted a liberal arts and sciences education, we prepare students whose main interest is in a scientific career as well as provide foundational experiences for other majors on campus (e.g. nursing and exercise science) and offer courses for non-majors seeking to fulfill the scientific component of their liberal arts and science education.

We strive to:

- Produce students who are well prepared for careers and advanced study in the Biological Sciences and related fields.

- Maintain a high level of scholarly activity in a variety of fields associated with Biology, Chemistry and Science Education.
- Serve the needs of the entire college and specific academic departments through our curricular offerings and involvement in the college community.
- Provide state of the art pedagogical approaches as well as utilize appropriate equipment, technology, and resources for teaching, learning and research in the Sciences and Science Education.
- Recruit and retain qualified students for our academic programs from a variety of backgrounds.

1.3 Student Outcomes

Students who successfully complete a major in Biology will:

- Demonstrate a command of key concepts from a broad range of course topics, including cell and molecular biology, genetics, organismal biology, evolution, ecology, developmental biology, and topics from advanced electives.
- Identify and solve biological problems by using critical thinking.
- Propose alternative, testable hypotheses to explain patterns and phenomenon in nature.
- Collect, summarize and interpret empirical and quantitative data.
- Construct and present scientific reports as papers, posters, and oral presentations.
- Possess specific skills and knowledge necessary to pursue careers in the biological sciences.
- Effectively read, analyze, synthesize and write about historical and contemporary advances in the biological sciences.
- Demonstrate technical skills appropriate for jobs in the laboratory, field and/or classroom.
- Understand and perform appropriate practices for lab safety, including health and environmental concerns.
- Recognize ethical dimensions surrounding the decisions made in the name of biological science.
- Understand and express the roles biological sciences play in society

2. Faculty and Staff Information

The Department of Biology and Chemistry currently has 20 full-time faculty - 13 biologists and 7 chemists. In addition, part-time faculty members (adjuncts) are appointed to teach introductory biology and chemistry courses. There is a full-time administrative assistant and

three laboratory technicians. These technicians play a vital role in setting up labs, ordering and stocking lab supplies, and most importantly, maintaining and enforcing health and safety regulations. The current Department Chair, Dr. Mel Govindan, has served in this position since July, 2014.

Below is the office location of all faculty and staff members in the department as well as a brief description of their teaching and research interests:

Name	Office (Science Center)	Title	Teaching/Research Interests
Awasabisah, Dennis	223	Assistant Professor of Chemistry	bioinorganic, organic, and inorganic chemistry
Barrette, Melissa	220	Administrative Assistant	
Cratsley, Christopher	225	Professor of Biology	Behavior ecology, biology education
Downs, Emma	327	Assistant Professor of Chemistry	inorganic chemistry
Fiedler, Steven	335	Assistant Professor of Chemistry	physical chemistry
Govindan, Meledath	220B	Professor of Chemistry	organic chemistry, natural products chemistry
Grimm, Lisa	231	Assistant Professor of Biology	cell biology, immunology, science education
Hoey, Meg	228	Professor of Biology	genetics, plant biology
Kilpatrick, Elizabeth	224	Assistant Professor of Biology	immunology, virology, anatomy, physiology
Kowlzan, Karen	346	Laboratory Technician	
Krieser, Ronald	338	Associate Professor of Biology	genetics, molecular biology

Krishnamurthy, Mathangi	227	Assistant Professor of Chemistry	organic chemistry, medicinal chemistry
Legare, Melissa	238	Laboratory Technician	
Ludlam, John	226	Associate Professor of Biology	ecology, environmental science
Murray, Ian	236	Laboratory Technician	
Nosek, Michael	224	Professor of Biology	cell biology, biochemistry
O'Connor, Aisling	330	Associate Professor of Chemistry	analytical & green chemistry, science education
Picone, Christopher	336	Associate Professor of Biology	ecology, environmental science
Rehrig, Erin	230	Associate Professor of Biology	plant biology, science education
Rollins, Sean	237	Associate Professor of Biology	microbiology, infectious diseases
Samulak, Billy	333	Assistant Professor of Chemistry	analytical chemistry, biochemistry, science education
Schoenfeld, Thomas	334	Associate Professor of Biology	anatomy, physiology, neuroscience
Soczek, Mary Lou	325	Adjunct Instructor	Intro to Life Sciences
Welsh, Daniel	233	Assistant Professor of Biology	fish morphology, ecology, evolution, behavior, natural history
Williams, Eric	235	Assistant Professor of Biology	developmental biology, cancer biology and physiology.

3. Curriculum (See also Section 4)

The Biology and Chemistry Department offers the following degrees: Bachelor of Science (BS), Bachelor of Arts (BA) degrees in Biology, and the Bachelor of Science degrees in Chemistry and Chemistry Education.

All Biology majors follow a general program of study which includes of four core courses, and six electives including a capstone course. In the capstone course, students apply their understanding of the process of scientific inquiry to research projects. Within the Biology major, students may also elect to pursue one of several tracks or concentrations to achieve a more focused course of study in contemporary, specialized fields.

3.1 Required Courses for Biology, BS

- **Core Courses**

- BIOL 1800 - General Biology I

- BIOL 1900 - General Biology II

- BIOL 2300 - Ecology

- BIOL 2800 - Genetics

- **Elective Courses:** Biology majors also take six advanced electives at or above BIOL 2000. Independent study, directed study or internship may each count as one advanced BIOL elective in a student's program of study. Courses with a separate lecture and lab registration count as a single elective: the lab portion of a course does not constitute a distinct biology elective.

- **Capstone Course:** One of the six electives must be a designated Capstone course. Students in the Capstone course conduct a research project to demonstrate their skills in research design and analysis. The Capstone course also meets the University's Listening and Speaking and Junior/Senior Writing requirement. Capstone courses must be taken at Fitchburg State: courses that transfer as the equivalent course will not fulfill this requirement. Independent studies (BIOL 4903) require approval by the departmental curriculum committee in order to fulfill the Capstone requirement.

- BIOL 3550 - Developmental Biology

- BIOL 3650 - Plant Biology

- BIOL 4500 - Molecular Biology

- BIOL 4700- Animal Physiology

- BIOL 4903 - Independent Study (requires department approval)

- **Required Courses in Related Sciences Subjects:** In addition to biology courses, Bachelor of Science (BS) students are required to take the following courses in related sciences and two mathematics courses at or above MATH 1300.

CHEM 1300 - General Chemistry I
CHEM 1400 - General Chemistry II
CHEM 2000 - Organic Chemistry I
CHEM 2100 - Organic Chemistry II
PHYS 2300 - General Physics I
PHYS 2400 - General Physics II

3.2 Required Courses for Biology, BA

The core, electives and capstone course requirements for BA students are identical to those for the BS degree as described above.

Required Courses in Related Sciences: In addition to biology courses, Bachelor of Arts students are required to take courses in related sciences and two courses in mathematics at or above MATH 1300

CHEM 1300 - General Chemistry I
CHEM 1400 - General Chemistry II
CHEM 2000 - Organic Chemistry I
One PHYS course
One GEOG course

- a. **BA language Requirement:** Foreign language proficiency at the intermediate level. This usually means 2 years of a single language unless the student can take a CLEP test to pass the first year (basic level) courses. Some may come in with A.P. credits as well. See the details of FSU's CLEP acceptance policy in Section 4.4.

3.3 Biology Concentrations/Tracks (BS only)

Students may elect to pursue one of several tracks or concentrations within the major for a more focused course of study in contemporary, specialized fields of biology. The following concentrations are offered:

Biology with Initial Teacher Licensure
Biotechnology
Environmental Biology

Health Sciences
Neuroscience and Behavior

3.4 The Chemistry Major

There are two separate degree programs: B.S. in Chemistry and B.S. in Chemistry with Initial Teacher Licensure in Secondary Education. Both have the same core courses:

- General Chemistry I and II
- Organic Chem I and II
- General Analytical Chemistry
- Physical Chemistry I
- Inorganic Chemistry
- Foundations of Biochemistry
- Chemistry Seminar

Courses in Related Disciplines:

- General Biology I
- Pre-calculus (MATH 1300)
- Calculus I (MATH 2300) and Calculus II (MATH 2400)
- General Physics I and II (PHYS 2300-2400) or
Calculus-based Physics I and II – PHYS 2600-2700.

B.S. in Chemistry requires all of the above courses plus two electives chosen from chemistry courses at or above 3000-level.

B.S. in Chemistry – Secondary Education requires all the above required courses, one chemistry elective at or above 3000 and several education courses.

Chemistry majors are recommended to take the calculus-based physics sequence (PHYS 2600-2700).

Two electives are offered in 2017-18: Medicinal Chemistry in fall and Proteomics in spring.

3.5 Four-Year Plans of Study

Recommended 4-year plans of study are available for all the programs. They can be found at: <http://www.fitchburgstate.edu/offices-services-directory/career-counseling-and-advising/four-year-plans-of-study-by-major/>

3.6 Transfer & Change of Major Students

Students who transfer from another school or major will need to develop a unique plan of studies with their advisor. The amount of time it will take to complete the major will depend on the number of relevant courses already taken prior to the transfer into the program.

4. Advising, Requirements, and General Policies (see also Section 3)

Every major in the department is given a faculty member as their advisor. Students are required to see their advisor twice a year (during advising periods - once in the fall semester and once in the spring semester) and are encouraged to see them more often as the advisor may assist with many issues.

4.1 Biology Program – New Requirement

Beginning fall of 2016, the following curriculum change went into effect for those students who started that year. Students who came in before fall 2016 have the option of switching their Catalog year to 2016-17 but they need to do that by completing a form to be submitted to the Registrar. A student cannot go back and opt for an older Catalog year.

- **Minimum grade of 2.0 in General Biology I (BIOL 1800) and General Chemistry I (CHEM 1300)** to remain in the major. A student failing to make this grade in his/her first attempt will get one more chance to repeat the course. After that they will be dropped from the major and should meet with their advisor to choose a new major.

4.2 Other important aspects of the biology curriculum

- Gen Bio I and II can be taken out of sequence. Most students start with Gen Bio I in fall and move to Gen Bio II in spring. Students are strongly encouraged to take it in this order.
- Genetics requires Gen Bio I as a pre-requisite.
- Beginning Fall 2017, Ecology will only be offered in fall. It is recommended that students take Ecology in fall and Genetics in spring of their sophomore year. A student could wait until the fall of their junior year to take it if they were not able to fit into their sophomore year schedule. Ecology requires either Gen Bio I or II as pre-req or co-enrolled with a red card.
- **Grade of 1.7 minimum.** Almost all BIOL and CHEM courses that have pre-requisites require that the students get at least a 1.7 in the pre-requisite courses. For example, you must earn at least a 1.7 in General Chemistry II before you can move on to Organic Chemistry I. The only exceptions are a few upper-division biology and chemistry electives. The 2.0 requirement in General Biology I and General Chemistry I supersedes this requirement.

- **Biotechnology concentration** requires taking Cell Biology and three other courses from the following five:
BIOL 3450 - Biochemistry; BIOL 3900 - General Microbiology; BIOL 4500 - Molecular Biology; BIOL 3350 - Cell Culture Techniques; BIOL 4810 - Immunology.
- **Environmental Biology** concentration.
 - a. **For those students who matriculated before fall 2015**, it requires Introduction to Environmental Science (BIOL 1010). One of the electives must be an Internship (BIOL 4950) at 3-6 credits. Independent Studies or another course may be approved on a case by case basis to replace the internship. In lieu of two semesters of physics students can take any PHYS or GEOG courses ≥ 2000 level, including Oceanography and Computer Applications in Geography/Earth Science.
 - b. **Beginning Fall 2015 the requirement has changed.** Physics I and II are now required. BIOL 1010 is replaced by Conservation Biology as a required course. Two GEOG courses are required: at least one course must come from the Cluster 1 consisting of GEOG 2100, GEOG 2500, GEOG 3110, or GEOG 4600. Another course must come from the Cluster 2 consisting of GEOG 4500, GEOG 3120, GEOG 4000, GEOG 4400, or GEOG 2400. This reduces the Biology elective to 5 courses including Capstone.
- **Health Sciences concentration** requires: Biochemistry (either BIOL 3030 or 3450) as one of the electives and Anatomy and Physiology I and II. A Microbiology course (Medical Microbiology or General Microbiology), Developmental Biology, and Cell Biology are strongly recommended; so also Applied Statistics. Those who are interested in medical school should take Introduction to Psychological Sciences and Introduction to Sociology as a preparation for the MCAT test on these topics. Please be aware that students interested in pursuing graduate school in the health field do not *need* to take this concentration as long as they meet the pre-requisites for their intended health professional program.
- **Neuroscience and Behavior concentration:** Among the six BIOL electives required for the BS in Biology, including the Capstone, students must take BIOL 2650 (Neuroscience) and at least two courses providing additional perspectives to the study of neuroscience and behavior (BIOL 2600, 3250, 3550 and 4700). They also need to take PSY 1100 plus 3500 or 3550.
- **Biochemistry:** Foundations of Biochemistry (BIOL/CHEM 3030, 3 cr.) will be offered every fall and BIOL 3450 (Biochemistry with lab, 4 cr.) every other spring semester. Both courses require Organic I as pre-requisite and BIOL 3450 has an additional Genetics pre-requisite. BIOL 3030 can count as an elective for the biology major or towards the chemistry minor (if a student takes it as CHEM 3030) but it cannot be counted for BOTH.

4.3 **Chemistry Minor**

The Chemistry minor is very achievable for Biology majors and may open up employment possibilities. It requires General Chemistry I and II, Organic I and II,

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General Analytical Chemistry and one course at or above 2000-level (23-24 credit). The students must meet the 50% rule (i.e., only 50% of the coursework can be transferred from outside Fitchburg State) and the minimum GPA of 2.0 in the CHEM courses. Foundations of Biochemistry can only be used as a Biol elective for the Biology major or Chem elective for the Chemistry Minor; but not both.

4.4 Biology Minor

The Biology minor is something a chemistry major could take and requires the additional courses in General Biology II plus 10 more credits in biology courses at or above 2000 level.

4.5 Neuroscience, Behavior, and Cognition Minor

The Neuroscience, Behavior, and Cognition minor is an interdisciplinary program designed to provide students with the opportunity to explore the biological basis of behavior, consciousness, perception and cognition. All NB&C minors will take two biology and two psychology core courses, two electives in biology or psychology making up the 18 credits required for the minor. Students interested in pursuing a minor are advised to consult with their academic advisor and also should refer to further details in the University Catalog:

<http://www.fitchburgstate.edu/academics/undergraduate/undergraduate-day-programs/all-minors/>

4.6 Fitchburg State University's Policies on AP and CLEP Credits

AP Credits: Generally, AP course credits for students who score 3, 4, or 5 on the Advanced Placement (AP) examination. See the [Academic Glossary](#) of the University Catalog for the advanced placement courses accepted. Students need to have official AP scores sent by the College Board to the Registrar in order to get credit. The score report you had sent when you applied to FSU may not be sufficient as it may not have contained scores of all the AP exams you took.

For the **CLEP exams**, Fitchburg State University adheres to the standards established by the American Council on Education granting credit for tests on which a score of 50 has been achieved. This credit is awarded only to students enrolled in degree programs at Fitchburg State University. The nearest CLEP exam site is at the testing center of Mount Wachusett Community College (978) 630-9244. Here is how the Registrar gives credits for the foreign language tests.

- **French** – based on score; pass-62 will give the student FREN 1000 and FREN 1100. A score of 63+ will grant those two courses, as well as FREN 2000 and FREN 2100.
- **German** – based on score; pass-58 will give the student GER 1000 and GER

1100. A score of 59+ will grant those two courses, as well as GER 2000 and GER 2100.

- **Spanish** – based on score; pass-59 will give the student SPAN 1000 and SPAN 1100. A score of 60+ will grant those two courses, as well as SPAN 2000 and SPAN 2100.

There are CLEP tests in many other disciplines. However, students interested in graduate, medical or P.A. schools are discouraged from taking CLEP tests as these programs would not accept these credits for pre-requisite courses, such as Biology, Chemistry, English, Physics, and Math. In addition Biology and Chemistry CLEP credits only carry elective course credits – they do not get credit for BIOL 1800 or CHEM 1300. CLEP credits are accepted for other courses not required as pre-requisites.

Students planning to take French, Spanish or Latin are required to take a placement test if the student is native speaker of a foreign language or has completed a high school level course in French, Spanish or Latin. This will allow someone to be placed in the appropriate level in these languages. Please see the [Placement Test website](#) for additional information.

5. Internships and Independent Research Projects

The Department of Biology and Chemistry provides learning and resume building opportunities for students through internships and independent studies. Internships send students into work environments in their chosen fields in order to provide real world experience and networking opportunities. Over the past few years we have had students work in a variety of industrial and academic lab settings. Examples include

Cape Cod Museum of Natural History
Charles River Labs Inc.
City of Fitchburg, Leominster Conservation Commission
Crocker Elementary School, Fitchburg, MA
Devens Natural Resource Management
Environmental Protection Agency
FLO Chemical Corporation
Food and Drug Administration (Washington Center Internships)
Leominster Health Alliance Hospital
Mass General Hospital
MIT Biomaterials and Engineering Lab
Museum of Science, Boston
New England Peptide Inc.

Oxbow Associates, Inc. – Environmental Consultants
Pediatric Medicine at Southboro Medical Group, Southboro, MA
PCI Synthesis Inc.
Psychiatric Associates, Wellesley, MA
Quest Diagnostics
Second Chance Animal Shelter, East Brookfield, MA
Southwick Zoo
UMass Medical School
University of Connecticut

- If students are interested in internships, they should contact their advisors who will help them initiate the process which will include selection of an internship site, development of a resume and cover letter and completion of paperwork including the Internship Contractual Agreement. On the second floor of the Science building, there is a bulletin board designated to provide information about internship opportunities. Additional information is also posted on the various Blackboard sites specifically for students in various concentrations. The Fitchburg State Internship Handbook (PDF) provides additional information including forms, evaluation process and academic credit. Please see more information here:
<http://www.fitchburgstate.edu/academics/undergraduate/internships/looking-for-an-internship/>

Independent Study: During independent studies, students participate in research under the guidance of a faculty member of the student's choosing. Independent studies allow students to engage in the scientific process, improve critical thinking skills and learn laboratory techniques. Each spring, the entire university community at Fitchburg State recognizes the achievements of undergraduate student scholars and researchers at the Undergraduate Research Conference. At this event, many biology and chemistry majors present their research in the form of a poster presentation or talk and are provided the opportunity to share and receive feedback from the larger campus community.

- If students are interested in independent studies, they should contact the faculty member whose research interests align with their own. The research areas of each faculty member are summarized in the Faculty Profiles link that can be accessed via the Department of Biology and Chemistry website at
<http://www.fitchburgstate.edu/academics/academic-departments/biology-chemistry/>.

Introduction to Research: Students who are in the beginning of their academic career in the department (freshmen and sophomores) are offered opportunities to assist in research projects conducted by faculty. They can earn academic credit by registering for BIOL 1600 or CHEM 1600 - Introductory Research. This course provides students with the opportunity to engage in

scientific research. Participants work under the supervision of faculty to contribute to the lab's current, ongoing research projects. This course may be repeated once but only 2 credits can be earned in total. Restricted to Biology and Chemistry majors and by permission of the instructor. Graded on a S/U scale. For each credit earned, the student is expected to work 3 hours in the lab of the investigator. Please contact your advisor if you are interested in participating.

6. Graduate and Professional School Preparation and Opportunities:

Admission into programs in the health professions such as medicine, dentistry, nursing, pharmacy, optometry and veterinary medicine are highly competitive and require careful preparation and planning. Our pre-health professions program has an advisor, Dr. Meledath Govindan, with the knowledge to advise students interested in pursuing these careers. He works with students to help them with course selection, exam preparation and other admissions requirements. Dr. Govindan works as a complement to your academic advisor to prepare you to be a competitive candidate for these programs.

The Department of Biology has partnerships with other institutions in the areas of medicine and biotechnology which provide students with an opportunity to gain acceptance without having to go through the regular application process. These opportunities include the following:

- The Lake Erie College of Osteopathic Medicine (LECOM) Early Acceptance Program permits students to apply for early, provisional acceptance into the following programs: Doctor of Osteopathic Medicine, Doctor of Dental Medicine and Doctor of Pharmacy. Students with qualifying SAT scores and GPA can apply within the first two years of their program of study. Interested students should talk with Dr. Govindan and visit the following link: <https://lecom.edu/admissions/entrance-requirements/college-of-osteopathic-medicine-entrance-requirements/>.
- Any student with a B.S. in biology or chemistry and with a minimum GPA of 3.2 will be automatically eligible for admission into the Northeastern University College of Science MS in Biotechnology Program. This is a non-thesis graduate program designed to prepare students for careers in biotechnology and includes a six month co-op assignment with an industry employer to provide real world experience. For more information about the program, visit the following link: <http://www.northeastern.edu/cos/biotech/educational-degree-programs/>.

7. Student Resources

7.1 Biology & Chemistry Departmental Resources:

- Biology & Chemistry Department Office SCI 220

Dr. Meledath Govindan, Chairperson (e-mail: mgovindan@fitchburgstate.edu)

Melissa Barrette, Administrative Assistant (Phone: 978-665-3246; e-mail: mbarrette@fitchburgstate.edu)

Dr. Govindan prefers to be contacted via e-mail except for emergencies, when he can be reached by calling the department office, staffed by Melissa Barrette, Administrative Assistant. She can answer many student questions or put you in contact with someone who can! She also has copies of departmental and university forms. In addition, she can help you to contact faculty members.

- Faculty Mailboxes SCI 222: Each faculty member has a mailbox in this room. They are arranged alphabetically by last name. Students can use the mailboxes to drop off assignments, forms etc. for faculty members.
- Advisors: Every biology major is assigned a faculty advisor. If you are not sure who your advisor, you can find the information on DegreeWorks (Web4) or by contacting Melissa Barrette in the department office.
- Pre-Health Advisor: Dr. Meledath Govindan serves as the university's pre-health advisor. Any students interested in a career in the health sciences should contact him.
- Faculty Offices: The faculty offices are located on the second and third floors of the Condike Science wing. Office room numbers are posted outside the department office (SCI 220).
- Faculty Schedules: All faculty members have their class and office hour schedules posted on a noticeboard on the 2nd floor of the Condike Science wing between SCI 218 and SCI 220.
- Job/Internship Noticeboard: This noticeboard is located on the 2nd floor of the Condike Science wing.
- Facebook Page: <https://www.facebook.com/FitchburgStateUniversityBioChem/>
- Biology & Chemistry Club: The goal of the Biology and Chemistry Club is to develop a community of students interested in the fields of biology, chemistry, and other natural and applied sciences. In addition, they foster interaction between the students and faculty of the Biology and Chemistry department. Meetings are generally held on

Tuesdays at 3:30 pm and many events are scheduled throughout the year. See their website for further information: <https://orgsync.com/58081/chapter>

7.2 Campus Wide Resources:

The Academic Support Center in the Hammond Building houses a number of academic and personal support services, which are available for all students.

- **Tutor Center:** The Tutor Center's peer tutors offer free individual and group peer tutoring in a variety of subjects. Location / Phone Number: Hammond 306 / 978-665-3499. <http://www.fitchburgstate.edu/offices-services-directory/tutor-center/>
- **Counseling Services:** The Counseling Services Office offers a range of services including individual, couples and group counseling, crisis intervention, psychoeducational programming, outreach workshops, and community referrals. Counseling services are confidential and are offered at no charge to all enrolled students. Location / Phone Number: Hammond 317 / 978-665-3152. <http://www.fitchburgstate.edu/offices-services-directory/counseling-services/>
- **Disability Services:** Disability Services provides reasonable and appropriate accommodations for Fitchburg State students with documented disabilities, allowing equal access to all university programs and services. Location / Phone Number: Hammond 303 / 978-665-4020. <http://www.fitchburgstate.edu/offices-services-directory/disability-services/>
- **Career Counseling and Advising Center:** This center provides services such as career counseling, academic coaching, advising for Pre-Majors and advising for students experiencing academic difficulty. Location / Phone Number: Hammond 318 / 978-665-3151. <http://www.fitchburgstate.edu/offices-services-directory/career-counseling-and-advising/>
- **Math Center:** The Math Center is a free walk-in tutoring service for all Fitchburg State University students. Location / Phone Number: Hammond 306A / 978-665-3499
- **Expanding Horizons:** Expanding Horizons is a federally funded student support services program for first generation undergraduate university students, low income students, or students with disabilities. Location / Phone Number: Hammond 315 / 978-665-3064.
- **Writing Center:** At the Writing Center, individual writing tutoring is provided by peer tutors. Writing Peer Tutors work together with writers at all levels, in all stages of the writing process, and in all areas of study. Location / Phone Number: Hammond 306 / 978-665-3499
- **International Education Office:** This office supports students seeking study abroad

opportunities (including faculty-led study abroad courses offered throughout the year and in summer), as well as providing support to undergraduate and graduate international students. In addition, they promote cross-cultural awareness on campus. Location / Phone Number: Hammond 316 / 978-665-3089.

<http://www.fitchburgstate.edu/offices-services-directory/international-education/>

- **Placement Test Center**: This center oversees and administers required placement tests in math, reading and writing for new freshman and transfer students. Foreign language placement testing is also offered. Location / Phone Number: Office - Hammond 306, Test Site – Hammond 101 / 978-665-3499.
<http://www.fitchburgstate.edu/offices-services-directory/placement-center/>
- **Center for Diversity and Inclusiveness (CDI)**: The center coordinates and maintains a campus-wide program that reflects the University's mission to support the development of the whole person, by engaging students, in an inclusive environment, through the promotion of active involvement, collaboration, education and leadership opportunities and ensuring each students goal fulfillment. Location / Phone Number: Hammond G04 / 978-665-3399. http://www.fitchburgstate.edu/offices-services-directory/center_diversity_inclusiveness/