THE FISCHELL DEPARTMENT of
BIOENGINEERING

UNDERGRADUATE STUDENT HANDBOOK
FALL 2016 -

"The finest goal that engineering can achieve is to improve the quality of life for millions of people throughout the world...Bioengineering and biomedical devices are the most direct means to achieve that goal."

Dr. Robert E. Fischell

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Please Note: The Undergraduate Student Handbook will be updated as needed. Please refer to the Fischell Department of Bioengineering Web site at www.bioe.umd.edu for the most up-to-date policies.

Introduction

Welcome to the Fischell Department of Bioengineering! The Bioengineering Undergraduate Program is designed to teach the principles and applications embedded in engineering in conjunction with the sciences of biology, medicine, and health. Our curriculum emphasizes the principles of biology, physiology, engineering, and design. We encourage students to explore an area of interest by following one of our elective tracks: Biotechnology and Therapeutics Engineering, Biomechanics and Biomaterials, Biomedical Instrumentation, or Pre-health Professions. Students who prefer to take electives from across different tracks may opt for general Bioengineering Studies. In addition to the technical aspects, the curriculum also incorporates ethics, economics, and patent concepts. Students also complete the University's General Education Requirements. Together, these areas of study create a rich educational experience that prepares our graduates for success in the professional world.

This handbook provides students with a ready-reference for undergraduate studies in bioengineering. The faculty and staff of the Fischell Department of Bioengineering are here to assist students throughout their academic careers. Please feel free to contact us with any questions or concerns. The Undergraduate Office can always be reached by email at bioe-undergrad@umd.edu. Faculty profiles and contact information are also available on the departmental website. We wish students the best in their academic journeys. Go Terps!

Bioengineering at Maryland

Bioengineering is a field rooted in physics, mathematics, chemistry, biology, and life sciences. Each of these areas is applied in a systematic, quantitative, and integrative way to approach problems in biology, biosystems, medical research, and clinical practice. Bioengineering advances fundamental concepts, creates knowledge from molecular to organ to system levels, and develops innovative processes for the prevention, diagnosis, and treatment of disease. In short, bioengineering seeks to improve the health and life of humankind on many levels.

Bioengineers specialize in those products and processes made from, used with, or applied to biological organisms. In addition to engineering science and design, bioengineers study cell biology, physiology, bioinformatics, bioimaging, and biomechanics. The synthesis of engineering and biology gives bioengineers unique capabilities in our modern world.

In the first two years, students take engineering foundation courses in biology, chemistry, physics, and math. In the third and fourth years, the focus shifts to elective courses and tracks The Senior Capstone courses, taken in year four, feature guest speakers and allow students to discuss current issues in bioengineering including ethics, clinical trials, regulatory issues, venture capitalism, business principles, and entrepreneurship.

Thanks to the breadth of our program, Maryland graduates are presented with a full range of career opportunities in medicine, human health, government, dentistry, law, pharmaceuticals, biotechnology, ecological engineering, environmental engineering, biomedical devices, bioprocessing, and teaching.

Important Contacts

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Mission Statement

The Fischell Department of Bioengineering is a forward-thinking academic organization dedicated to utilizing engineering and scientific knowledge and methods to assist the citizens of Maryland and the nation. The department intends to develop biologically based knowledge and products to promote ecological, human, and animal health, and to improve quality of life while maintaining a healthy environment. The department has risen quickly to assume a leadership role in the field of bioengineering through educating an innovative student body and pioneering groundbreaking technologies.   The Mission Statement is documented both here and on the Fischell Department of Bioengineering Web site at www.bioe.umd.edu

Program Educational Objectives

The undergraduate program in the Fischell Department of Bioengineering provides students with a broad and fundamental education relating engineering to the biological sciences. The program has focuses in biomedical devices, human health, and biotechnology. These focuses all contain components of fundamental sciences, design, and communications skills.

Our program offers a grounding in fundamentals that aims to serve its graduates well throughout their professional careers. Students gain an understanding of human behavior, societal forces, and the dynamics of human efforts. Subsequently, students are encouraged to consider the effects these concepts have upon human health and the health of the environment. With these underpinnings and abilities, we have defined several Program Educational Objectives we expect our graduates to attain in 3-5 years after graduation:

1. Our graduates are either continuing their education or are gainfully employed in bioengineering or related professions;
2. Our graduates participate in lifelong learning activities that will further their careers and their impact on society;
3. Our graduates serve their profession and community.

The Program Educational Objectives are documented both here and on the Fischell Department of Bioengineering Web site at www.bioe.umd.edu

Student Outcomes

Maryland bioengineers gain a broad-based education in which engineering approaches are used to understand and improve living systems and their environments. We educate students to excel in the field of bioengineering and carry out research, development, and commercialization of bioscience systems and tools that will improve the lives of people throughout the world. The ABET (Engineering Accreditation Commission) student outcomes for the Clark School of Engineering are listed below (a-k) followed by additional outcomes specific to the Bioengineering Undergraduate Program (ABO 1-3).

(a)   An ability to apply knowledge of mathematics, science, and engineering
(b)   An ability to design and conduct experiments, as well as to analyze and interpret data
(c)   An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
(d)   An ability to function on multidisciplinary teams

(e)   An ability to identify, formulate, and solve engineering problems
(f)   An understanding of professional and ethical responsibility
(g)   An ability to communicate effectively
(h)   The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
(i)   A recognition of the need for, and an ability to engage in lifelong learning
(j)   A knowledge of contemporary issues
(k)   An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
ABO 1: An ability to perform measurements on and to interpret data from living systems
ABO 2: Background knowledge to support understanding of interactions between living and non-living materials and systems.
ABO 3: An ability to apply statistics to bioengineering applications

The Student Outcomes are documented both here and on the Fischell Department of Bioengineering Web site at www.bioe.umd.edu

Sample Bioengineering Program

The Bioengineering curriculum is designed to emphasize strong fundamentals in both engineering and biology, to include experiential learning in the engineering practices, and to align with specific careers in bioengineering sub-fields. In the first two years, students take engineering foundation courses in biology, chemistry, physics, and math. In the third and fourth years, the focus shifts to the areas of career-specific areas, including biotechnology, biomechanics, biomaterials, and biomedical instrumentation. Senior Capstone Designis a two-semester fall/spring sequence taken in the fourth year that provides an immersion experience in entrepreneurialism, innovation, and the engineering practice.

Students are expected to maintain timely progress towards degree completion and satisfactory academic performance as defined by the A. James Clark School of Engineering and the department. For more information on academic progress, including the 45-credit review, please see http://www.eng.umd.edu/advising/academic-policies#expectation.

The undergraduate program is designed to be completed in four years. The sample plan below is an important guide for students, as good planning is important for timely graduation with a degree in a rigorous engineering program. It should be noted that students entering the program with AP credits may benefit from added flexibility. A separate sample plan for those following the pre-health track is also available.

Students are encouraged to follow the sample program as closely as possible and to follow what is agreed upon during advising meetings. Since the courses build upon each other, it is critical that they are taken in the specified order. Most upper-level BIOE courses require BIOE 120, 121, 241 and MATH 246. The Senior Capstone Design Course, BIOE 485 and 486, requires successful completion of 21 BIOE credits.

Year 1
ENES 100 - Introduction to Engineering Design
MATH 140 - Calculus I
CHEM 135 - Chemistry for Engineers
CHEM 136 - Chemistry for Engineers Laboratory
BIOE 120 - Biology for Engineers
BIOE 121 - Biology for Engineers Laboratory
ENES 102 - Mechanics I
MATH 141 - Calculus II
PHYS 161 - General Physics I
ENGL 101 - Introduction to Writing
General Education Requirement I

Year 2
CHEM 231 - Organic Chemistry I
CHEM 232 - Organic Chemistry I Laboratory
MATH 241 - Calculus III
BIOE 241 - Biocomputational Methods
PHYS 260 - General Physics II
PHYS 261 - General Physics II Laboratory
General Education Requirement II
MATH 246 - Differential Equations

BIOE 232 - Thermodynamics
BIOE 371 - Linear Algebra and ODEs for Bioengineering
Applications
Biological Science Elective I (BSCI 2xx)
General Education Requirement III
BIOE 221 - Intro to Bioengineering Major

Year 3
BIOE 331 - Biofluids
BIOE 372 - Biostatistics for Experimental Design and Data Analysis
BSCI 330 - Cell Biology and Physiology
BIOE Foundational Selective I
BIOE Elective I
BIOE 340 - Modeling Physiological Systems and Laboratory
BIOE 457 - Biomedical Electronics & Instrumentation
BIOE Foundational Selective II
BIOE Elective II
General Education Requirement IV

Year 4
BIOE 485 - Capstone I
BIOE Elective III
Breadth Elective
General Education Requirement V
General Education Requirement VI
ENGL 393 - Technical Writing
BIOE 486 - Capstone II
BIOE Elective IV
Biological Science Elective II
General Education Requirement VII
Oral Communications Requirement

General Education Requirements (GenEd)

Students matriculating to the University of Maryland (including freshmen and students transferring from private institutions and from non-Maryland public institutions) fall 2012 and forward are subject to the University's new General Education program requirements. See The Switch from CORE for exceptions for transfer students and more information.

Students who matriculated prior to fall 2012 who are under the CORE Program can review their general education requirements here: www.ugst.umd.edu/core/overview/WhatIs.html

From the Office of Undergraduate Studies website's General Education Requirements Overview

The General Education program has four Distributive Studies categories: History and Social Sciences, Humanities, Natural Sciences, and Scholarship in Practice.

The Program has three additional categories that may be taken on their own or, through double counting, may be rolled up into the Distributive Studies categories. Two of these comprise the Diversity requirement: Understanding Plural Societies and Cultural Competence. The third is the I-Series program which offers students two courses that deal with major issues, usually from an interdisciplinary perspective. With double-counting, students will have a minimum of 40 credits in General Education.

Bioengineering students must plan their electives carefully to maximize double-counting and minimize number of credits needed for General Education.

The General Education requirements include:

- Fundamental Studies (Academic Writing, Professional Writing, Mathematics, Analytic Reasoning, and Oral Communication) [5 courses, 15 credits]
- Distributive Studies (2 Humanities, 2 Natural Sciences [1 must be a lab course], 2 History and Social Sciences, and 2 Scholarship in Practice [only 1 may be in student's major]) [8 courses, 25 credits]
- The I-Series courses [2 courses, may be double counted with Distributive Studies and/or Diversity]
- Diversity (Understanding Plural Societies and Cultural Competence [2 courses, may be double counted w/ Dist. Studies])

See the Summary Chart and the General Education website for more detailed information about the requirements and applicable courses.

Technical Electives

The Bioengineering Undergraduate Program requires the completion of 7 technical electives (21 credits): 4 bioengineering electives (12 credits), 2 biological science electives (6 credits), and 1 breadth elective (3 credits). All electives must be successfully completed (C- or better). It is strongly recommended electives be selected in conjunction with a Bioengineering Track within the Undergraduate Program. A consistently updated electives list can be found here on the Fischell Department of Bioengineering Website: http://www.bioe.umd.edu/undergraduate/electives

Students seeking to count an elective that is not on this list should submit a BIOE Petition for Waiver to Departmental Policy. If a student obtained prior approval during an advising meeting to take and count an elective not on this list, student should have advisor make note on the BIOE Advising Worksheet.

The biological science electives must adhere to the following policies:

- The elective must be chosen from the biological science elective list posted on the Bioengineering website;
- All biological science electives must be at the 200-level or above;
- At least one course (3 credits) must be at the 300-level or above.

Tracks

The Bioengineering Undergraduate Program has established tracks to provide guidance to students who aim to specialize in a particular sub-field of bioengineering. Aligning with a track may improve career awareness and readiness while improving a student's resume. The tracks categorize the 2 foundational courses and 7 electives into career-specific sets. All of the required bioengineering core courses must be completed, regardless of the track selected. While students are highly encouraged to select a track, one need not be followed to satisfy the requirements of the program. Each track has a faculty leader. Questions about the track, including the addition of new courses to a track, should be directed to the track leader.

The most current information about the tracks may be found on our web site: http://www.bioe.umd.edu/undergraduate/tracks

Our tracks are:

Biotechnology and Therapeutics Engineering
Biomechanics & Biomaterials
Biomedical Instrumentation
Pre-Health Professions*

Please consult closely with the Reed-Yorke Health Professions Advising Office for additional courses and specific recommendations

Advising and Registration

The Bioengineering Undergraduate Program is committed to student advising and aims to provide comprehensive curricular support to all of its students. Students seek guidance about course planning and scheduling at various points during their academic careers for a number of different reasons. Students may initiate the advising process by emailing bioe-undergrad@umd.edu, and we will point you in the right direction. Generally, advising is handled by one or a combination of the following: faculty advisor, departmental advisor, college advisor.

Faculty Advising

All bioengineering students are assigned to a faculty advisor. Students are required to meet with their faculty advisor at least once per semester. For currently enrolled students, the mandatory advising period occurs in the weeks prior to registration for the next semester. The advising meeting with the faculty member generally covers the following: course selection for upcoming semester, four-year planning, and career goals. Students should prepare for every advising meeting by completing and updating the BIOE Advising Worksheet.

Freshmen are assigned to faculty advisors and notified during their first semester. All other students may contact bioe-undergrad@umd.edu if they are not sure of their faculty advisor assignment. For faculty contact information, please see www.bioe.umd.edu/facstaff/faculty-list.html

Departmental Advising

Bioengineering majors and prospective transfer students may also need to meet with a departmental (staff) advisor. Some examples of departmental advising include: study abroad planning, C.A.R.E (academic probation) advising, double-major/double-degree planning, graduation audit review (seniors), and additional help with four-year planning.

For departmental advising, please send an email including your name, UID, and general question to bioe-undergrad@umd.edu. All students seeking advising should read and make sure that they understand the policies and requirements stated in this Handbook.

College Advising

The Clark School of Engineering's Office of Undergraduate Advising and Academic Support (UA&AS) also provides a broad range of services and support for engineering students. Some policies are the oversight of the College, so your faculty or departmental advisor may at times refer you to a Clark School advisor. For example, transfer admission/transfer credit, 45-credit benchmark review, and permission to enroll at another institution are handled by the College.

Registration

Each semester students are given an appointment by the university for pre-registration based on their credit level. Students are notified of their appointment date and time by email. The appointment time is also available in students' Testudo accounts. Students are not be able to register until they have met with their assigned faculty advisor and obtained the advisor's signature on the BIOE Advising Worksheet. Students should submit the BIOE Advising Worksheet to the BIOE Undergraduate Office and will be cleared for registration within 24 hours of submitting the form.

During the drop period, a student may drop a maximum of 4 credits. Drops performed during this period will be recorded on the student's permanent record with a notation of 'W' for withdrawal.

Benchmark

The goal of the Student Academic Success Degree Completion Policy is to promote undergraduate student success. This is accomplished through a Benchmark review as described below. For the Benchmark, the student will be assigned a status of Pass, Fail, or Fail but Continue. Students who receive Fail status are required to change their major out of engineering. Students who receive Fail but Continue are required to meet with the departmental advisor and their faculty advisor to discuss their plan to make the necessary progress towards completion of the degree requirements. If a student fails to make progress based on the plan developed between the student and his/her advisor, the student may be required to choose a major outside of engineering.

45 Credit Review Benchmark: *This gateway review is administered by the Clark School's Office of Undergraduate Advising & Academic Support*
Students who are directly admitted to Engineering from high school are reviewed for successful completion of the 45 credit review in the semester in which they attain 45 credits at the University of Maryland. The primary requirements of the review are:
- CHEM 135 with a minimum grade of 2.0
- MATH 141 with a minimum grade of 2.0
- PHYS 161 with a minimum grade of 2.0
- ENES 100 with a minimum grade of 2.0
- Fundamental Studies in English
- One Distributive Studies course from the Humanities or Social Sciences
- No more than one repeat of any of the courses above (a 'W' counts as an attempt)
- Minimum grade point average of 2.0

Graduation

Students must apply for graduation at the beginning of the semester in which they intend to graduate. The most current information can be found on the Clark School Advising Office's graduation web site: http://www.eng.umd.edu/advising/graduation. Generally, there are several steps to complete this process:

- Fill in the requested information and then print out a graduation worksheet (Web link will be given during semester of graduation).
- Complete a senior survey AND print out the confirmation receipt (not the entire survey).
- Print out and attach your degree audit (accessible from Testudo)
- Apply on-line for graduation: www.testudo.umd.edu/apps/candapp/

Please note that there are often corrections that need to be made and courses that need to be entered in the student's audit. In order to ensure that all information is correct on the audit, please schedule a senior audit appointment with a departmental advisor at the start of your final semester or during the advising session in the semester before your final semester.

Academic Difficulty

Sometimes students run into academic difficulties. In some cases, this is a serious indication that Bioengineering may not be a good fit for the student. Students who feel that this may be the case should contact their faculty advisor immediately to discuss options. In other cases, academic difficulty may be simply an indication that time management, study habits, and priorities need to be re-evaluated and adjusted. Below are the policies and guidelines related to academic difficulty.

University Repeat Policy & Freshman Forgiveness
- Any course may be attempted a maximum of two times
- Students may repeat up to 18 credit hours.
- A 'W' (withdrawal) counts as an attempt.
- Both attempts of a course are calculated into the GPA unless the course was originally taken during the student's first semester at UMCP or within the first 24 credits taken at UMCP (this includes transfer credits from another institution, but not AP/IB credits). For those courses, there is a grace period where only the new grade will be calculated into the GPA. *Please note the original grade is not deleted from the transcript.*
- No more than 4 credits may be dropped during one semester.

For more information, please see:
http://www.umd.edu/catalog/index.cfm/show/content.section/c/27/ss/1584/s/1537.

Appeals of any of these policies will be considered. To appeal, please complete the appropriate Exception to Policy Form.

Academic Probation
An engineering student is placed on academic probation if his/her cumulative GPA falls below a 2.0. If a student has less than 60 credits when placed on probation, then the student may be permitted to continue in the major as long as a minimum semester GPA of 2.0 is achieved. If a student has more than 60 credits when placed on academic probation, then the student will be allowed one probationary semester. If the student's cumulative GPA remains below a 2.0 after the probationary semester, then the student will be dismissed from the Clark School of Engineering.

All students on academic probation are required to complete the CARE (Creating Academic Responsibility in Engineering) program conducted by the Clark School's Office of Undergraduate Advising & Academic Support. In addition, all students on probation have an academic hold placed on their file and will not be allowed to add or drop any courses until the CARE program is completed. There are three steps students must complete before an academic hold can be removed:
- Complete CARE modules (students will receive an email from Engineering Undergraduate Advising Office with instructions to modules)
- Meet with assigned faculty or departmental advisor
- Meet with an advisor in the Engineering Undergraduate Advising & Academic Support Office

Advising for Professional Schools

Many bioengineering students plan to attend professional schools upon completion of their undergraduate degrees. Many of the courses required for medical school and dental school preparation are included in the Bioengineering Undergraduate Program. Students interested

in pre-health or pre-law professions are strongly encouraged to contact the appropriate advising office and take advantage of their services *as early in their undergraduate career as possible.* Information on pre-med, pre-dental and pre-law student organizations can also be found at the following Web sites.

>   Reed-Yorke Health Professions Advising Office
>   1210 H. J. Patterson Hall
>   Phone: 301-405-7805
>   Email: preprof@umd.edu
>   Web: www.prehealth.umd.edu
>
>   Pre-Law Advising Office
>   0110 Hornbake Library
>   Phone: 301-405-2793
>   Email: prelawadvisor@umd.edu
>   Web: www.prelaw.umd.edu

Student Organizations

- BMES-UMD
  Biomedical Engineering Society – University of Maryland Student Chapter

- AEMB
  Alpha Eta Mu Beta, Biomedical Engineering Honors Society

Internships

Bioengineering students have access to the following professional development resources:

- The Engineering Co-op & Career Services Office assists all engineering students with the job search process for co-op, internship, summer jobs, or post-graduation positions. Services include online job listings (Careers4Engineers database), resume critiques, career fairs, and more.
- The department occasionally receives and forwards internship opportunity information to the undergraduate email list.
- Research Experiences for Undergraduates (REU), sponsored by the National Science Foundation, gives students the opportunity to work closely with a faculty member on a specific research project. REU sites are located at US and foreign institutions. Students must apply and be selected.
- Maryland Center for Undergraduate Research helps students identify on-campus research opportunities.
- Faculty members may hire students for volunteer, credit-based, or paid internships in their research laboratories. Students should investigate faculty research areas and contact individual faculty members.

Study Abroad

Study abroad is a wonderful opportunity for students to broaden their horizons and enrich their educational experience by immersing themselves in a foreign culture. Students interested in study abroad should look into the process early in their academic careers. Here are the major steps in the process:

- Contact Bioengineering departmental advising at bioe-undergrad@umd.edu to discuss feasibility of study abroad courses in context of four-year-plan. This should ideally be done more than one full semester before you plan to go abroad
- If study abroad fits with your plan, contact or visit International and Leadership Programs (ILP) to discuss options and gather resources
- Decide where you wish to study abroad
- Communicate with Bioengineering Advising and ILP to develop a list of 6 to 8 courses you are interested in taking at the host university
- Make sure your faculty advisor is up-to-date with your study abroad plan
- Obtain approval signatures on study abroad forms from a Departmental Advisor(see contact information section)

Course equivalencies should be identified *before* you leave for study abroad. If you wish to transfer a course equivalent to a BIOE course, then you will need to obtain host university course syllabi and seek evaluation by the Bioengineering Undergraduate Program. Contact bioe-undergrad@umd.edu for assistance. Other courses may transfer as CORE/General Education courses, engineering science electives, or biological science electives at 100, 200, or 300 levels.

The University also has a Study Abroad Office that provides forms and services/information for study abroad. Students may also take advantage of their services and information: http://www.international.umd.edu/studyabroad

Special Programs

The A. James Clark School of Engineering offers the **Engineering Honors Program** (EHP), which provides eligible students the opportunity to pursue an enriched program of study. Engineering students meeting all of the following criteria are eligible to apply:
- Upper fourth of engineering juniors and seniors based on GPA
- Junior standing of 60 applicable credits
- Completion of at least one semester at the University of Maryland

For more information, visit: http://www.eng.umd.edu/current/honors-program

The Bioengineering Department offers a two-year research based **Bioengineering Undergraduate Honors program**. Interested students should apply to the honors program in the spring of their sophomore year. Those accepted into the program will begin honors research in their junior year. For more information please see: http://bioe.umd.edu/undergraduate/honors

The Maryland Technology Enterprise Institute (Mtech) offers the **Hinman CEOs Program**, which is the nation's first living-learning entrepreneurship program. This program brings together entrepreneurially-minded students from all academic disciplines to explore business ventures. For more information, visit http://www.hinmanceos.umd.edu/

The **Quality Enhancement Systems and Teams Program (QUEST)** is a reality-based learning program engaging undergraduate students from business, engineering, and computer, mathematical and natural sciences. QUEST students participate in courses focused on cross-functional collaboration, innovation, quality management, and teamwork. Additionally, students participate in QUEST-exclusive extracurricular events (Integrating QUEST) that are offered each semester. For additional information, visit http://www.rhsmith.umd.edu/programs/undergraduate-programs/academics/fellows-special-programs/quest

University Policies

The University of Maryland has numerous policies, many of which apply to students. All policies are posted here: http://www.president.umd.edu/policies. Some that apply specifically to students are included below.

Discrimination
The University of Maryland is actively committed to providing equal educational and employment opportunity in all of its institutions and programs. The University does not discriminate on the basis of race, color, religion, age, national origin, sex, or disability, and all policies, programs, and activities of the University are and shall be in conformity with all pertinent federal and State laws including, but not limited to, Title VI of the Civil Rights Act of 1964 as amended, Title IX of the 1972 Education Amendments, and Section 504 of the Rehabilitation Act of 1973. To review the University's human relations code in full, please visit http://www.president.umd.edu/policies/vi100b.html

Sexual Harassment
The University of Maryland is also committed to maintaining a working and learning environment free of intimidation, fear, coercion, and reprisal. Accordingly, the Campus prohibits sexual harassment. The University defines sexual harassment as: (1) unwelcome sexual advances; or (2) unwelcome requests for sexual favors; or (3) other behavior of a sexual or gender-based nature where:
- Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or participation in a University-sponsored educational program or activity; or
- Submission to or rejection of such conduct by an individual is used as the basis for academic or employment decisions affecting that individual; or
- Such conduct has the purpose or effect of unreasonably interfering with an individual's academic or work performance, or of creating an intimidating, hostile, or offensive educational or working environment.

For more information on the University of Maryland's sexual harassment policy, please visit http://www.president.umd.edu/policies/vi120a.html

Student Conduct
Students are expected to exercise appropriate conduct both on and off campus. A complete list of conduct considered prohibited as well as procedures for resolving allegations of misconduct may be found in the "Code of Student Conduct" available through the Office of Student Conduct website: http://osc.umd.edu/

Sanctions for violations of conduct regulations include disciplinary probation, suspension, and expulsion. In addition, the University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all students. Any of the following acts would be considered an instance of academic dishonesty:

- **Cheating:** Intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise.
- **Fabrication:** Intentional and unauthorized falsification or invention of any information or citation in an academic exercise.
- **Facilitating Academic Dishonesty:** Intentionally or knowingly helping or attempting to help another to violate any provision of this Code.

- **Plagiarism:** Intentionally or knowingly representing the words or ideas of another as one's own in any academic exercise.

All members of the University community - students, faculty, and staff - share the responsibility and authority to challenge and make known acts of apparent academic dishonesty. For more information on the Code of Academic Integrity and the Student Honor Council, please visit http://www.shc.umd.edu/

Frequently Asked Questions

What do I need to do if I want to take a course somewhere else?
- Fill out the Clark School Permission to Enroll in Another Institution Form found at http://www.eng.umd.edu/advising/forms. Instructions for submission are also found at this site. This should be submitted before taking the course.

What is the maximum number of credits I can register for?
- Freshmen are allowed a maximum of 17 credits in their first semester. All other students are allowed a maximum of 18 credits per semester. Students who want to appeal their credit limit should fill out a Clark School Exception to Policy Form found at http://www.eng.umd.edu/advising/forms

What do I do if I need a stamp for a course or a registration block removed?
- Submitting the BIOE Advising Worksheet (see http://bioe.umd.edu/undergraduate/advising/forms) will ensure that you have satisfied mandatory advising and that you will receive stamps for BIOE courses. If a stamp is required for any other course, contact the department offering the course.

How do I register for BIOE 399: Independent Study?
- Complete the BIOE 399 Form (see http://bioe.umd.edu/undergraduate/advising/forms)

What do I do if I want to count an elective that is not on the approved list?
- Submit the BIOE Petition Form (see http://bioe.umd.edu/undergraduate/advising/forms)

How long does it take to graduate?
- The program is designed to be completed in 4 years. AP credit, summer/winter courses, study abroad, and special programs (Gemstone, Honors, Quest) may affect the length of time it takes to graduate.

Why doesn't my degree audit reflect all my courses?
- Some courses (technical electives) have to be manually entered into the degree audit. Advisors typically conduct degree audits during the student's graduating semester. Students who would like to have a graduation audit conducted sooner may contact bioe-undergrad@umd.edu

What is the difference between bioengineering and biomedical engineering?
- Bioengineering is a more broad based education that includes, but is not limited to, biomedical engineering topics.

What do students do after graduation?
- Many students work at biotechnology companies or government agencies (NIH, FDA, NIST), attend graduate or medical school, or enter into other post-baccalaureate programs.