Bioengineering – Undergraduate Departmental Honors Policy Guidelines

OVERVIEW

The Departmental Honors program provides undergraduate Bioengineering students advanced training and experience in the conduct of experimental research and professional development. One of the primary objectives of this program is to provide students additional preparation for placement in post-graduate schooling and/or to increase the probability of achieving their professional career aspirations. Departmental Honors students will take part in both mentored (faculty supervised) laboratory research and professional development activities over a minimum of two (2) semesters. In general, Departmental Honors students will be required to perform research, present their findings utilizing both oral (semester poster / oral presentations) and written formats (honors thesis) in addition to attending academic and professional development lectures/experiences. Successful completion of the Departmental Honors program upon graduation requires undergraduate bioengineering students to perform at levels significantly above and beyond the basic requirements for a non-honors undergraduate degree in Bioengineering.

REQUIREMENTS FOR GRADUATING WITH DEPARTMENTAL HONORS

General Requirements

Prospective Departmental Honors students and their research advisors must fill out the Departmental Honors agreement (Form 1) along with a Departmental Honors syllabus (Form 2) during the registration period immediately prior to the semester in which the student wishes to start the Departmental Honors Program (this lead time is required so that the Departmental Honors committee can review the completed Form 1). In general, the student should enroll in the Departmental Honors program at least two semesters prior to graduation. The Departmental Honors agreement will be reviewed in a timely manner (within 30 days of receipt) by members of the Departmental Honors committee. Students and their research advisors will be notified of acceptance or denial into the Departmental Honors program.

Academic Requirements

Departmental Honors students must have a minimum (major) grade point average of 3.5 to be admitted to the program which must be maintained throughout the course of their studies. Additionally, the students must be members of the Calhoun Honors College.

Course Requirements

Research Principles (BIOE H4150): It is strongly suggested that Departmental Honors students take BIOE H4150 during their first semester in the program. This course introduces Departmental Honors and senior students to principles and practices of scientific research. Topics covered include developing scientific concepts, developing projects, collaborating in multidisciplinary teams, patenting and publishing technical and scientific information
and reviewing professional and ethical standards of performance. Course completion will be tracked via Form 3 – Section A.

Research Requirements

**Mentored Research (BIOE H4910):** This course will provide mentored research training for undergraduate Departmental Honors students working with a faculty research advisor. These students will take a total of 6 research credits (equivalent to 270 total hours of lab time) under a single research advisor. The faculty research advisor will develop a syllabus outlining the proposed research and evaluation methods (From 2) within the first two weeks of each semester in which the student is performing Departmental Honors research. Assessment of the students’ progress through the research program will be tracked via Form 3 – Section A). The students will learn the basic principles of scientific / engineering research including performing literature reviews, experimental design, research documentation, and presentation of results.

**Departmental Honors Research Seminar:** Departmental Honors students will be required to actively participate in one research seminar / symposium each semester during enrollment in the program. During their first semester in the program, each student will be required to present (via printed poster) their research progress at a departmental or university sponsored research symposia or a professional society meeting. Additionally, each student is expected to give an oral presentation of their research findings during their final semester to peers and faculty within the Department of Bioengineering during a departmental research symposium. Departmental Honors students can be exempt from their final oral presentation if they present documented proof (i.e. conference proceedings) to the honors committee that they have previously presented their honors research (via podium presentation) at a professional society meeting. However, the student must submit a poster for viewing and must be present during the research symposium during their last semester. Posters and oral presentations will be evaluated based upon a suggested assessment rubric which can be found within the Departmental Honors Syllabus (Form 2) by both their research advisor and by a member of the Departmental Honors committee. A final evaluation grade will be recorded on Form 3 – Section B and will be signed off on by the research advisor and a Departmental Honors committee member. Additionally, a hard copy artifact (print out) of each poster and final presentation will be required so that it can be kept within the student’s file for tracking progress throughout the program.

**Departmental Honors Research Thesis:** Departmental Honors students are required to complete a thesis according to the thesis content and formatting guidelines provided by the Departmental Honors committee (Form 4). At minimum, the thesis should include a review of literature pertinent to the students’ research focus area, research aims and hypotheses, materials and methods, results, discussion and a brief description of the conclusions that can be drawn from the research performed. The thesis must be submitted to the students’ research advisor who will review the document for completeness and clarity at least one month prior to the student’s intended graduation date from the undergraduate program. Following assessment by the research advisor, the thesis and assessment form will be submitted to the Departmental Honors committee for final review/approval at least two weeks prior to graduation with Departmental Honors (Form 3 – Section D).

Professional Development Activity Requirements

**Attendance of Bioengineering Seminar / Lecture Series:** Departmental Honors students will be required to attend a total of 9 bioengineering, scientific, professional and/ or entrepreneurial events (i.e. Hunter, C. Dayton Riddle, annual scientific meetings, etc...) over the course of their enrollment within the program. Students will
be required to sign a roll sheet following each seminar to illustrate their attendance at the event in addition to completing Form 3 – Section C.

HONORS PROGRAM PROGRESS TRACKING

A student’s progress through the Departmental Honors program will be tracked via Form 3. These forms will be maintained in hardcopy along with Forms 1 & 2 in the student’s file folder to be housed with the Undergraduate Student Services Coordinator. It is the responsibility of the student to update and maintain their tracking form. This form can be signed out by the student, the student’s research advisor or by a member of the honors committee in order to update the student’s progress towards completion of the honors program. However, it is primarily the student’s responsibility to keep up with tracking their own progress through the program.

Policy Statement: The policies herein outline requirements for obtaining Bioengineering Undergraduate Departmental Honors upon graduation. Any deviation from these guidelines and the referenced documents will result in the denial of departmental honors status. In extreme cases, deviations can be subject to review by the departmental honors committee for consideration of the granting of departmental honors status.