

Adopted Summer 2017

Primary Guidelines

Undergraduate students may take up to 3 credits of EGN4912 toward the completion of their specialization track or BME electives requirement, provided the following conditions are met:

1. Research activities must be supervised by a primary biomedical engineering faculty or a biomedical engineering affiliate faculty. Research activities in laboratories outside of the biomedical engineering faculty may be approved by on a case-by-case basis by the undergraduate programs committee; however, these approvals should be obtained prior to initiation of the research activities (see petition guidelines below).
2. **One day prior** to the drop/add deadline by 5:00 pm, the [EGN4912 Plan of Study Form](#) that includes an outline of laboratory expectations (time commitments, reporting expectations, lab meeting presentations, etc.) **AND** the [EGN4912 Registration Form](#) (only accepted as one page, printed front/back – copies are available in JG56) with signatures must be submitted **together** to undergrad@bme.ufl.edu.
 - Please title email “Plan of Study for EGN4912 Specialization Track/BME Electives.”
 - Plans will be reviewed by the Associate Chair for Undergraduate Studies, Undergraduate Coordinator, or a designated member of the Undergraduate Programs Committee for compliance with guidelines outlined in the form.
 - Failure to comply with departmental guidelines may result denial of credits toward the completion of the specialization track/BME electives.
3. By the last day of the semester, a final report must be submitted to the research advisor for grading, as well as to undergrad@bme.ufl.edu for compliance evaluation (see final report guidelines below).
 - Please title email “Final Report for EGN4912 Specialization Track/BME Electives.”
 - Reports will also be reviewed by the Associate Chair for Undergraduate Studies, Undergraduate Coordinator, or a designated member of the Undergraduate Programs Committee for compliance with guidelines outlined below. While failure to comply with guidelines will not affect the

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grade assigned in EGN4912 by the evaluating professor, failure to comply with departmental guidelines may result denial of credits toward the completion of the specialization track/BME electives.

4. Laboratory research must meet the departmental expectations for undergraduate research commitment per credit hour assigned for the specialization track/BME electives. See guidelines below:
 - **Fall/Spring terms (15 weeks in length):**
 - 1 credit is equivalent to approximately 4 hrs of laboratory work per week (60 hrs of work in the lab during the term).
 - 2 credits are equivalent to approximately 8 hrs of laboratory work per week (120 hrs of work in the lab during the term).
 - 3 credits are equivalent to approximately 12 hrs of laboratory work per week (180 hrs of work in the lab during the term).
 - **Summer A/B terms (6 weeks in length):**
 - 1 credit is equivalent to approximately 10 hrs of laboratory work per week (60 hrs of work in the lab during the term).
 - 2 credits are equivalent to approximately 20 hrs of laboratory work per week (120 hrs of work in the lab during the term).
 - 3 credits are equivalent to approximately 30 hrs of laboratory work per week (180 hrs of work in the lab during the term).
 - **Summer C term (12 weeks in length):**
 - 1 credit is equivalent to approximately 5 hrs of laboratory work per week (60 hrs of work in the lab during the term).
 - 2 credits are equivalent to approximately 10 hrs of laboratory work per week (120 hrs of work in the lab during the term).
 - 3 credits are equivalent to approximately 15 hrs of laboratory work per week (180 hrs of work in the lab during the term).

Documentation of time is not required; and, projects will commonly require higher workloads during specific times of the semester, and lower workloads during other times. However, the plan of study and final report should reflect contact time and laboratory commitments that correlate to this scale. Failure to comply with these contact hour assessments per credit hour may result denial of credits toward the completion of the specialization track/BME electives.

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5. Credits in EGN4912 must reflect active research activities, including design of experiments, prototype development, data collection, data analysis, and/or presentations. While students are expected to participate in general laboratory activities (such as washing dishes, cleanup) that are in conjunction with being a typical laboratory member, educational activities in the plan of study and final report should reflect active research activities only, and not general laboratory citizenship. While standard record keeping and maintaining patient records is part of typical laboratory activity, clerical record keeping is not considered active research. To count as active research, analysis of the data collected and/or the application of analytical tools to these data are required.
6. To count toward the specialization track/BME electives, students should plan to take a total 3 credits in EGN4912 prior to graduation. These credits may be completed as a single 3 credit assignment or broken across multiple semesters (1 credit in one semester and 2 in succeeding semester, or 2 credits in one semester and 1 in succeeding semester). *If credits are broken across multiple semesters, a plan of study and final report must be submitted for each semester of credit.*
 - Since specialization track/BME electives courses are typically 3 credit hours each, failure to complete a total of 3 credits in EGN4912 will likely require the student complete more than 15 credits of work to complete the specialization track/BME electives.
 - Approval of specialization track/BME electives courses is solely based on scientific and academic content, not student preference or convenience toward completion the specialization track/BME electives requirements for graduation.

Petition Guidelines for Research Activities Outside of Biomedical Engineering

If a student wants to conduct research activities for the specialization track/BME electives in a laboratory outside of the biomedical engineering faculty (primary or affiliate), approval must be obtained from the undergraduate program committee (UPC) prior to the initiation of research activities for credit in the BME specialization track/BME electives. Please note, research activities are always encouraged in BME students, and activities may still be sought by students in laboratories outside of BME without UPC

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approval as technical electives. The UPC approval process is only for counting of these credits toward the BME specialization track/BME electives.

To petition the committee, the following three forms should be submitted **together** for the UPC to review: (1) [EGN4912 Plan of Study Form](#), (2) [EGN4912 Registration Form](#), AND (3) [Student Petition Form](#). These documents must be received **two days prior** to the drop/add deadline by 5:00 pm. Please submit petitions to undergrad@bme.ufl.edu.

Final Report Guidelines

If the research is for academic credit in the specialization track/BME electives, a final report must be submitted to both the research advisor for grading and to undergrad@bme.ufl.edu for compliance evaluation. Students may use the [EGN4912 Final Report Template](#) to create the report.

Minimum report lengths are as follows:

- 2 pgs for 1 credit hours
- 4 pgs for 2 credit hours
- 6 pgs for 3 credit hours
- Title page, references, and appendices do not count toward the page length requirement.

The contents of the final report should describe progress and participation in active research activities in the laboratory, focusing on skills and training in design of experiments, prototype development, data collection, and/or data analysis. Progress in all areas is not required, but final report should document active research activities and the training in these laboratory skills, and should not include laboratory activities related to general laboratory citizenship (ordering supplies, cleaning up, organizing samples, etc.).

To ensure minimum page length requirements are met, final reports should have margins of exactly 1 in, have line spacing of 1.5 lines exactly (single spaced and double spaced is not acceptable), and font size of exactly 12 pt.