

GUIDELINES FOR STUDENTS AND SUPERVISING FACULTY

BIOC 482 INDEPENDENT RESEARCH IN BIOCHEMISTRY

Catalog Description:

BIOC 482 Independent Research in Biochemistry var 1-sh

Prerequisites: BIOC302 and 312, permission by program coordinator. Student conducts a research project in any area of biochemistry. Work supervised by faculty. Does not involve regular class or lab hours. Enrollment by permission only.

Biochemistry majors are required to complete 2 credits of BIOC 482. This is normally accomplished during the fourth year, after completion of BIOC 302 and 312, but could be started concurrently with these courses or during the summer session. It is the responsibility of the student to initiate discussions with faculty members with whom they would like to pursue a research project. The supervising faculty member may be from Biology, Chemistry, or another department. The only restriction is that the project must involve research in biochemistry. For this purpose, biochemistry is defined broadly. For example, research that may be best classified as molecular biology or cell biology would be appropriate. If a student is uncertain whether a possible project meets this requirement, they should consult with the appropriate Biochemistry Program Co-coordinator (currently Dr. Southard) before submitting a Request for Independent Study form.

A project report is required for all students enrolled in BIOC 482. This report may be in the form of a poster presented at a local, regional, or national meeting, a PowerPoint presentation, or a written report. The Biochemistry Program will maintain a file of these reports as part of its student learning outcome assessment program. Each student enrolled and his/her research supervisor are jointly responsible to provide a copy of the final report to the designated Co-coordinator (currently Dr. Southard) at the completion of 2 credits of BIOC 482.

The initiation of a research project requires the mutual agreement of the student and the faculty member. Students are encouraged to discuss possible research projects with several faculty members since any given faculty member may be unable or unwilling to supervise a given student for a variety of reasons. Once the student and faculty member agree to work together, a Request for Independent Study form must be completed. Forms are available in the Biology and Chemistry offices or from the appropriate Biochemistry Program Co-coordinator (currently Dr. Southard). To ensure approval of the request, the 8 items listed under D, Rationale and Plan of Study must be addressed.

- 1) A rationale for conducting an independent study.
Required for the biochemistry major.
- 2) The purpose of the study.
Briefly provide background information to show the significance of the proposed work.
- 3) Objectives.
Briefly describe the specific objectives of the study.
- 4) Activities to accomplish objectives.
Briefly describe the experimental approach you will use to achieve the objectives. Also describe what aspects of the work the student will be responsible for. For example "the student in consultation with the advisor will design experimental protocols and carry them out. The student will be responsible for maintaining a laboratory notebook and meet regularly with the advisor to discuss the progress of the

research ". Another suggestion - this is a good place to spell out who will maintain possession of the records for the project.

- 5) Required reading and/or bibliography.
Describe briefly.

- 6) An evaluation process **IMPORTANT: The faculty supervisor must initial this section to confirm his/her agreement. Proposals without faculty initials will not be approved by the program coordinator.**

How will a grade be assigned? Typical elements of the evaluation are:

- a) Commitment of time and thought to the work as judged by observation of lab work, discussions during regular faculty-student meetings and the progress of the research.*
- b) Quality of records of work completed (lab notebook for the project).*
- c) Quality of the final report of the project.*

The elements above are not meant to be restrictive - only suggestions.

- 7) Use for special purposes.
Usually do not need to do anything here.

- 8) Number of credits.

Make sure you fill this in under section D on the form. The expectation is that the student will spend at least an average of four hours per week on the project throughout the semester for each credit requested. Given the nature of most research projects and other commitments on time of both student and faculty it is usually preferable to register for 1 credit each, for two semesters rather than 2 credits in one semester. Requests, for independent study credits in excess of those required, for the major should be clearly justified in terms of the amount of work to be completed and the ability of the student to complete the work in a timely fashion. University policy states that an 'I' grade may be submitted only "because of personal illness or other unavoidable reasons".

NOTES:

1. In Section D of the form, leave course section and CRN # blank. Fill in BIOC 482, Independent Research in Biochemistry, and the credits requested for the semester.
2. A new request form (including a proposal addressing items 1-8) must be completed for each semester. Usually the proposal for the second semester can be a very simple modification of the previous one.
3. The request form must be signed by the supervising faculty member as 'faculty member of record' (he/she must also initial the evaluation section), the student's academic advisor (as 'advisor or doctoral coordinator'), and by the designated biochemistry program co-coordinator, currently Dr. Southard (as 'chairperson').
DO NOT give the request form to the Biology or Chemistry chairperson to sign as chair.
4. The request form must be completed (with the above signatures) prior to the end of the drop/add period. In other words, do not wait until you return to campus in the fall to begin talking to potential faculty supervisors - you should do this at least one semester in advance of beginning the project.