

Jeff Anderson's Independent Study Policies

WHAT IS AN INDEPENDENT STUDY COURSE?

An independent study course is an opportunity for you to earn transcriptable units for learning that you complete outside a formal classroom structure. Such a course provides an opportunity for the student to expand their studies in Mathematics beyond the classroom by completing a project or an assignment arranged by agreement between the student and instructor. As per Foothill College's policy, students may take a maximum of 6 units of Independent Study per department. Foothill College Math Department offers four possibilities:

Math 70R: a 1-unit independent study course

Math 71R: a 2-unit independent study course

Math 72R: a 3-unit independent study course

Math 73R: a 4-unit independent study course

For more information about these courses, please visit the Foothill College Mathematics Course Catalog page and scroll down until you find the entries matching the course titles listed above.

WHAT ARE FOOTHILL'S POLICIES FOR INDEPENDENT STUDY?

In order to establish an independent study contract, you will need to complete an independent study contract. This process involves a number of steps:

- Step 1: Download and read the Foothill College's Independent Study Contract. To do so, visit the URL <https://foothill.edu/curriculum/forms.html>. Under the *Forms for Courses* section, find the link and click on the link for the "Independent Study Contract." Please read through this link carefully.
- Step 2: Decide on a project that you are interested in completing. This project should focus on a specific topic that is not covered¹ in the regular curriculum available at our college. In other words, this independent study contract should not duplicate a course offered at our department, required for a major, or offered by another program of study.
- Step 3: After you've identified a specific topic of interest and verified that this is indeed not available elsewhere in departmental curriculum, then you may make an appointment during student (office) hours to propose a research project. Please note that I (Jeff Anderson) am under no obligation to work with you on the topic that you propose. In fact, I do not get paid for my time on this type of project. To learn more about the types of projects I usually work on, please keep reading.
- Step 4: Once I have accepted to work with you on an independent study (see more below), I will become the sponsoring faculty member for this project. As a team, you and I will then need to complete and sign the Independent Study contract mentioned in Step 1 above. In this contract, we specify details regarding the scope of your project and evidence of completion. See the top of the page 2 for a list of questions we need to answer together.

¹ When we say that you should decide on a topic is not "covered," we normally mean that it does not appear on the Course Outline of Record for any of the courses offered in our department. However, there are some cases where a student might have a profound interest in a topic that can be found in a departmental course. In this case, the student must argue that the chosen topic is not covered in sufficient depth to satisfy her curiosity.

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1. Please list all the courses the student has completed in this department.
2. Please describe in detail the project or activities the student will complete to receive the above noted units for this course/project.
3. Please describe the evidence of completion that the student will provide in order to receive a grade in this course.

Please note: In order to earn a passing grade, you must complete the project along with any written evidence and submit this to me (the sponsoring faculty member) before the last day of instruction for the appropriate quarter.

WHAT TYPE OF PROJECTS DOES JEFF ANDERSON USUALLY WORK ON?

Let me begin by saying this: I am not paid for any of the work I do on Independent Study Contracts. Instead, I think of the time I dedicate to these projects with three purposes in mind: to serve Foothill College, to enhance the student experience in our Mathematics Department, and to further my capacity as a mathematics instructor. With these themes in mind, I maintain an ever-evolving list of personal interests. Please be aware that I reserve the right to decide what type of projects I will work on. If I am not interested in working on your proposed project, I will tell you this during our meeting. In this case, I may be able to point you in the direction of other faculty members who are more capable of serving you.

With this in mind, let me clarify my main interests: I am head-over-heals in love with applied numerical linear algebra. I believe this field is the workhorse of modern day (post-1950) mathematical modeling. One of my major professional goals is to redesign the introductory linear algebra classroom to be engaging, experiential, and mastery-based. I also yearn to provide students with opportunities to cultivate valuable technical skills as part of their introduction to linear algebra. To accomplish these goals, I create curriculum, experiments, learning resources and software focused on applied numerical linear algebra. I share many of the resources on this website www.appliedlinearalgebra.com.

WHAT DOES JEFF LOOK FOR IN STUDENTS WHO WANT TO DO AN INDEPENDENT STUDY?

In general, if I think about your college education as a meal, then I like to think about an independent study as dessert. With this in mind, I encourage students to remember mom's advice: we only get to enjoy the sweet stuff after we've finished our vegetables (major classes needed for transfer). When I work with a student in this capacity, I trust that such a student has very strong personal and time management systems. More specifically, I assume that a student who I work with on an independent study contract will thrive in her normal classes and successfully complete our Independent study during the appropriate quarter. With these expectations in mind, I refer to the following criteria when considering work with a student on an independent study contract:

- A. You must have successfully completed a course with me in the past (REQUIRED)
- B. You earned at least a B+ in all classes that you finished with me
- C. You have a cumulative GPA of 3.5 or higher.
- D. You have spent time with me, one on one, in my office hours on many occasions.
- E. You exhibit strong interpersonal communication skills.
- F. You wield effective time and energy management skills.
- G. I feel I can trust you to respect my time and effort.

These are general guidelines not rigid prescriptions. On occasion I have worked with students who did not satisfy one item between letters B - G. In any case, I hope this list helps you get insight into my thinking.