The Software Engineering Apprenticeship is a unique program designed to provide URI computer science majors with the practical software engineering and development skills required by industry today.

Under new curriculum requirements, undergraduates are expected to enroll in CSC 499, Project in Computer Science, in their junior or senior year. Students in this practicum work 12-15 hours per week for two semesters (or one semester and in the summer) on a capstone project in computer science that will prepare them for careers in industry or for graduate study.

Students can choose to do this work either with an industrial partner affiliated with the SEA Program or with a faculty member on campus.

The Partnership
The key element of the SEA Program is that it is a fully cooperative effort between the university and the participating industrial sponsors. The success of the program will require a sharing of responsibilities between the URI faculty, the sponsoring companies, and the student.

University Faculty. The Department of Computer Science will match talented and motivated students with prospective industrial partners. The faculty will represent the university in assuring that students enrolled in the SEA Program have a clear plan for an apprenticeship project that, upon successful completion, will meet the requirements for receiving academic credit. The faculty will also have the final authority for determining satisfactory completion and grades. A designated faculty advisor will act as the point of contact to the industry sponsor for the duration of a student's apprenticeship.

Industry Sponsor. The industrial partner will provide a professional, team-oriented environment where a student can contribute to an ongoing project that utilizes software engineering skills. The sponsor will provide a direct supervisor who will guide the student's progress, and who will be a liaison with the designated faculty advisor. The supervisor will give timely feedback to both the student and the faculty advisor concerning the student's progress.

The Student. The student will provide any reports and other documentation as set forth by the requirements of the program. The student will perform and represent himself/herself and the university as a member of the computer
technologies profession, contributing as a valued team member on a real-world software engineering project. The student will keep his/her industry supervisor informed of all progress, and of any issues or difficulties arising during the apprenticeship.

**SEA Operational Framework**

**Time frame and Eligibility.** All computer science students are expected to enroll in CSC 499 for two consecutive semesters as part of the requirements for the B.S. in Computer Science, unless specifically exempted by a curriculum modification approved by the department. Students will first register for CSC 499 in the spring of their junior year, the summer following their junior year, or the fall of their senior year. Enrollment for the second semester is contingent upon satisfactory completion of the first semester’s work.

**Project Descriptions.** Industry sponsors and university faculty members will submit short descriptions of the SEA projects that are currently appropriate for the program. These project descriptions will be available in the department for students to review. Each description of an industrial project should list the points of contact at both the sponsor’s project site and a university faculty advisor. In the case of university projects, the sponsor and advisor will be the same individual.

**Project Proposals.** Using the project description as a basis, the student will develop a set of objectives and a statement of work acceptable to the himself/herself, the industrial sponsor (if applicable), and the university faculty advisor. The proposal will serve as the standard agreement between the parties. A project proposal must be completed and approved before a student can register for CSC 499.

Project proposals should include the following elements:

- Problem Description: motivate the problem addressed in the proposed work
- Statement of Work: describe the actual tasks to be performed
- Schedule: provide a timetable for doing the work; include deliverables such as reports and presentations
- Skills: enumerate new skills to be learned; relate project work to skills acquired in URI courses

**Reports.** Students will submit monthly reports of their progress to their faculty advisor. In the case of an industrial project, the report will be approved and signed by the industrial sponsor prior to its submission to the university advisor. These reports will generally be 1-2 pages in length and will be due on the first working day of the month.
At the end of the first semester, the student will submit a more extensive report, generally 8-10 pages, to the faculty advisor. At the end of the second term, the student will submit a more extensive final report, generally 10-15 pages, and may also be asked to prepare an oral presentation of his/her work. This presentation may be given at either the sponsor's site or at the university.

**Work Hours.** CSC 499 carries four university credits toward graduation. Accordingly, students in the program will be expected to work on their SEA project 12 to 15 hours per week during the academic year. Students should not work more than 20 total hours in one week when classes are in session and during the final examination period.

**Compensation.** The amount of compensation for industry sponsored SEA projects is to be negotiated by the student but will typically be $8 - $15 per hour with industry. Some students have worked for free for non-profits. University sponsored projects may or may not include compensation, depending upon the availability of funds.

**Work at the Sponsor Site.** Dress code, work hours, etc. will be clearly presented to a prospective student candidate at the outset of the apprenticeship.

**Summer Employment.** General guidelines for summer employment are 20 to 40 hours per week, $8 to $15 per hour. Please speak to Professor Peckham about other arrangements needed for summer credit in the SEA program.

For further information, contact:

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