COMP 4560 – Industrial Project

Course Description

Calendar entry

Students will work in teams on an industrial project. Projects are supplied by the Department. May not be held with COMP 2980, COMP 4522, the former COMP 4520, or SCI 3980. Prerequisite: COMP 3350 and written permission of the department.

Detailed Prerequisites

Before entering this course, a student should be able to:

- Develop software with incomplete or evolving requirements.
- Refine software as it being developed.
- Develop code in a team and share code safely amongst the members.
- As part of a team, design and build a complete software product to solve a real-world problem.

Additionally:

- Students cannot have completed SCI 3980 Co-operative Education Work Term 1.
- An information session is held 6-10 weeks before the beginning of Fall and Winter sessions. Interested students must attend these information sessions.

General Course Description

Students will use the knowledge they gained during their time as a Computer Science student to gather project requirements from an industry partner, create project timelines, design a solution, create a prototype, and finally demonstrate the project to industry. Projects are collected from industry, not-for-profits, open-source projects, and individuals.

Students work in groups of varying sizes, depending on the scope and scale of the project.

Ideal projects are Research and Development projects that the industry contacts do not have the resources to take on, often called “Backburner” projects. Projects will have a question that requires answer. Example project structures include:

- Design of a new system, or design of an addition of a system. Create a proof of concept of the design.
- What is the best approach to solve a provided problem? Create a few proofs of concept demonstrating different possible solutions to the problem.
- Create a functioning proof-of-concept from ideas published in academic journals or whitepapers.

Projects have 3 stakeholders:

1. The project team, which can be an individual student or a group of students.
2. A faculty member supervisor to oversee the project and assign a final grade.
3. An industry member that drives the requirements of the project.

Project matching (Phase I):

Students must attend the pre-term information session, after which they must express interest in the course. Projects descriptions will be shared with all students that have expressed interest. Project descriptions will be distributed and matched to students. Depending on demand, students may be required to apply to a project idea, identifying why they are a good candidate for the project.

Scoping (Phase II)

Once matched, the project team meets with a project supervisor (assigned by the department) and the industry contact. The project is discussed in-depth, and the scope of the project is determined: what work will be done, what work will not be done, and what the final deliverable should be.

Project Proposal (Phase III)

Once the scoping meeting has completed the project team will write a short proposal, due by the end of the first full week of the term. The proposal will describe:

i. The problem or questions to be addressed.
ii. Anticipated methods for addressing these problems/questions, and anticipated products of the research (e.g., software prototype, empirical results, algorithm, proofs).
iii. A timeline of when certain tasks will be completed.

Project Work (Phase IV)

Once the Project Proposal is accepted, project work begins. The team will meet with the project supervisor and industry a minimum of two times throughout the term to check in on the project. The check-ins will compare the progress of the project to the timeline agreed upon in the Scoping phase.

Presentation (Phase V)

At the end of the term the project team will make a presentation that highlights what was planned, the process taken during the term, and what was accomplished.

Evaluation

Project teams are graded based on how well they communicated with the supervisor and the industry contacts, how well the project was executed, how the team reacted to and communicated issues, and on the quality of the final presentation.