Textbook Alternatives Project (TAP)

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CS 160: Software Engineering

Software engineering principles, requirements elicitation and analysis, design, configuration management, quality control, project planning, social and ethical issues. Required team-based software development, including written requirements specification and design documentation, oral presentation, and tool use.

Brief description of the course and its place in the curriculum

CS 160 is a required course for Computer Science majors. Two to four sections are offered each semester with around 30 students per section. The goal of the course is to educate students on the general concepts of software engineering and all the relevant subjects in the software development process through a hands-on team term project. Currently, students pay $150 each for their textbooks.

Summary of course re-design activities

To replace the traditional textbook currently used by his students, Prof. Tseng is adapting a text he wrote and turning it into an open source textbook that will be available to his students online for free. He will solicit student feedback on the content and exercises and will evaluate student learning effectiveness by comparing the grades of students using the free online content to those of students in prior years that used a traditional textbook.

This new approach could potentially save students enrolled in CS 160 a collective total of $72,000.