Software Engineering Course Module Development Workshop

Gregory W. Hislop  
Drexel University  
hislop@drexel.edu

Abstract

This half-day workshop will provide participants an opportunity to learn about the SWENET project and to participate in review or materials development tasks related to the project. SWENET is an NSF project designed to create a Web-based community for software engineering education. A key activity in the project is to create, collect, and share software engineering course materials within the context of current accreditation guidelines and curricular models.

1. Workshop organizers.

Thomas B. Hilburn, Embry-Riddle Aeronautical University  
Gregory W. Hislop, Drexel University  
Michael J. Lutz, Rochester Institute of Technology  
W. Michael McCracken, Georgia Institute of Technology  
Mark J. Sebern, Milwaukee School of Engineering

2. Overview

As the number of baccalaureate programs in software engineering increases, problems have become apparent in university infrastructure, faculty development, and lack of supporting educational materials. SWENET, A Web-based Community for Software Engineering Education, is a project created to address these issues, most especially the lack of supporting educational materials.

As software engineering educators, we are all too aware of how difficult it is to start from scratch. In particular, the lack of examples, teaching materials, and exercises can significantly impede the inclusion of software engineering concepts into undergraduate courses. Our primary goal in developing SWENET is to make it easier for other educators to find materials they can use.

Our initial focus is a subset of software engineering areas that are central to professional technical competence and commonly emphasized in undergraduate programs. Within each area there are modules on specific topics, with each module supplemented by adaptable support materials. The modules are self-contained, and typically cover one to six lecture hours of material. The supporting resources are key to our approach, as these are exactly the materials that are difficult to create.
3. Workshop goals and organization

In this half-day workshop participants will be able to:

- Learn about SWENET and what the project can provide to software engineering educators and trainers.
- Participate in group activities to review SWENET features, review curriculum modules or to develop additional modules.
- Provide input on the current features of the SWENET Web site.
- Provide guidance and recommendations on how SWENET modules could be used in implementing a software engineering curriculum (or area of concentration)

The workshop will be divided into the following activities:

- SWENET Overview - A summary presentation to explain the SWENET project goals and to explain the structure and content of the SWENET curriculum modules.
- General Discussion - After the opening presentations, participants will be able to ask questions and provide feedback about the project overall.
- Group Activities - Small groups will review SWENET facilities and curriculum modules, or work on creation of additional modules. The particular tasks of these groups will be determined by the position papers.
- Closing Discussion - A final session will provide an opportunity to discuss results of the group activities and future direction.

4. Workshop position papers

The SWENET Web site is http://www.swenet.org. Participants are encouraged to submit short position papers (a single page will suffice for many topics). Suggestions for position paper topics include:

- Focused review of an existing curriculum module, or general review of a group of modules in a topic area
- Outline or materials for a new curriculum module
- Discussion of how particular modules might be used, or suggestions for module additions
- Comparison or mapping of SWENET materials to the Computing Curriculum Software Engineering (CCSE) volume
- Comments on the SWENET site or suggestions for future development

The set of position papers will be used to organize the group activities at the workshop. We are particularly interested in people who would like to submit materials that could provide the basis for a new module. These module submissions would also count as position papers. For these submissions, a workshop group interested in that topic area will be invited to work on the materials to develop the module. Other groups will be invited to work on review or assessment tasks.

For participants who miss the conference position paper deadline, we welcome position papers submitted up to four weeks before the workshop. We plan to publish the position papers and a summary of the workshop activities on the SWENET site. Participants will be recognized on the site for papers or modules they submit.