Some comments for CSE TC 30/10/2009

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I cannot attend this TC meeting and these are comments on some of the agenda items.

1. **Teaching of Project Management to engineering students**

   The teaching of project management in this School (COMP3711) has a long and inglorious history:

   Within the School by external consultant

   Within the School by one of us

   Externally by SISTM

   In all cases it has been a dismal failure. It was one of our very Red courses when we colour coded them. We thought things would improve when it was given to SISTM (INFS2848), but it hasn't.

   I believe that the reasons for this failure are reasonably obvious —in hindsight. I personally don't believe you can teach project management in the way we teach many other things. And I believe we have effectively proved that!

   I believe that you can teach project management effectively only when it is taught in close connection with a project that really matters:

   - *not in isolation*
   - *not with some dummy project*

   For that reason —in the SE revision discussion paper I recently presented to the TC— I am suggesting that for the SE program *project management* be taught as part of a 6uoc Software Engineering Workshop. Maybe it could be taught by an external consultant, but the important thing is that it deals with real project management issues that the students are experiencing, or most likely will experience, as part of the project they are undertaking.

   I now believe that anything else is a waste of time.

   I have found an interesting book that might help
   Meri Williams: *The Principles Of Project Management* published by sitepoint.

2. **The teaching of Software Engineering to non-SE students**

   I think the most pressing problem is to work out what the above phrase means, and I believe that the blurriness of the phrase is the reason why various attempts —specifically COMP3111— has been another of our bright red courses in the past.

   I've always thought that the idea of a *software engineering* course is absurd. It seems to derive from the idea that there is something different about software engineering that can

be encapsulated in a few simple concepts and recent experience with COMP3111 seem to wish to get across the idea that software engineering is

a) qualitative rather than quantitative

b) contains a number of wishy-washy, hard-to-grasp notions

c) involves a lot of report writing, which is essentially the nub of what SE is

I reject all of the above. To me SE is first about *software*, but secondly it is about *engineering* and that —I suggest is incompatible with the above list of attributes.

I did an investigation of COMP3111 in 2006 and all of the above —I believe— contributed to the dissatisfaction with the course. It's important to understand that many different academics have been associated with COMP3111 during its period of maximal blushing, so it's problems are probably cannot be slated home to particular individuals.

It will appear that I have not proposed a solution to the agenda question, but I return to my initial paragraph, which I suggest is the most important question to resolve.

3. **Teaching of Professional Issues and Ethics to all students**

I think my views on this might be reasonably well known. Briefly, we are teaching students who are going to graduate as *engineers*. Most students don't have the foggiest idea of what that means or what that entails. With a significant course background in what can only be described as "hacking" many/most will find the expectation that they may be responsible for delivering systems that meet their requirements novel to say the least.

But further than that our students are involved in an area that is imposing its own ethical dilemmas on society at large: copyright, patents, DRM, surveillance, privacy, and so on.

There is more than enough important material for a good 6uoc course. While it would be a good idea for some ethical/professional notions to be threaded through many parts of the programs, I think it is a delusion —if not a deception— to claim that it is sufficient to sneak it into some other course or courses.

Here is a brief outline of what SENG4921 consists of:

Lectures: mostly invited lecturers on topics ranging from foundations of ethics (Stephen Cohen, Philosophy) to legal issues (Peter Ho, David Vaille (Law).

Seminars: discussion classes every week

Student run seminars: student pick a topic and organise a seminar class.

Essay:

Oral exam: short oral exam with questions chosen from across the whole course.