CSC 300
Fall 2008
Final exam instructions

- Attach a COVER SHEET with your name, the course name and the date on it.
- Attach it firmly to your Questions and the 2 essays.
- DO NOT PUT YOUR NAME on the QUESTIONS or the INDIVIDUAL ESSAYS, I like to grade them blind
    to the author's name.
- Please put the QUESTIONS section on a separate page (or pages) from the essays. Please put the
    separate essays on separate sections of pages (do not end one essay and start another on the same
    page, do not end the questions and start an essay on the same page, keep them physically separate.)
- Start your written (typed) answers by repeating the question or essay question from this exam.

The exam must be turned into my office (14-222) by the end of the normal exam time, **absolute deadline is 4 pm
on Wednesday, 10 December.** This deadline is absolute and failure to turn in the exam before that
time results in a failing grade for the course. The exam may be turned in earlier, and it may be turned in to the CSC
office for a time/date stamp and delivery to me by the end of the normal exam time.
Exam text:

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Turner, Fall 2008
300 Final exam
_____

Part A: QUESTIONS. One or two sentences are about all that is needed to answer each individual part of these
questions.

1. What part of the California Penal Code would you use to find out whether your hacking tool exposed you to
liability upon its release? What part of the Cal Poly Responsible Use Policy would you use to find out whether
your hacking tool exposed you to disciplinary action if used with campus resources?

2. What parts of the Cal Poly Intellectual Property Policy grant to you, the student, liberal rights in the Intellectual
Property you develop at Cal Poly? What sort of resources, if utilized by you in your Intellectual Property
development at Cal Poly, result in Cal Poly having some rights to profits?

3. What do the "Principles Behind the Agile Manifesto" say about the "best method" of conveying information on
a team?

4. Define "software engineering." Define "computer science." Give the main difference in focus.

5. Define "competence." Define "process."   Define the "process of incompetence" we discussed in class.

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Part B: ESSAYS. There are two essays on the exam. Upper limit three (3) pages, single spaced, for each essay.
I expect an adequate answer to exceed 2 pages. With such a limit, every sentence and paragraph must be crisp,
well written and meaningful. Spelling, sentence structure, paragraph transitions and grammar are important to the
grade. Any quotations or claims about the state of the world must have a proper citation. Be sure to answer each
part of the question!

1. Many bemoan the apparent ambiguity of the Software Engineering (SE) Code's central theme: the "Public Good."
Computer Science and Software Engineering professionals don't need to grapple with such ambiguous qualities.
Do they? Consider such "nonfunctional" requirements as "Usability," "Security," and "Maintainability." These
are common quality attributes customers demand and Software Engineers are required to provide (such as
in your CSC 308/309 projects). Compare and contrast the basic properties of the SE Code regarding "public good"
and one of the nonfunctional software requirements listed as examples above.   Do we already "know" how to meet
such SE Code provisions (because we already know how to build software to meet our nonfunctional requirements?)
Explain.

2. Glenford Myers, in his seminal book, "The Art of Software Testing" (nearly 30 years ago!) notes that software
testing can only show the presence of bugs, not their absence. With this in mind, evaluate the ethical efficacy of
Dr. Cem Kaner's thesis in his article "Lawsuits, Lawyers and Quality-Related Costs"
(at www.badsoftware.com/plaintif.htm).

Notes:

Note each part of the question that you must answer (check that you've answered each part somewhere in your essay!) Proofread your work. Sentence structure, spelling, grammar and clarity of your writing are very important to a passing grade.

Mere opinion and conclusions receive no credit. Recall that basic analysis starts with a statement of a set of relevant facts that raise an important issue or subissue. A statement of a relevant principle that applies to the set of facts in context is then given. The principle is then applied to that set of facts to arrive at an interim or final conclusion.

Note for essay 1: I suggest you consult your text and notes from CSC 307 or 308/309 or 402/405/406 regarding the issues and solutions with respect to "nonfunctional" requirements. Look at the interesting features of such requirements (and how they are satisfied) and list differences and similarities to features of the SE Code provisions in general (especially respecting the "public good"). See if you can find interesting parallels (or lack of them!!!)

Note for essay 2: Start your essay with a brief recitation of important facts that raise the issue. State the issue very briefly and give a quick explanation about why it is worth investigation. Cover differing arguments about how this issue should be resolved (most powerfully, cite to sources for various arguments or different points of view). Most of your grade depends on the quality of your analysis and logical resolution of the issue. Be sure to include explicit ethical and technical analysis where it is relevant.