

SENG4921 Professional Issues and Ethics

Oral Examination

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1 Agenda

- To explain the oral exam rationale.
- To explain the oral exam format.
- To give the current state of the exam questions.
- To give the draft exam schedule.

1.1 The Oral Exam Rationale

- The exam questions should cover all the activities of SENG4921 this semester.
- Adequate preparation for this examination requires a student to be familiar with a significant number of the lectures and the content of the seminar discussions.
- Each student has an opportunity to prepare his or her own question.
- The examination format attempts to give a wide base to this assessment, even though the actual assessment session will be very short. We think this makes this a good assessment instrument.
- By revealing questions 2 & 3, and the basis for the question 1, it is hoped that the stress of this type of assessment is minimised. The only unknowns in this exam are the actual questions to be answered in questions 2 & 3.

1.2 The Oral Exam Format

The oral examination for each student will be scheduled as 15 minutes within a 20 minute slot. There will be three (3) questions; each question to be answered in 5 minutes. The three questions will be as follows:

Question 1: free choice Each student should prepare a topic based on, or derived from, the discussions, seminars and lectures given this semester. The question should be broad enough to not overlap

with the other two questions. At the examination the student will be asked to present his/her topic and discussion.

Question 2: based on Seminars A discussion of one question chosen randomly from a set of questions on the seminar discussion topics. The set of topics will be finalised before the end of the semester.

Question 3: based on Lectures A discussion of one question chosen randomly from a set of questions that will be finalised before the end of the semester.

1.3 Question choice

The question for questions 2 & 3 will be chosen as follows:

1. Three (3) question numbers will be chosen randomly (from a deck of cards) by the student.
2. One of the three questions is chosen by the student, or
3. All three questions are rejected and the student chooses another three questions and answers one question for half marks.

1.4 Rules

- The timing of the examination is critical; answers must not be longer than 5 minutes. Answers longer than 5 minutes will be terminated.
- Students may bring any reference material to the exam. However, students will be expected to *only consult* notes and not to read answers. *Completely read answers will not be considered satisfactory.*
- It must be emphasised that this exam is an *oral* exam and will be assessed accordingly. The exam is not a discussion or question and answer activity. During the answering of questions, the only person talking will be the student.

1.5 What makes a good answer?

The examiners will be looking for:

- clear identification of the issues;
- analysis of the professional and/or ethical consequences;
- careful presentation of the outcomes.

There are no *correct* answers, but a good answer will give a clear indication of consequences and issues. A good answer will draw on lessons learnt from lectures, seminars and discussion during the semester.

1.6 Seminar Questions

1. (a) Give a description of what is generally understood by “Engineering” as a profession.
(b) Explain why *Software Engineering* may not be considered an engineering profession.
(c) Give your response to the arguments in (2)
2. Using the ACM and ACS codes of ethics as a guide, briefly describe a code of ethics for students and staff in a program like the Software Engineering program.
3. Discuss the professional and ethical issues raised by the Therac 25 case.
4. Describe the technical issues and problems in the Therac 25 case.
5. Briefly discuss Rawl’s ethical principles as presented in the paper *How good is good enough?*, and discuss a case that illustrates these principles.
6. Take an important character in the Killer Robot story, such as George Cuzzins, Randy Samuels, or Cindy Yardley, and evaluate his or her performance according to each of the ”more specific professional responsibilities” listed in the ACM Code of Ethics.
7. Discuss the organisational and development process issues that led to the accident in the Killer Robot story.
8. Base on the paper, *Against intellectual property*, give arguments both for an against Intellectual Property.
9. Dataveillance: Describe three forms of data surveillance and then give an overview of the relevant professional and ethical issues for Software Engineers.

1.7 Lecture Questions

- Give an overview of the lecture.
 - Describe the important professional and/or ethical ideas raised that impact on Software Engineers.
 - Answers any specific questions attached to the lecture.
1. Stephen Cohen: *Introduction to Ethics and Moral Reasoning: A Practical Framework*
 2. Stephen Cohen: *Professionalism and ethical responsibilities*
 3. Brendan Scott: *The Hows, Whys and Wherefores of Open Source - Open source as a market reaction to regulation of the software industry*
 4. Amrah Jay (APESMA): *Industrial Relations and the Professional*
 5. Ken Robinson: *Ariane 5 Disaster*
Specific Software Engineering implications should be addressed, as well as an overall analysis of what went wrong.
 6. Stuart Irvine (Freehills Patent & Trade Mark Attorneys) *Intellectual Property: the asset of the 21st century*

7. Geoff Dick: *Information Technology - facilitator, or temptress for the unethical ?*

Briefly outline 3 ways in which information technology can tempt management or staff to act in an unethical manner and discuss what action management might be able to take to minimise these temptations.

8. David Vaile: *Legal perspectives on system development – Liability, litigation risk, 'professional' standards, and ethics.*

1.8 Oral Exam Schedule

The schedule can be found on the [Oral Exam information page](#).