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# Engineering Ethics & Design

## Senior Design Project Guidelines – EE 441/442

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As part of your final project writeup, you must provide a 1-2 page of analysis of ethical implications of your project. The content of this section will vary, but you will probably want to discuss the following issues:

### **Required Components:**

#### **1. Description of the larger context of your system:**

This description should include the physical, logical, procedural, and social elements of the system. The physical structure includes the machines and other hardware involved, the networks, and the physical facilities in which the system is housed (e.g. the offices). The logical structure includes the data structures and software structures involved in the system.

The procedural elements of the system include the ways in which data is gathered, collated, stored, backed up, and reported. They also include procedures for maintenance, repair, and replacement of the system, and any other relevant organizational procedures (e.g. those related to privacy protection or safety). The social elements of the system include a description of personnel and their relationships to each other and to other relevant stakeholders.

#### **2. Analysis of ethical components of the system:**

This section includes a discussion of those concrete aspects of the system that lead to specific concerns. The analysis of these specific concerns should highlight the specific risks associated with them, the probability of those risks occurring, and the likely harm or ethical concerns associated with those risks. Finally, the concrete advantages of resolving the specific concerns should be described.

#### **3. Recommendations:**

This section should contain a set of recommendations that address each specific concern mentioned in the previous section. There should be at least two action options for each specific concern, and those options should be evaluated in terms of the client's goals and the ethical or social concerns involved.

Remember that you will probably need to use your imagination to answer some of these questions. You will be evaluated on the quality of your analysis, not on the presence or absence of ethical concerns.

### **Useful Resources:**

IEEE Code of Ethics: [www.ieee.org/about/whatis/code.html](http://www.ieee.org/about/whatis/code.html)

Online Ethics Center: [www.onlineethics.org](http://www.onlineethics.org)