EE 370 – Fall 2015 Term Project Statement

For each student, consider **ONLY ONE** of the following medical devices:

1. Patient monitor
2. Ventilator
3. Hemodialysis machine
4. Defibrillator
5. Electrosurgical unit (ESU)
6. Surgical lasers
7. Electroencephalography (EEG)
8. Ultrasound imaging
9. Fetal Doppler
10. Hearing aid
11. X-ray imaging
12. Steam sterilizer
13. Anesthesia machine
14. Infusion pump

a. Describe briefly the theory of operation of each in English. *(1 page – 20%)*

b. Describe in one page their operation in clinical use (i.e., how the healthcare personnel use them). *(1 page – 20%)*

c. Based on a site visit, provide specific comments about the requirements of the installation, operation and maintenance of each of these devices in the actual local environment in the site you visited and the problems. *(1 page – 20%)*

d. Provide your comments about the roles of the biomedical engineer in the installing, operating and maintaining each device and the background/training required for them to do that. *(1 page – 20%)*

e. Provide a list of the ethical issues faced by biomedical engineers related to their work on your chosen devices and in their work environment in general and how they are handled in practice. *(1 page - 20%)*

Important Notes

1. The project report should include a separate section for each of the above items for the medical device of your choice.
2. It is required to submit your project report and presentation by December 17, 2015. No late submissions will be accepted. Presentations will be scheduled shortly after this date.
3. The project evaluation will amount to 20% of your term grade.
4. You are required to submit the project report in electronic format only through Blackboard (i.e., no hardcopies will be needed or accepted).
5. The project output should include a report in PDF format and a maximum of 15-minute presentation for each student.
6. You must use your own words in the report with clear reference citation. "Copy-Paste" items without references will not be accepted and will be considered as plagiarism. Plagiarism/cheating in a major ethical violation that may result in a failing grade for the offending project group. Please refer to this web site for more information on plagiarism.