

Medical Equipment I Class Project 2011-2012

Consider the following biomedical engineering areas:

1. Patient Monitoring
2. Mechanical Ventilation
3. Renal Dialysis
4. Laboratory Analytical Instrumentation
5. Surgical Tools
6. Medical Imaging
7. Sterilization
8. Orthotics and Prosthesis
9. Tissue engineering
10. Bionanotechnology

For EACH of these areas, please report on the following:

- a. The definition and theory of operation in English.
- b. The definition and theory of operation in Arabic.
- c. Description of its utilization in clinical use.
- d. Applicable international standards that apply to it.
- e. Your comments about the problems facing its use in the actual local environment based on a site visit or an interview with an expert.
- f. Your comments about the tools/resources used in its implementation and your opinion about the possibility of establishing an industry for it in Egypt.
- g. Aspects of human factors engineering applicable to it.

Important Notes

1. You are required to submit by January 1, 2012. No late submissions will be accepted.
2. The project evaluation will amount to 10 points in your course grade (10%).
3. Number of students in the group should include an average of 10 students. Be advised that all projects will be graded the same regardless of how many students are on it.
4. All students in the same group will receive the same grade. It is your responsibility to work as a group to get the best grade for all of you.
5. You are required to submit the project in electronic format only (i.e., no hardcopies will be accepted). The project output should include a report in PDF format for each group. No additions or modifications to the report will be allowed after the deadline.
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 will not be tolerated in this class and will result in a failing coursework grade for all members of the project group.