Course Specifications

University: Benha University
Faculty: Benha Faculty of engineering

Course specifications
Program(s) on which the course is given: Electrical Engineering technology Dep.
Major or minor element of programs: Major
Department offering the program: Electrical Engineering technology Dep.
Department offering the course: Electrical Engineering technology Dep.
Academic year / Level: Third year
Date of specification approval: 2009

A- Basic Information
Title: Project [1st Term]  Code: E399
Credit Hours: N.A.  Lecture: 1
Tutorial: 0  Practical: 3  Total: 4

B- Professional Information

1 - Overall aims of course
Project provides students with opportunities to apply and implement the skills gained during all other courses studied in the program toward providing a solution to a specific engineering problem. The project resembles problems that will face the graduate engineer at the work place, when he/she is required to work in a team to tackle a predetermined engineering task. The project provides the opportunity for students to work in groups under staff supervision.
The project is the step in preparing the student for professional practice to apply and demonstrate the students' accumulation of knowledge, skills and experiences throughout their undergraduate education. All the students’ education including lectures, tutorials, discussion groups, labs, seminars, field trips, and industrial training should be reflected in the graduation projects. It requires continuous work and commitment to achieve the required goals.
It is recommended that the selected project represents an actual need of the industry or the community. This reflects the message of the faculty and the university. Students are encouraged to select new topics and involve other departments and disciplines, where applicable, in their graduation projects.

2- Intended learning outcomes of course (ILOs)
a. Knowledge and understanding:
• Illustrate how to identify current engineering problems in the industry/community and how to formulate the problem in the form of "An Essential Question"
• Modeling the real-life problem in engineering context
• Practicing collecting scientific, engineering and market data on a particular problem
• Applying the engineering knowledge and skills earned throughout the program
• Practicing team work and synergy with other students and with the advisors and the program coordinator
• Practicing proper technical writing and oral presentation skills
• Establishing contacts with the industry/community
• Other Specific intended learning outcomes that depend on the particular project and program

b- Professional and practical skills
By the end of this course, the student should be able to:
• Implement the techniques of oral and written presentations.
• Apply project management fundamentals.
• Understand the ethics of engineering profession and environmental issues.

c- General and transferable skills
By the end of this course, the student should be able to:
• Work cooperatively and effectively in a group
• Find information independently
• Interact with industry.

3- Contents

<table>
<thead>
<tr>
<th>Topic</th>
<th>No. of Hours</th>
<th>Lecture</th>
<th>Tutorial/Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty members discuss their proposed projects with students</td>
<td>5</td>
<td>2</td>
<td>0/3</td>
</tr>
<tr>
<td>Meet with students</td>
<td>12</td>
<td>2</td>
<td>0/10</td>
</tr>
<tr>
<td>Advisor Grading Sheet</td>
<td>5</td>
<td>2</td>
<td>0/3</td>
</tr>
<tr>
<td>Meet with students</td>
<td>12</td>
<td>2</td>
<td>0/10</td>
</tr>
</tbody>
</table>
Course Specification, Project [1st Term]

<table>
<thead>
<tr>
<th></th>
<th>10</th>
<th>2</th>
<th>0/8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Report due</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rehearse final presentation</td>
<td>6</td>
<td>2</td>
<td>0/4</td>
</tr>
<tr>
<td>with advisor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attend Final Exam Presentation</td>
<td>6</td>
<td>2</td>
<td>0/4</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>14</td>
<td>0/42</td>
</tr>
</tbody>
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4– Teaching and learning methods

4.1- Tutorials
4.2- Practice in Laboratories
4.3- Internet collected information and Self-study projects

5- Student assessment methods

5-1 Weekly follow ups with the teams by College Coordinators on progress & communication skills
5-2 Oral exams to assess the abilities of discussing physical concepts
5-3 Final report and presentation to assess professional skills

Assessment schedule

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Content</th>
<th>Submitted on</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report # 1</td>
<td>• Essential Question and project title, problem description and importance (2 pages)</td>
<td>Week 3</td>
</tr>
<tr>
<td>Report # 2</td>
<td>• Preliminary research work and market analysis</td>
<td>Week 8</td>
</tr>
<tr>
<td>Report # 3</td>
<td>• Proposed solution approach and/or design expected cost</td>
<td>Week 11</td>
</tr>
<tr>
<td></td>
<td>• Required material, tools and facilities</td>
<td></td>
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<tr>
<td></td>
<td>• Time plan with list of deliverables</td>
<td></td>
</tr>
</tbody>
</table>

Weighting of assessments

- Final examination 50%
- Semester work 50%
- Total 100%

6- List of references

Books, lecture notes, internet, etc.
7- Facilities required for teaching and learning

Lecture rooms – Experimental Labs - computers – Virtual simulation programs

Course coordinator: Assoc. Prof. Ghada Amer
Head of Department: Assoc. Prof. Ghada Amer
Date: