Course Specifications of

Engineering Skills - C 250

University: Benha  Faculty: Benha Faculty of Engineering

Course specifications
Programme(s) on which the course is given: Structural Engineering & Utilities Engineering

Major or minor element of programmes: N.A.
Department offering the programme: Civil Engineering
Department offering the course: Civil Engineering
Academic year / Level: 2nd year – 1st & 2nd term
Date of specification approval: / /2009

A- Basic Information

Title: Engineering Skills  Code: C 250
Credit Hours: N.A.  Lecture: -
Tutorial: 1  Practical: 3  Total: 4

B- Professional Information

1 - Overall aims of course:

By the end of the course the students will be able to:

- Demonstrate knowledge and understanding of civil drawing (steel structures, reinforced concrete structures and irrigation structures)
- Recognize the different types of steel, reinforced and irrigation structures.
- Draw and illustrate the different views of the structures.

2- Intended learning outcomes of course (ILOs)

a. Knowledge and understanding:

a.1 Study the given drawing (Isometric or views).

a.2 Drawing the main elements in plan, elevation and side views of the given drawing.

a.3 Drawing the remaining elements.

a.4 Drawing the dimensions and finishing the drawing.
b. Intellectual skills
   b.1 Analyze and compare between structures.
   b.2 Search for different structures in Internet.
   b.3 Drawing Structures using AutoCad.

c- Professional and practical skills
   c.1 Visiting local structures.
   c.2 Making model of a structure.

d- General and transferable skills
   d.1 Preparing report containing pictures of all structures.
   d.2 Practice working in a team to make the report.

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>Steel sheds: column base, column &amp; beams connections.</td>
<td>12</td>
<td>3</td>
<td>9</td>
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<tr>
<td>Steel bridges: plate girder &amp; truss bridges.</td>
<td>8</td>
<td>2</td>
<td>6</td>
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<tr>
<td>R.C. structures: slabs, beams &amp; footings.</td>
<td>36</td>
<td>9</td>
<td>27</td>
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<tr>
<td>Irrigation structures: channel section, change in levels &amp; wing walls.</td>
<td>24</td>
<td>6</td>
<td>18</td>
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<tr>
<td>Bridges &amp; culverts.</td>
<td>16</td>
<td>4</td>
<td>12</td>
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<tr>
<td>Regulators, weirs.</td>
<td>16</td>
<td>4</td>
<td>12</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>112</strong></td>
<td><strong>28</strong></td>
<td><strong>84</strong></td>
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</tbody>
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4– Teaching and learning methods
   4.1- Internet search
   4.2- Lectures
   4.3- Local visits
   4.4- Tutorials

5- Student assessment methods
   5.1 Written exams (mid-term & final) to assess understanding and scientific knowledge.
   5.2 Assignments and quizzes to assess ability to solve problems and analyze results independently.
   5.3 Report to assess practical, and presentation skills.
Assessment schedule

Assignment 1-14  week 1-14
Midterm exam 1    week 15
Assignment 15-28 week 16-29
Midterm exam 2    week 30
Final exam

Weighting of assessments

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Mid-Term Examination (1)</td>
<td>20%</td>
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<tr>
<td>Mid-Term Examination (2)</td>
<td>20%</td>
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<tr>
<td>Assignments</td>
<td>20%</td>
</tr>
<tr>
<td>Final-term Examination</td>
<td>40%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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</tbody>
</table>

6- List of references

6.1- Course notes
   - Course notes.

6.2- Essential books (text books)

6.3- Recommended books

6.4- Periodicals, Web sites, ... etc
   - N.A.

7- Facilities required for teaching and learning
   - Appropriate teaching class accommodations including presentation board and data show.

Course coordinator: Dr. Ahmed Youssef Kamal El- Deen
Head of Department: Assoc. Prof. Dr. Ashraf Abou-Rayyan
Date: / / 2009