Introduction to Computer-Assisted Problem Solving for Construction Systems Management

CSE 1112

Description / Conditions

Transcript Abbreviation:
Intr Computng CSM

Course Description:
Using productivity software, especially spreadsheets and databases, to solve problems for construction management; relative/absolute cell referencing, logic, functions; relational databases, querying, project integration.

Course Levels:
Undergraduate (1000-5000 level)

Designation:
Elective

General Education Course:
(N/A)

Cross-Listings:
(N/A)

Course Detail

Credit Hours (Minimum if “Range” selected):
3.00

Max Credit Hours:
(N/A)
Select if Repeatable: Off

Maximum Repeatable Credits: (N/A)

Total Completions Allowed: (N/A)

Allow Multiple Enrollments in Term: No

Course Length:
14 weeks (autumn or spring)
12 weeks (summer only)

Off Campus: Never

Campus Location: Columbus

Instruction Modes: In Person (75-100% campus; 0-24% online)

Prerequisites and Co-requisites: (N/A)

Electronically Enforced: No

Exclusions:
Not open to students with credit for 1111 (101), 1113, 105, or 200.

Course Goals and Learning Objectives
Course Goals / Objectives:
Be familiar with computer basics: hardware, software, OS, and communications, including how the internet works
Be familiar with designing and testing spreadsheets to aid in estimating all aspects of construction costs by using spreadsheet features including relative/absolute cell referencing, boolean logic, reference functions, and financial functions
Be familiar with basic concepts of a relational database, with setting up a basic relational database including input and output forms, with writing queries to obtain needed information, and with developing reports
Be familiar with linking of spreadsheets, databases, word processing, and presentation software to automate the development of reports and presentations

Check if concurrence sought:
No

Contact Hours

Contact Hours:

<table>
<thead>
<tr>
<th>Topic</th>
<th>LEC</th>
<th>REC out-of-class</th>
<th>REC in-class</th>
<th>Weekly LAB out-of-class</th>
<th>Weekly LAB in-class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer basics</td>
<td>2.0</td>
<td>0.0</td>
<td>0</td>
<td>2.5</td>
<td>0</td>
</tr>
<tr>
<td>Excel - writing formulas using simple functions and relative/absolute cell addressing; boolean functions; LOOKUP function; financial functions; charts</td>
<td>10.0</td>
<td>0.0</td>
<td>0</td>
<td>8.0</td>
<td>0</td>
</tr>
<tr>
<td>Access; database features of Excel</td>
<td>6.0</td>
<td>0.0</td>
<td>0</td>
<td>3.0</td>
<td>0</td>
</tr>
<tr>
<td>Powerpoint; object linking; Word, including mail merge</td>
<td>2.0</td>
<td>0.0</td>
<td>0</td>
<td>4.0</td>
<td>0</td>
</tr>
<tr>
<td>How the internet works and how to create a simple webpage</td>
<td>2.0</td>
<td>0.0</td>
<td>0</td>
<td>1.0</td>
<td>0</td>
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<tr>
<td>Total</td>
<td>22</td>
<td>0</td>
<td>0</td>
<td>18.5</td>
<td>0</td>
</tr>
</tbody>
</table>

Grading and Texts

Grading Plan:
Letter Grade
**Course Components:**
Lecture  
Lab

**Grade Roster Component:**
Lecture

**Credit by Exam (EM):**
No

**Grades Breakdown:**

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labs</td>
<td>20%</td>
</tr>
<tr>
<td>Homework</td>
<td>12%</td>
</tr>
<tr>
<td>Class participation</td>
<td>2%</td>
</tr>
<tr>
<td>Pop quizzes</td>
<td>6%</td>
</tr>
<tr>
<td>Midterm</td>
<td>20%</td>
</tr>
<tr>
<td>Final project</td>
<td>10%</td>
</tr>
<tr>
<td>Final exam</td>
<td>30%</td>
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</table>

**Representative Textbooks and Other Course Materials:**

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series for Microsoft Office Bundle Including SAM Software</td>
<td>Shelly Cashman</td>
<td></td>
</tr>
</tbody>
</table>

**ABET Student Learning Outcomes**
### ABET-CAC Criterion 3 Outcomes:

<table>
<thead>
<tr>
<th>Significant contribution (7+ hours)</th>
<th>1</th>
<th>Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantial contribution (3-6 hours)</td>
<td>2</td>
<td>Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program’s discipline.</td>
</tr>
<tr>
<td>Some contribution (1-2 hours)</td>
<td>3</td>
<td>Communicate effectively in a variety of professional contexts.</td>
</tr>
<tr>
<td>Some contribution (1-2 hours)</td>
<td>4</td>
<td>Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles</td>
</tr>
<tr>
<td>Substantial contribution (3-6 hours)</td>
<td>6</td>
<td>Apply computer science theory and software development fundamentals to produce computing-based solutions.</td>
</tr>
</tbody>
</table>

### ABET-ETAC Criterion 3 Outcomes:

(N/A)

### ABET-EAC Criterion 3 Outcomes:

No outcome selected

### Embedded Literacies (UG courses only)

Embedded Literacies Info:

### Attachments / Additional Notes or Comments

**Attachments:**

(N/A)

**Additional Notes or Comments:**

(N/A)