**Course Title** - Construction Estimating I

**Course Prefix and Number** – CNST 2351

**Department** - Engineering Design  
**Division** - Technology and Business

**Course Type:** (check one)
- ☒ Academic General Education Course (from ACGM – but not in WCJC Core) Unique Need
- ✗ Academic WCJC Core Course
- ☐ WECM course (This course is a Special Topics or Unique Needs Course: ☐ Y or ☐ N)

**Semester Credit Hours # : Lecture Hours # : Lab/Other Hours #**  
3:3:0

**Equate Pay hours for course - 3**

**Course Catalog Description** - Introduction to the skills and tools necessary to prepare cost estimates for construction projects; focuses on blueprint reading and material quantity.

**Prerequisites/Co-requisites** – CNST 1361 or ENGT 2304 and CNST 2321

**Prepared by** Jo Ann Shimek  
**Date** 1/23/14

**Reviewed by Department Head** Jo Ann Shimek  
**Date** 1/23/14

**Accuracy Verified by Division Chair** David Kucera  
**Date** 1/31/14

**Approved by Dean or Vice President of Instruction** Amy LaPan  
**Date** 3/20/2014
I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non-lecture instruction):

Architectural - including
  wall and floor coverings; windows and doors; finishes and accessories
Civil - including
  underground utilities; earthwork
Structural - including
  reinforced concrete; structural steel; masonry units; timber construction
Mechanical - including
  piping; instrumentation (P&ID's); Ducts; equipment and accessories
Electric Plan - including
  cables and wires; conduits and cable trays; equipment and accessories

II. Course Learning Outcomes

Upon successful completion of this course, students will:

- read blueprints
- perform quantity takeoff for various work items
- utilize computer software to prepare required deliverables

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>Methods of Assessment</th>
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<tr>
<td>Upon successful completion of this course, students will:</td>
<td>Six quizzes per semester</td>
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<tr>
<td>- read blueprints</td>
<td>Final Exam</td>
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<tr>
<td>- perform quantity takeoff for various work items</td>
<td>Class discussion</td>
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<tr>
<td>- utilize computer software to prepare required deliverables</td>
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III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

Basic Estimating for Construction, 2nd ed; by James A.S. Fatzinger
Applied Cost Engineering by Forrest D. Clark
Fundamentals of Construction Estimating, by Pratt; Thomson Delmar Learning

IV. Suggested Course Maximum - 20

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

Computer work station to include printers/plotters, projection system and appropriate software.

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

Quizzes - 80%
Final - 20%

A = 100 -90
B = 89-80
C = 79-70
D = 69-60
F = 59 or below

"C" or above in all degree specific classes
VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
  No additional documentation needed

- **Academic WCJC Core Course**
  Attach the Core Curriculum Checklist, including the following:
  - Basic Intellectual Competencies
  - Perspectives
  - Exemplary Educational Objectives

- **WECM Courses**
  If needed, revise the Program SCANS Matrix & Competencies Checklist.