Course Outline

COURSE: CMGT 102      DIVISION: 50     ALSO LISTED AS:

TERM EFFECTIVE: Fall 2020     CURRICULUM APPROVAL DATE: 11/12/2019

SHORT TITLE: CONSTRUCTION GRAPHICS

LONG TITLE: Construction Graphics

<table>
<thead>
<tr>
<th>Units</th>
<th>Number of Weeks</th>
<th>Type</th>
<th>Contact Hours/Week</th>
<th>Total Contact Hours</th>
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<tr>
<td>3</td>
<td>18</td>
<td>Lecture:</td>
<td>3</td>
<td>54</td>
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<tr>
<td></td>
<td></td>
<td>Lab:</td>
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<td>0</td>
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<td>Other:</td>
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<tr>
<td></td>
<td></td>
<td>Total:</td>
<td>3</td>
<td>54</td>
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COURSE DESCRIPTION:

This course develops the graphic communication knowledge and skills needed by the construction management professional. ADVISORY: Fundamental knowledge of MS Operating System, Microsoft Office, and Adobe Acrobat software.

PREREQUISITES:

COREQUISITES:

CREDIT STATUS: D - Credit - Degree Applicable

GRADING MODES
  L - Standard Letter Grade

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:
  02 - Lecture and/or discussion

STUDENT LEARNING OUTCOMES:

By the end of this course, a student should:
1. Recognize the application of virtual construction and modeling in the design and construction industry.
2. Analyze construction documents for planning and management of construction processes.
3. Apply the principles and concepts of 2D construction graphics and 3D modeling.
CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS
Curriculum Approval Date: 11/12/2019

12 Hours
Student Performance Objectives: Perform various calculations. Utilize SketchUp software. Identify key construction graphics and modeling terminology.

12 Hours
Student Performance Objectives: Complete the calculations and drawings for the class project. Discuss where and how modeling is used.

16 Hours
Content: Introduction and Demonstration of Revit Software. Exam.
Student Performance Objectives: Discuss how Revit software works. Perform various exercises using Revit software.

12 Hours
Content: Introduction and Demonstration of Navisworks Software.
Student Performance Objectives: Explain how Navisworks software functions. Perform various exercises using Navisworks software. Demonstrate skills in the basic building and manipulation of 3D computer models.

2 Hours
Final Exam

METHODS OF INSTRUCTION:
lecture, discussion, guided practice, multi-media presentation

OUT OF CLASS ASSIGNMENTS:
Required Outside Hours: 24
Assignment Description: Review drawings and video presentations.
Required Outside Hours: 24
Assignment Description: Read textbook. Study for exams and quizzes.
Required Outside Hours: 60
Assignment Description: Out of class assignments, class exercises, and project. Such as: drawings, calculations, construction documents plans, Revit homework, Navisworks homework, and 3D model exercise.

METHODS OF EVALUATION:
Percent of total grade: 60.00 %
50% - 70% Assignments/Class Activities
Skill demonstrations
Percent of total grade: 20.00 %
10% - 20% Exercises
Objective examinations
Percent of total grade: 20.00 %
10% - 20% Exams/Quizzes
Other methods of evaluation
Percent of total grade: 0.00 %
0% - 10% Participation in class activities.
REPRESENTATIVE TEXTBOOKS:
Reading Level of Text, Grade: 13th Verified by: Publisher

Required Other Texts and Materials
Required course tools: (1) Laptop Computer (2) SketchUp 3D modeling software (student version available free online (3) Autodesk Revit Architecture and Navisworks software (student version available free online (4) Architectural scale, Engineering scale, straight edge (triangle), graph paper, pencils and eraser.
Recommended Reference Texts: (1) Autodesk Revit Architecture by Eric Wing, Sybex Publishing (2) Mastering Autodesk Navisworks by Jason Dodds and Scott Johnson, Sybex Publishing

ARTICULATION and CERTIFICATE INFORMATION
Associate Degree:
CSU GE:
IGETC:
CSU TRANSFER:
   Transferable CSU, effective 202070
UC TRANSFER:
   Not Transferable

SUPPLEMENTAL DATA:
Basic Skills: N
Classification: Y
Noncredit Category: Y
Cooperative Education: N
Program Status: 1 Program Applicable
Special Class Status: N
CAN:
CAN Sequence:
CSU Crosswalk Course Department: CMGT
CSU Crosswalk Course Number: 110
Prior to College Level: Y
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: D
Maximum Hours:
Minimum Hours:
Course Control Number:
Sports/Physical Education Course: N
Taxonomy of Program: 095700