GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

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

Units	Number of Weeks	Type	Contact Hours/Week	Total Contact Hours
3	18	Lecture:	3	54
		Lab:	0	0
		Other:	0	0
		Total:	3	54

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

Content: Introduction. Visualization and Projections. Shapes, Scaling and Calculations. Software Demonstration/SketchUp 3D Modeling Software. Drawing and Layout. Vocabulary. Exam.

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

12 Hours

Content: Construction Documents. Project Plans. Exam.

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:

Surinder Singh Virdi, Roy T. Baker, Narinder Kaur Virdi . Construction Mathematics. Routledge,2017.

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