

Course Outline

COURSE: CMGT 104 **DIVISION:** 50 **ALSO LISTED AS:**

TERM EFFECTIVE: Fall 2020 **CURRICULUM APPROVAL DATE:** 10/8/2019

SHORT TITLE: ANALYSIS CON DRAW

LONG TITLE: Analysis of Construction Drawings and Specifications

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

COURSE DESCRIPTION:

This course is designed to provide the student with an introduction to reading construction drawings and specifications used in the construction industry.

PREREQUISITES:

Completion of CMGT 101, as UG, with a grade of C or better.

AND Completion of CMGT 102, as UG, with a grade of C or better.

AND Completion of CMGT 103, as UG, with a grade of C or better.

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:

1. Summarize the overall organization, specific purposes, and information provided in standard construction specifications.

Measure of assessment: exams, quizzes, class activities/exercises

Semester/Year assessed, or planned Semester/Year of assessment: Spring 2021

2. Apply the ability to read 2D building plans and project specifications.

Measure of assessment: exams, quizzes, homework

Semester/Year assessed, or planned Semester/Year of assessment: Spring 2021

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS

Curriculum Approval Date: 10/8/2019

3 Hours

Content: Course Overview. Types of Contracts and Players. Specifications.

Student Performance Objectives: Identify the different types of contracts. Recognize various types of project delivery methods and the roles and responsibilities of the players. Analyze construction documents for planning and management of construction processes.

3 Hours

Content: Correspondence and Submittal Process. Introduction to Bluebeam Revu Software.

Student Performance Objectives: Discuss the construction drawings submittal process. Apply the ability to successfully use Bluebeam Revu software.

3 Hours

Content: Keys to Plan Reading.

Student Performance Objectives: Explain how to read 2D building plans. Summarize the importance of construction quality assurance and control.

6 Hours

Content: Construction Surveying/Staking. Civil and Landscape Plans. Exam.

Student Performance Objectives: Apply basic surveying techniques for construction layout and control. Analyze civil and landscape plans for planning and management of construction processes.

3 Hours

Content: Architectural Plans.

Student Performance Objectives: Create construction project cost estimates as it relates to architectural plans. Analyze architectural plans for planning and management of construction processes.

6 Hours

Content: Foundations Plans. OnScreen Takeoff Software.

Student Performance Objectives: Create construction project cost estimates as it relates to foundations plans. Analyze foundations plans for planning and management of construction processes. Complete various activities utilizing OnScreen Takeoff software.

9 Hours

Content: Structural Plans. Ethics. PlanGrid Software. Exam.

Student Performance Objectives: Create construction project cost estimates as it relates to structural plans. Analyze structural plans for planning and management of construction processes. Remember the construct of business ethics code of conduct and analyze ethical decision making best practices. Apply electronic-based technology to manage the construction process.

4.5 Hours

Content: Plumbing and Fire Sprinkler Plans.

Student Performance Objectives: Recognize the basic principles of plumbing systems. Identify construction quality assurance and control for plumbing and fire sprinkler plans. Create construction project cost estimates as it relates to plumbing and fire sprinkler plans.

4.5 Hours

Content: Heating and Cooling Plans.

Student Performance Objectives: Recognize the basic principles of mechanical systems. Identify construction quality assurance and control for heating and cooling plans. Create construction project cost estimates as it relates to heating and cooling plans.

3 Hours

Content: Electrical Plans.

Student Performance Objectives: Recognize the basic principles of electrical systems. Identify construction quality assurance and control for electrical plans. Create construction project cost estimates as it relates to electrical plans.

3 Hours

Content: Types of Estimates and Uses. Exam.

Student Performance Objectives: Create construction project cost estimates. State their uses.

4 Hours

Content: Review for Final.

Student Performance Objectives: Participate in study guide review. Complete course binder.

2 Hours

Final

METHODS OF INSTRUCTION:

lecture, discussion, guided practice, multi-media presentation

OUT OF CLASS ASSIGNMENTS:

Required Outside Hours: 36

Assignment Description: Read textbook and handouts. Study for quizzes and exams.

Required Outside Hours: 72

Assignment Description: Out of class assignments and activities. Such as: Bluebeam Revu homework, reading specifications, architectural plans homework, foundations plans homework, OnScreen Takeoff software homework, structural plans homework, plumbing and fire sprinkler plans homework, heating and cooling plans homework, and electrical plans homework.

METHODS OF EVALUATION:

Problem-solving assignments

Percent of total grade: 40.00 %

30% - 50% Assignments/Class Activities

Skill demonstrations

Percent of total grade: 10.00 %

10% - 20% Exercises

Objective examinations

Percent of total grade: 40.00 %

30% - 50% Quizzes and Exams

Other methods of evaluation

Percent of total grade: 10.00 %

10% - 20% Participation in class activities. Course binder.

REPRESENTATIVE TEXTBOOKS:

Mark W. Huth. Understanding Construction Drawings, 7th Edition . Boston, MA: Cengage Learning,2019.
ISBN: 978-1-337-40864-6

Reading Level of Text, Grade: 12th Verified by: MS Word

Recommended Representative Textbooks

Keith A. Bisharat. Construction Graphics: A Practical Guide to Interpreting Working Drawings, Second Edition. Hoboken, New Jersey: John Wiley & Sons, Inc,2008.

ISBN: 978-0-470-13750-5

Reading Level of Text, Grade: 12th Verified by: MS Word

Required Other Texts and Materials

Required course tools: (1) Laptop Computer (2) Access to a color printer. A course pack will be provided to the student at no cost. It includes: temporary license for the OnScreen Takeoff (OST) software, temporary license of Bluebeam Revu software, an educational license of PlanGrid software, plan set with highlighter, and course work binder and tabs.

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Not Transferable

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: 210

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: CCC000608405

Sports/Physical Education Course: N

Taxonomy of Program: 095700