GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

Course Outline

COURSE: JFT 130 DIVISION: 50 ALSO LISTED AS:

TERM EFFECTIVE: Fall 2021 CURRICULUM APPROVAL DATE: 06/8/2021

SHORT TITLE: BUILDING CONSTRUCTION FIRE

LONG TITLE: Building Construction for Fire Protection

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

Out of Class Hrs:	108.00
Total Learning Hrs:	162.00

COURSE DESCRIPTION:

This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, pre- planning fire operations, and operating at emergencies.

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
05 - Hybrid
71 - Dist. Ed Internet Simultaneous
72 - Dist. Ed Internet Delayed

STUDENT LEARNING OUTCOMES:

By the end of this course, a student should:

1. Describe building construction as it relates to firefighter safety, building codes, fire prevention, code inspection, firefighter strategy and tactics.
2. Identify structural Stability, Fire Resistance and Fire Protection of Elements

COURSE CONTENT:

Curriculum Approval Date: 06/8/2021

I. Introduction - 2 hours

A.History of Building Construction

B.Governmental Functions, Building and Fire Codes

C.Fire Risks and Fire Protection

D.Fire Loss Management and Life Safety

E. Pre-fire Planning and Fire Suppression Strategies

II. Principles of Construction - 8 hours

A.Terminology and Definitions

B.Building and Occupancy Classifications

C.Characteristics of Building Materials

D.Types and Characteristics of Fire Loads

E.Effects of Energy Conservation

III. Building Construction - 8 hours

A.Structural Members

B.Structural Design and Construction Methods

C.System Failures

IV. Principles of Fire Resistance - 4 hours

A.Standards of Construction

B.Fire Intensity and Duration

C.Theory versus Reality

V. Fire Behavior versus Building Construction - 4 hours

A.Flame Spread

B.Smoke and Fire Containment

1. Construction and Suppression Systems
2. HVAC Systems
3. Rack Storage
4. Combustible

VI. Wood Construction - 4 hours

A.Definition and Elements of Construction

B.Types of Construction

C.Fire Stopping and Fire Retardants

D.Modifications/Code Compliance

VII. Ordinary Construction - 4 hours

A.Definitions and Elements of Construction

B.Structural Stability and Fire Barriers

C.Modifications/Code Compliance

VIII. Steel Construction - 2 hours

A.Definitions and Elements of Construction

B.Structural Stability, Fire Resistance and Fire Protection of Elements

C.Modifications/Code Compliance

COURSE CONTEN(CONTINUED):
IX. Concrete Construction -2 hours
A.Definitions and Elements of Construction
B.Structural Stability and Fire Resistance
C.Modifications/Code Compliance
X. High Rise Construction - 2 hours
A.Early versus Modern Construction
B.Vertical and Horizontal Extension of Fire and Smoke
C.Fire Protection and Suppression
D.Elevators
E. Atriums/Lobbies
F.Modifications/Code Compliance
XI. Collapse - 1 hour
XII. Ventilation - 4 hours
XIII. Non-Combustible - 1 hour

METHODS OF INSTRUCTION:
Lecture and written reports, utilizing web conferencing tools and the College provided LMS

OUT OF CLASS ASSIGNMENTS:
Required Outside Hours: 68
Assignment Description: Read class text

Required Outside Hours: 40
Assignment Description: Written assignments regarding various types of building construction.

METHODS OF EVALUATION:
Writing assignments
Percent of total grade: 30.00 %
Written Homework Assignments

Objective examinations
Percent of total grade: 70.00 %
Quizzes, Exam

REPRESENTATIVE TEXTBOOKS:
Glenn P. Corbett, Francis L. Brannigan, National Fire Protection Association. Brannigan's Building Construction for the Fire Service. Jones and Bartlett,2018.
ISBN: 9781284136135
Reading Level of Text, Grade: 12 Verified by: Doug Achterman

Instructor handouts and manual 2020

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:
CSU GE:
IGETC:
CSU TRANSFER:
Transferable CSU, effective 201770
Not Transferable
UC TRANSFER:
Not Transferable
Not Transferable

SUPPLEMENTAL DATA:

Basic Skills: N
Classification: Y
Noncredit Category: Y
Cooperative Education:
Program Status: 1 Program Applicable
Special Class Status: N
CAN:
CAN Sequence:
CSU Crosswalk Course Department:
CSU Crosswalk Course Number:
Prior to College Level: Y
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: C
Maximum Hours:
Minimum Hours:
Course Control Number: CCC000578300
Sports/Physical Education Course: N
Taxonomy of Program: 213300