

THREE RIVERS COMMUNITY COLLEGE FIRE ALARM & COMMUNICATION SYSTEMS SYLLABUS

COURSE TITLE: Fire Alarm & Communication Systems
CLASS HRS: 3

COURSE NO: FTA225
CREDIT HRS: 3

INSTRUCTOR: James Turner (Jim)
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SEMESTER: Fall 2010
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CLASS DAY & TIME: Wednesday 6:00 PM to 8:45 PM
REQUIRED TEXT: Fire Alarm Signaling Systems, 3RD Edition
AUTHORS: Richard W. Bukowski, P.E. & Robert J. O'Laughlin, P.E.

CLASS ROOM: Room D109

COURSE OBJECTIVE:

To provide the student with information and an understanding of the changes in technology as it relates to the design, installation, testing, & maintenance of all components of fire alarm detection and notification systems.

GRADING:

Score	Grade	GRADING NOTES
A	96 – 100	<p>Academic Honesty - Three Rivers Community College adheres to Academic Honesty in addition to the Student Discipline Policy, sections 2:10 and 3:1-10, as provided by the Board of Trustees of Connecticut Community Colleges.</p> <p>Late Work – I reserve the right to deduct 10% from the possible points that you may receive for an assignment, for each class session that an assignment is late, up to three class sessions. After three class sessions, I will record a zero (0) for that assignment, unless you have made previous arrangements with me and only in exceptional circumstances. All assignments must be submitted by the end of the last class.</p> <p>Incompletes – An incomplete is a temporary grade assigned by the faculty member when course work is missing and the student agrees to complete the requirements. The student and instructor both must sign a contract to permit an "incomplete" grade. The contract will denote what must be completed to resolve the "I" grade. The "I" must be resolved by the end of the 10th Session of the next academic semester (except summer) or it automatically converts to an "F" or "NC" for incomplete (remedial) courses.</p>
A-	90 – 95	
B+	87 – 89	
B	83 – 86	
B-	80 – 82	
C+	77 – 79	
C	73 – 76	
C-	70 – 72	
D+	67 – 69	
D	63 – 66	
D-	62 – 60	
F	BELOW 59	
ASSIGNMENT WEIGHTING		
1. Quizzes	60%	
2. Project	20%	
3. Final	20%	

SPECIAL NOTE(S):

- No class November 26th
- Last Class is December 17th
- All papers are to be submitted using APA format.

SESSION OBJECTIVES

Session 1 – September 8 - Introduction

- Session's Objectives - Course Overview, Course Project, Administration Topics, Fire Signatures, Fatality Potential
- Individual Assignment(s) - Read Chapter 2

Session 2 – September 15 – Fire Alarm Systems

- Session's Objectives - Description & Types of Fire Alarm Systems
- Individual Assignment(s) - Read Chapter 3

Session 3 – September 22 – Signal Initiation

- Session's Objectives - Initiating Devices, Signals & Extinguishing Systems
- Individual Assignment(s) - Read Chapter 4

Session 4 – September 29 – Signal Transmission

- Session's Objectives - Wire, Wireless, Fiber Optic Transmission, Signal Transmission Compatibility
- Individual Assignment(s) - Take Home Exam Quiz 1; Chapters 1, 2, 3, & 4 – Due Session 5; Read Chapter 5

Session 5 – October 6 – Signal Processing

- Session's Objective - Types of signals processed, types of processing
- Individual Assignment(s) - Read Chapter 6

Session 6 – October 13 – Electrical Supervision

- Session's Objective - Supervision of power supplies, circuits and equipment, remote stations, addressable initiating devices, analog devices, non-supervised components
- Individual Assignment(s) - Read Chapter 7

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Session 7 – October 20 – Signal Notification

- a) Session's Objective - Types, classification, combination systems, operation, physically & mentally challenged, appliance options, EVAC systems, controls, high-rise buildings
- b) Individual Assignment(s) - Prepare for Quiz 2

Session 8 – October 27 – Facility Tour

- a) Session's Objective - Tour a local facility that has a dispatch center and perform sprinkler and manual alarm testing in a building to see the alarm transmission process.
- c) Individual Assignment(s) - Take Home Quiz 2; Chapters 5, 6, & 7 – Due Session 9; Read Chapter 8

Session 9 – November 3 – Power Supplies

- a) Session's Objective - Main, standby & other power supplies, storage batteries
- b) Individual Assignment(s) - Read Chapter 9

Session 10 – November 10 – Fire Detection System Design

- a) Session's Objective - Design objectives and criteria, heat, smoke & flame detectors
- b) Individual Assignment(s) - Read Chapter 10

Session 11 – November 17 – Heat and Smoke Detector Placement / UL Listings

- a) Session's Objective - Placement methodology, main variables
- b) Individual Assignment(s) - Read Chapter 11

Session 12 – November 24 – Engineering Documents

- a) Session's Objective - Design drawing specifications, technical specifications for fire detection and alarm systems
 - i) Individual Assignment(s) - Take Home Quiz 3, Chapters 8, 9, 10, & 11 – Due Session 13; Read Chapter 12

Session 13 – December 1 – Approvals & Acceptance

- a) Session's Objective - Approvals, authorities, labeling & listing, codes & standards, test lab procedures
- b) Individual Assignment(s) - Read Chapter 13; Individual Project Due

Session 14 – December 8 – Public Fire Service Communication Systems

- a) Session's Objective - Communication center location, construction & operation
- b) Individual Assignment(s) - Complete Take home Final Exam – Due Session 15

Session 15 – December 15 – Final Exam

- a) Session's Objective - Submit Final Exam

INDIVIDUAL PROJECT

Select one of the two projects below. You will be required to submit a comprehensive inspection report for your selection. Your report should be at least 1,500 words in length, utilize at least three credible/verifiable references sources and written in APA formatting. An example of APA formatting is included with this syllabus. This paper is due by the end of class during Session 13.

1. Make a visit to your town's 9-1-1, communications center. Report on the following information:
 - a) Describe the telephone equipment i.e. what kind of information is displayed when someone dials 9-1-1, how many lines are there, are calls taped?
 - b) Describe other ways alarms are received i.e. phone dialers, central station equipment, municipal alarm systems, etc.
 - c) Describe the backup power supply(s) for the communications center, i.e. type of generator, etc. How long can it run on its supply tank?
 - d) Describe the number of alarms received annually.
 - e) Describe the communications center's "contingency" plan (do they have an alternate site to receive emergency calls and alarms in the event this one had to be shut down such as in the case of a fire. Does the alternate site have all of the provisions as the main site?)
2. Inspect a commercial occupancy (store, school, business, restaurant, factory, hotel, church, etc), which has some type of alarm system in it.
 - a) List the components of the system including number of zones, number of detection devices on each zone, number of horn light units on each zone, type of suppression systems (if any), and type of devices (heat detector, smoke detector, pull station, etc.).
 - b) List the UL listing number for each type of detection device, horn light unit, alarm panel, etc.
 - c) List the spacing of the detectors, horn/light units (does it meet code?).