

CENTRAL TEXAS COLLEGE
SYLLABUS FOR FIRT 2331
FIRE FIGHTING STRATEGIES AND TACTICS II

Semester Hours Credit: 3

INSTRUCTOR: _____

OFFICE HOURS: _____

I. INTRODUCTION

- A. This course is a continuation of Firefighting Strategies and Tactics I. The class will consist of emphasis on the use of incident command in large scale command problems to improve strategic decisions as well as tactical operations and other specialized fire problems.
- B. This is a required course for an Associate of Applied Science Degree in Fire protection Technology.
- C. This course is occupationally related and serves as preparation for a career in Fire protection and Fire Service.
- D. Prerequisites: None
- E. Alphanumeric coding used throughout the syllabus denotes the integration of CANS occupational competencies (C) and Fundamental Skills (F).

II. LEARNING OUTCOMES

Upon successful completion of this course, fire Fighting Strategies and Tactics II, the student will:

- A. Be able to recognize explain and implement incident command (C1, C5-C7, F1)
- B. Create a diagram a fire attack on a high rise building (C1, F6, F8, F9, F13)
- C. Develop strategies to mitigate various specific emergencies (C7, C15, F6)

III. INSTRUCTIONAL MATERIALS

- A. The instructional materials identified for this course are viewable through www.ctcd.edu/books

Current textbook is: James P. Smith, *Strategic & Tactical Considerations on the Fire-ground*, third edition 2012, Pearson/Bradly Fire Series, 9780132158817.

B. References:

1. Fire Protection Handbook: NFPA, 1997
2. Fire Officer's Handbook of Tactics Study Guide. Saddle Brook, NJ Penn Well Publishing Company.

IV. COURSE REQUIREMENTS

- A. Your first responsibility is scholarship. The grade you receive for this course will not be the grade of the instructor, but the grade you and you alone earn.
- B. This course is designed to require a steady, continuous effort from the student. A crash-cram policy will not result in the best grade possible. In addition to exams, factors such as class participation, initiative, attendance, and individual work will be considered in grade computation.
- C. You are encouraged to give your best effort throughout the semester. From the beginning, you should plan for a steady, organized, and continuous effort, which in the long run will prove more effective for your final grade than a last minute crash-cram policy. Your course grade is not determined solely by exam grade. Such factors as class participation, initiative, attendance, and individual research papers or projects will be considered in grade computation.
- D. From time to time, special library and other assignments may be made to members of the class, individually and in groups. You are expected to read all assignments and fulfill your responsibilities to any group assignments.
- E. You are expected to read all assigned material and bring your textbook to class. Keep up to date and informed on assignments, especially after a period of absence.
- F. Good class notes are indispensable for earning a good grade since both the material assigned and discussed will be the basis for examination material. Regular attendance is essential for the same reason.
- G. Scholastic Honesty: All students are required and expected to maintain the highest standards of scholastic honesty in the preparation of all coursework and during examinations. The following are considered examples of scholastic dishonesty:

Plagiarism: The taking of passages from the writing of others without giving proper credit to the sources.

Collusion: Using another's work as one's own, or working together with another person in the preparation of work, unless such joint preparation is specifically approved in advance by the instructor.

Cheating: Giving or receiving information on examinations.

H. Special Work: Special assignments may be made during the semester, both for regular work or supplemental work.

V. EXAMINATIONS

- A. There will be a minimum of three major examinations as follows:
1. Three-week exam
 2. Mid-term exam
 3. Twelve-week exam (optional)
 4. Final exam
 5. In addition to the minimum of three major exams students will complete a research paper.
- B. Unannounced short quizzes may be given covering any material that has been assigned from the beginning of the course.
- C. Occasionally a student will find it unavoidable to be absent from an exam. Only students with excused absences will be permitted to take make-up exams. Unexcused absences will result in a zero for the exam missed. The policy of the college is clearly stated in the catalog. A doctor=s excuse is required in case of illness.
- D. The exams will be structured to usually include both subjective and objective type of questions.

VI. SEMESTER GRADE COMPUTATION

<u>EXAM</u>	<u>POINTS</u>	<u>POINTS</u>	<u>GRADES</u>
Three-week exam	100-200	900-1000	A=4pts/sem hr
Mid- term exam	200-250	800-899	B=3pts/sem hr
Twelve-week exam (Opt)	200-0	700-799	C=2pts/sem hr
Final exam	300-350	600-699	D=1pt/sem hr
*Incentive Points	50-50	0-599	F=0pts/sem hr
Research Paper	<u>150-150</u>		
TOTAL	1000-1000		

The Twelve Week Exam is optional: if it is not given, then those points will default to Homework/Quizzes and to Incentive points. Incentive points may be earned for factors such as attendance, initiative, participation in class discussions, and timely completion of assignments. Three points will be deducted for each unexcused absence. Military assignments or unavoidable circumstances will be evaluated upon notification to class instructor.

VII. NOTES AND ADDITIONAL INSTRUCTIONS FROM COURSE INSTRUCTOR

- A. Withdrawal from course: It is the student's responsibility to officially drop a class if circumstances prevent attendance. Any student who desires to, or must, officially withdraw from a course after the first scheduled class meeting must file a Central Texas College application for Withdrawal (CTC Form 59). The withdrawal form must be signed by the student.

CTC Form 59 will be accepted at any time prior to Friday of the 12th. Week of classes during the 16 week fall and spring semesters. The deadline for sessions of other lengths is as follows:

10 week session	Friday of the 8 th . Week.
8 week session	Friday of the 6 th . Week.
5 week session	Friday of the 4 th . Week.

The equivalent date (75% of the semester) will be used for sessions of other lengths. The specific last day to withdraw is published each semester in the Schedule Bulletin.

Students who officially withdraw will be awarded the grade of "W", provided the student's attendance and academic performance are satisfactory at the time of official withdrawal. Students must file a withdrawal application with the college before they may be considered for withdrawal.

A student may not withdraw from a class for which the instructor has previously issued the student a grade of "F" or "FN" for nonattendance.

- B. An Administrative Withdrawal: An administrative withdrawal may be initiated when the student fails to meet College attendance requirements. The instructor will assign the appropriate grade on the Administrative Withdrawal Form for submission to the Registrar.
- C. An Incomplete Grade: The College catalog states, "An incomplete grade may be given in cases where the student has completed the majority of the course work but, because of personal illness, death in the immediate family, or military orders, the student is unable to complete the requirements for a course...." Prior approval from the instructor is required before the grade of "I" is recorded. A student who merely fails to show for the final examination will receive a zero for the final and an "F" for the course.
- D. Cellular phones and Pagers: Cellular phones and pagers will be turned off while the student is in the classroom or laboratory.
- E. Americans with Disabilities Act (ADA): Disability Support Services provides services to students who have appropriate documentation of a disability. Students

requiring accommodations for class are responsible for contacting the Office of Disability Support Services (DSS) located on the central campus. This service is available to all students, regardless of location. Explore the website at www.ctcd.edu/disability-support for further information. Reasonable accommodations will be given in accordance with the federal and state laws through the DSS office.

VIII. COURSE OUTLINE

A. **Unit One:** Introduction to the Course and Chapter One- Preparation.

1. **Unit Objectives:** Upon successful completion of this unit, the student will be able to:
 - a. Discuss the behavior of fire
 - b. Understand the benefits of training for the firefighter, company officer, and the fire department.
 - c. Discuss the benefits of preplanning.
 - d. Understand how to calculate needed fire flow.
 - e. Recognize the duties of both company and chief officers..
 - f. Identify the traits of a person with command presence.
Identify and discuss the 16 firefighter life safety initiatives.
2. **Learning Activities:**
 - a. Classroom lecture/discussion
 - b. Reading assignments: Introduction; and Chapter 1, pages x-34
 - c. Audio-visual aids: Instructors' preference
3. **Unit Outline:**
 - a. Behavior of Fire.
 1. Classes of Fire
 2. The Stages of Fire
 3. Rollover, Flashover, Backdraft
 - b. Training
 1. Firefighter Benefit
 2. Company Officer Benefit
 3. Department Benefit
 4. Preparation is Required
 5. Performance Standards
 6. Cross-Training
 - c. Pre-incident Planning
 1. Preplanning Responsibility
 2. Documentation
 3. Considerations
 4. Resource Utilization
 5. Disaster Planning

6. Plan Review
7. Testing the Plan
- d. Needed Fire Flow
 1. Multistory Structures
 2. Exterior Exposure
 3. Available Water Supply
 4. Determining Type of Attack
 5. Selection of Hose-Line
- e. The Fire Officer
 1. Company Officer
 2. The Chief Officer
- f. Command Presence
 1. Self-Discipline
 2. Visualize Incident Scenes
 3. Utilizing Experience
 4. The Learning Process
- g. Firefighter Life Safety Initiatives

B. Unit Two: Chapter 2: Management Tools

1. Unit Objectives: Upon successful completion of this unit, the student will be able to:
 - a. Understand the origin of the Incident Command System
 - b. Understand the implementation of the National Incident Management System.
 - c. Understand the positions of an incident management system.
 - d. Discuss the position of Command.
 - e. Know the different types of status reports and the information required in each type of report.
 - f. List the participants of the typical Engine Company and state their roles.
2. Learning Activities:
 - a. Classroom lecture/discussion
 - b. Reading assignments: Chapter 2. Pages35-78
 - c. Audio-visual aids: Instructors' preference
3. Unit Outline:
 - a. Incident Scent Management
 1. National Interagency Incident Management System (NIIMS)
 - b. U. S. Department of Homeland Security
 1. Homeland Security Presidential Directives
 2. Differences Between FIRESCOPE and NIMS
 3. Incident Management Teams
 4. Incident Types

- c. The Incident Commander
 - 1. Command Responsibilities
- d. Unified Command
 - 1. Incident Complex and Area Command
- e. Defining Command
 - 1. Problems Facing Command
 - 2. Unity of Command
 - 3. Incident Action Plan
 - 4. Directing Resources
 - 5. Controlling the Incident
 - 6. Command Staff
 - 7. Staging
 - 8. General Staff Functions
 - 9. Operations
 - 10. Branch
 - 11. Resources
 - 12. Strike Team
 - 13. Task Force
 - 14. Dividing the Fire: Assigning Branches, Divisions, and Groups
 - 15. Planning
 - 16. Logistics
 - 17. Finance/Administration
 - 18. Implementation of the System
- f. Incident Scene Control
 - 1. Establishing Command
 - 2. Assuming Command
 - 3. Transfer of Command
 - 4. Passing Command
 - 5. Mobile Command
 - 6. Command Post
- g. Status Reports
 - 1. Initial Status Report
 - 2. Ongoing Status Report
 - 3. Final Status Report
 - 4. Communications

C **Unit Three:** Chapter 3: Decision Making

- 1. **Unit Objectives:** Upon successful completion of this unit, the student will be able to:
 - a. Describe an Incident Action Plan.
 - b. Understand the difference between cue-based & classical decision making.
 - c. Identify and discuss the 13 points of size-up.
 - d. Discuss strategy, tactics, and tasks found in the classical decision

- e. making process.
- e. Discuss the modes of fire attack.

2. Learning Activities:

- a. Classroom lecture/discussion
- b. Reading assignments: Chapter 3, pages 79-130.
- c. Audio-visual aids: Instructors' preference

3. Unit Outline:

- a. Incident Action Plan and the Planning "P"
 - 1. What a Written Incident Action Plan Does
 - 2. Operational Period
 - 3. Components of an Incident Action Plan
 - 4. Plan "P"
- b. Incident Scene Decision Making
 - 1. Cue-Based Decision Making
 - 2. Classical Method of Decision Making
 - 3. The Command Sequence
- c. Size-Up
 - 1. Observation through the use of Our Senses
 - 2. Firefighter Size-Up
- d. Strategy, Tactics, and Tasks
 - 1. An Example of Implementing the Strategies, Tactics, and Tasks
 - 2. Successful Operations
 - 3. Applying Incident Management to Solve Problems
- e. Crew Resource Management
 - 1. Airline Crews and Fire Service Crews
 - 2. CRM in the Fire Service
- f. Modes of Fire Attack
 - 1. Offensive Mode
 - 2. Defensive Mode
 - 3. Transitional Mode
 - 4. Evaluating the Incident Scene
 - 5. Changing Attack Modes

D. Unit Four : Chapter 4: Company Operations

- 1. Unit Objectives: Upon successful completion of this unit, the student will be able to:
 - a. Discuss engine company duties.
 - b. Discuss hose-line placement considerations.
 - c. Discuss sprinkler and standpipe operations
 - d. Discuss truck company duties.
- 2. Learning Activities:

- a. Classroom lecture/discussion
- b. Reading assignments: Chapter 4, pages 131-178.
- c. Audio-visual Aids: Instructors' Preference

3. Unit Outline:

- a. Engine Company Operations
 - 1. Locating the Fire
 - 2. Confinement
 - 3. Extinguishment
 - 4. Securing and Delivering a Water Supply to the Incident Scene
 - 5. Utilizing the Water Supply
- b. Truck Company Operations
 - 1. Rescue
 - 2. Laddering
 - 3. Forcible Entry
 - 4. Ventilation
 - 5. Salvage Operations

E. Unit Five and Six: Chapter 5: Building Construction

- 1. Unit Objectives: Upon successful completion of this unit, the student will be able to:
 - a. Identify and discuss the five basic types of building construction
 - b. Discuss the benefits and safety concerns of fires involving timber trusses.
 - c. Discuss the benefits and safety concerns of lightweight building components.
- 2. Learning Activities:
 - a. Classroom lecture/discussion
 - b. Reading assignments: Chapter 5, pages 179-224.
 - c. Audio-visual Aids: Instructors' Preference
- 3. Unit Outline:
 - a. Fire-Resistive Construction
 - 1. Concrete
 - 2. New Concrete
 - 3. Firefighting
 - b. Noncombustible/Limited Combustible Construction
 - 1. Build-up Roof
 - 2. Operating on a Bar Joist Roof
 - 3. Ventilation
 - 4. Collapse
 - c. Ordinary Construction
 - 1. Walls

2. Floor and Roof Joist
3. Fire-Cut Joist
4. Lintels and Arches
5. Void Spaces
6. Firefighting
- d. Heavy Timber Construction
 1. Building Modifications
 2. Building Deterioration
 3. Firefighting in Mill Buildings
 4. Fire Attack
 5. Compartmentation
- e. Frame Buildings
 1. Types of Frame Buildings
 2. Balloon and Platform
 3. Frame Row Dwellings
 4. Nominal-Sized Timber
 5. Wood Deterioration
 6. Wood Treatments
 7. Attacking Fires in Frame Buildings
 8. Exterior Walls
 9. Chimney Fires
- f. Timber Truss
 1. Benefits of a Truss
 2. Identification of the Timber Truss
 3. Reasons for Truss Failure
 4. Failure of Timber Truss Roofs
- g. Lightweight Building Components
 1. Sheet Metal Surface Fasteners
 2. Plywood and Oriented Strand Board
 3. Wooden Gusset Plates
 4. Failure under Fire Conditions
 5. Finger-Jointed Trusses
 6. Wooden I-Beams
 7. Steel Bar Joist
 8. Construction Site Dangers
 9. Increasing the Carrying Capacity
 10. Truss Void Areas
 11. Void Space Fires
 12. Site Inspections
 13. Reacting under Fire Conditions
 14. Firefighters' Actions

(begin Chapter 6 if there is time remaining)

F. **Unit Seven:** Chapter 6: Building Collapse and Scene Safety.

1. **Unit Objectives:** Upon successful completion of this unit, the student will

be able to:

- a. Describe building collapse indicators.
- b. Describe a plan to address search at a building collapse
- c. Discuss the role and responsibilities of an incident scene Safety Officer.

2. Learning Activities:

- a. Classroom lecture/discussion
- b. Reading assignments: Chapter 6. Pages 225-280
- c. Audio-visual Aids: Instructors' Preference

3. Unit Outline:

- a. Building Collapse
 1. Aggressiveness
- b. Wall collapse
 1. Collapse Zone
 2. Building Collapse Indicators
 3. Collapse Considerations
- c. Collapse Search
 1. Safety Officer
 2. Staging
 3. Set-Up
 4. Determining the Cause of the Collapse
 5. Calling for Help
 6. Utilities
 7. Locating Victims
 8. Firefighters Involved in Collapse
 9. Floor Collapse
 10. Shoring
 11. Safety at Collapse Scenes
 12. Emergency Evacuation
 13. Debris Removal
- d. Safety
 1. Selecting a Departmental Safety Officer
 2. Safety Officer Response
 3. Conditions
 4. Risk Analysis
 5. Fire Department History
 6. Monitoring
 7. Monitoring Rehab
 8. Checklists
 9. Tunnel Vision
 10. Apparatus Placement
 11. Ladder Pipe Operations
 12. Risk versus Gain
 13. Self-Contained Breathing Apparatus Usage

14. Accountability
15. Two-In/Two-Out Rule
16. Rapid Intervention Crew
17. Upgrading a Rapid Intervention Crew to a Task Force
18. Crew Integrity
19. Mayday
20. Rescue Effort for Missing Firefighters
21. Incident Commander's Responsibilities when a Mayday is Sounded
22. PASS Devices
23. Unsuccessful Rescue
24. First In, First Out
25. Documentation
26. Public Safety Officers' Benefit Program

G. **Unit Eight:** Review and Mid-Term Examination

1. Review and discussion for Mid-Term Examination
2. Administer Mid-Term Examination

H. **Unit Nine:** Chapter 7: Special Situations and Occupancies

1. **Unit Objectives:** Upon successful completion of this unit, the student will be able to:
 - a. Understand the special occupancies discussed and the types of fires that may confront firefighters.
 - b. Identify pertinent characteristics of these occupancies.
 - c. Recognize the 13 points of size-up that pertain to these special occupancies.
 - d. Recognize the strategic considerations for these special occupancies.
 - e. Understand the incident management considerations of special occupancies.
2. **Learning Activities:**
 - a. Classroom lecture/discussion
 - b. Reading assignments: Chapter 7, pages 281-342.
 - c. Audio-visual Aids: Instructors' Preference
3. **Unit Outline:**
 - a. Basement and Cellar Fires
 1. Preplan Considerations
 2. Doorways
 3. Recognizing a Cellar Fire
 4. Strategy and Tactics
 5. Cellar Pipes and Distributors

6. High-Expansion Foam
7. Ventilation
8. Size-Up Factors for Cellar Fires
9. Strategic Considerations for Cellar Fires
- b. Garden Apartments
 1. Construction
 2. Roof Assemblies
 3. Access
 4. Problems
 5. Fire Considerations
 6. Fire Travel
 7. Storage Areas
 8. Roof Fire
 9. Operations
 10. Fire Attack
 11. Size-Up Factors for Garden Apartments
 12. Strategic Considerations for Fires in Garden Apartments
- c. Row Houses and Town Houses
 1. Interior Wall Construction
 2. Residential Life Safety
 3. Firefighting Practices
 4. Building Fronts
 5. Truck Company Operations
 6. Light and Air Shafts
 7. Overhead Electric Wires
 8. Size-Up Factors for Row House and Town House Fires
 9. Strategic Considerations for Fires in Row Houses and Town Houses
- d. Renovated Buildings
 1. Temporary Shoring
 2. Firefighting
 3. Ventilation
 4. Roofs
 5. Partition Fires
 6. Asbestos Abatement
 7. Size-Up Factors for Renovated Buildings
 8. Strategic Considerations for Fires in Renovated Buildings
- e. Hotels and Motels
 1. Protective Systems
 2. Standpipes
 3. Life Safety
 4. Multiple or Mass Casualty Incidents
 5. Access
 6. Strategic and Tactical Considerations
 7. Fire Spread
 8. Ventilation

9. Overhaul and Salvage
10. Evacuation
11. Size-Up Factors for Hotels and Motels
12. Strategic Considerations for Fires in Hotels and Motels
- f. Vacant Buildings
 1. Definitions of Vacant Buildings
 2. Effects of Weather
 3. Marking of Buildings
 4. Occupied Vacant Buildings
 5. Firefighting Considerations
 6. Exterior Operations
 7. Size-Up Factors for Vacant Buildings
 8. Strategic Considerations for Fires in Vacant Buildings
- g. Wildland Urban Interface
 1. Housing Developments in Wildland Urban Interface Areas
 2. Firefighting in Wildland Urban Interface Areas
 3. Size-Up Factors in Wildland Urban Interface Areas
 4. Locating Structures in Wildland Urban Interface Areas
 5. Access to Wildland Urban Interface Areas
 6. Evacuation of Wildland Urban Interface Areas
 7. Utilities
 8. Weather, Topography, and Fuel for Wildland Urban Interface Areas
 9. Structural versus Wildland Firefighting
 10. Objectives, Strategy and Tactics
 11. Determining which Structures can be Protected
 12. Protecting a Building at a Wildland Urban Interface Fire
 13. Hose-Line and Class A Foam for Wildland Urban Interface
 14. Resource Needs for a Wildland Urban Interface Fire
 15. Safety Considerations at Wildland Urban Interface Fires
 16. Lookouts, Communications, Escape Routes, Safety Zones
 17. Preplanning for a Wildland Urban Interface Fire
 18. Logistical Considerations at a Wildland Urban Interface Fire
 19. Size-Up Factors for Wildland Urban Interface Fires
 20. Strategic Considerations for Wildland Urban Interface Fires

I. **Unit Ten and Eleven:** Chapter 8: Health Care and High-Risk Populations

1. **Unit Objectives:** Upon successful completion of this unit, the student will be able to:
 - a. Understand the special occupancies discussed and the types of fires that may confront firefighters.
 - b. Identify pertinent characteristics of these occupancies.
 - c. Recognize the 13 points of size-up that pertain to these special occupancies.

- d. Recognize the strategic considerations for these special occupancies.
- e. Understand the incident management considerations of special occupancies.

2. Learning Activities:

- a. Classroom lecture/discussion
- b. Reading assignments: Chapter 8, pages 343-420.
- c. Audio-visual Aids: Instructors' Preference

3. Unit Outline:

- a. Hospitals
 - 1. Occupancy
 - 2. Preplans
 - 3. Hospital Codes
 - 4. Hospital Staff
 - 5. Laboratories
 - 6. Oxygen and Medical Gases
 - 7. Magnetic Resonance Imaging (MRI)
 - 8. Hospital Fires
 - 9. Protecting the Patient
 - 10. Evacuation
 - 11. Restrained Patients
 - 12. Calling for Help
 - 13. Firefighting
 - 14. Operating Rooms
 - 15. High-Energy Electrosurgical Units
 - 16. Ventilation
 - 17. Size-Up Factors for Hospitals
 - 18. Strategic Considerations for Fires in Hospitals
- b. Nursing Homes and Assisted Living Facilities
 - 1. Regulation
 - 2. Preplanning
 - 3. Construction
 - 4. Protective Systems
 - 5. Life Safety
 - 6. Evacuating or Protecting in Place
 - 7. Bed Restraints
 - 8. Incident Considerations
 - 9. Ventilation
 - 10. Salvage
 - 11. Incident Management System
 - 12. Size-Up Factors for Nursing Homes and Assisted Living Facilities
 - 13. Strategic Considerations for Fires in Nursing Homes and Assisted Living Facilities

- c. Mass Casualty Incidents
 - 1. Incident Requirements
 - 2. Standard Operational Guideline
 - 3. Trauma Centers
 - 4. Hazardous Materials
 - 5. Terrorism-Related MCIs
 - 6. Mass Casualty Vehicles
 - 7. Communications
 - 8. Critical Incident Stress Debriefing
 - 9. Simulated Exercises
 - 10. Operations
 - 11. Staging
 - 12. Logistics
 - 13. Medical Group or Medical Branch
 - 14. Triage
 - 15. Triage Form
 - 16. Treatment
 - 17. Transportation
 - 18. Need for Coordination
 - 19. Mass Casualty Incident Considerations
 - 20. Size-Up Factors for Mass Casualty Incidents
 - 21. Strategic Considerations for Mass Casualty Incidents
- d. Houses of Worship
 - 1. Building Inspection
 - 2. Construction Features
 - 3. Interconnecting Buildings
 - 4. Access
 - 5. Delayed Alarm
 - 6. Building Usage
 - 7. Converted Buildings
 - 8. Fire Prevention
 - 9. Fire Causes
 - 10. Problems
 - 11. Firefighting
 - 12. Communications
 - 13. Ceilings
 - 14. Ventilation
 - 15. Valuable Artifacts
 - 16. Defensive Attack
 - 17. Roof Failure
 - 18. Lessons Learned and Reinforced
 - 19. Churches of Frame Construction
 - 20. Wood Frame Churches with Lightweight Trusses
 - 21. Size-Up Factors for Houses of Worship
 - 22. Strategic Considerations for Fires in Houses of Worship
- e. Penal Institutions

1. Types of Institutions
 2. Emergency Operating Plan
 3. Fire Department Preplans
 4. Delayed Alarms
 5. Fires
 6. Riots
 7. Evacuation
 8. Unified Command
 9. Handling of EMS Calls
 10. Critical Incident Stress Debriefing
 11. Size-Up Factors for Penal Institutions
 12. Strategic Considerations for Fires in Penal Institutions
- f. Public Assembly Buildings
1. Combustible Furnishings
 2. Construction and Design
 3. Exits and Evacuation
 4. Evacuation
 5. Strategic Considerations
 6. Size-Up Factors for public Assembly Buildings
 7. Strategic Considerations for Fires in Public Assembly Buildings
- g. School Fires
1. Evacuation Plan
 2. Evacuation Problems
 3. Building Design
 4. Exits and Fire Doors
 5. Firefighting
 6. Laddering
 7. Preplanning
 8. Causes of School Fires
- h. School Violence
1. Developing an Emergency Operating Plan
 2. Interaction of Firefighters
 3. Police Procedures
 4. Interior of the School Building
 5. Active Shooter on School Grounds
 6. Police Front-Line Supervisors
 7. Fire Department and EMS Responsibilities
 8. Deployment of Fire Department Personnel
 9. School Personnel Responsibilities
 10. Northern Illinois University
 11. Incident Command System
 12. Size-Up Factors for School Fires and School Violence
 13. Strategic Considerations for Fires in Schools

I. **Unit Twelve**: Chapter 9: Commercial and Industrial

1. **Unit Objectives**: Upon successful completion of this unit, the student will be able to:
 - a. Understand the special occupancies discussed and the types of fires that may confront firefighters.
 - b. Identify pertinent characteristics of these occupancies.
 - c. Recognize the 13 points of size-up that pertain to these special occupancies.
 - d. Recognize the strategic considerations for these special occupancies.
 - e. Understand the incident management considerations of special occupancies.
 - f. Be able to identify the basic components needed in an operational guideline for high-rise fires.
 - g. Have a basic understanding of high-rise command systems.
 - h. Identify the specific components of a high-rise command system.

2. **Learning Activities**:
 - a. Classroom lecture/discussion
 - b. Reading assignments: Chapter 9, pages 420-493.
 - c. Audio-visual Aids: Instructors' Preference

3. **Unit Outline**:
 - a. Commercial Buildings and Warehouses
 1. Building Renovations
 2. Firefighting
 3. Sprinklers
 4. Fire Walls
 5. Rapid Fire Spread
 6. Blitz Attack
 7. Defensive Attack
 8. Water Supply
 9. Size-Up Factors for Commercial Buildings & Warehouses
 10. Strategic Considerations for Fires in Commercial Buildings and Warehouses
 - b. Strip Malls
 1. Construction
 2. Canopies
 3. Firefighting
 4. Rear Entry
 5. Renovations
 6. Ventilation
 7. Size-Up Factors for Strip Malls
 12. Strategic Considerations for Fires in Strip Malls
 - c. Enclosed Shopping Malls

1. Employee Training
 2. Types of Malls
 3. Parking Areas
 4. Magnet Stores
 5. Stores
 6. Response
 7. Occupants
 8. Resources
 9. Size-Up Factors for Enclosed Malls
 9. Strategic Considerations for Fires in Enclosed Malls
- d. Supermarkets
1. General Information
 2. Refrigeration
 3. Construction
 4. Storage Areas
 5. Rear Entry
 6. Life Safety
 7. Fire Considerations
 8. Problem Identification
 9. Storage Areas
 10. Ventilation Considerations
 11. Overhaul and Salvage
 12. Size-Up Factors for Supermarkets
 13. Strategic Considerations for Fires in Supermarkets
- e. Lumberyards
1. Piling of Lumber
 2. Diversified Products
 3. Initial Actions
 4. Spread of Fire
 5. Water
 6. Fully Enclosed Lumberyards
 7. Size-Up Factors for Lumberyards
 8. Strategic Considerations for Fires in Lumberyards
- f. High-Rise Buildings
1. High-Rise Considerations
 2. Defining a High-Rise Building
 3. Core Construction
 4. Knowledge of the Building and Its Systems
 5. Sprinklers and Standpipes
 6. Dedicated Water Supply
 7. High-Rise Stairways
 8. Stairwell Pressurization
 9. Communication Systems
 10. Computer Systems
 11. Floor Separations
 12. HVAC Systems

13. Operational Guideline
14. Building Engineer
15. Use of Elevators
16. Elevator Safety
17. Freight Elevator Usage
18. Water Supply
19. Firefighting Considerations
20. Fighting the Fire
21. Fire Spread
22. Wind Dangers
23. Breaking Windows for Ventilation
24. Tactics Used at Wind-Driven Fires
25. Time Factors
26. Staffing Hose-Lines for Extended Periods
27. Air Cylinders of Longer Duration
28. Remote Cascade
29. Life Safety
30. Search
31. High-Rise Command Structure
32. Command
33. Safety Officer
34. Command Post
35. Operations
36. Rapid Intervention Crews
37. Staging
38. Logistics
39. Base
40. Lobby Control
41. Elevator Control
42. Systems
43. Ground Support Unit
44. Stairwell Support
45. First-Aid Stations
46. Size-Up Factors for High-Rise Buildings
47. Strategic Considerations for Fires in High-Rise Buildings

J. **Unit Thirteen**: Chapter 10: Technical Operations

1. **Unit Objectives**: Upon successful completion of this unit, the student will be able to:
 - a. Discuss the initial concerns at a hazardous materials incident.
 - b. Set up initial exclusion zones at a suspected hazardous materials incident.
 - c. Identify the difference between evacuation and protecting in place.
 - d. Discuss types of storage tanks at tank farms and refineries.
 - e. Discuss fire extinguishment concerns at tank farms and refineries.

- f. Discuss boilover, slopover, and frothover at a burning storage tank.
- g. Discuss the weapons of terrorism.
- h. Discuss the actions of the first-arriving officer at a suspected terrorism event.
- i. Understand the stages of response at a suspected or confirmed terrorism event.
- j. Discuss strategic considerations if confronted with a dirty bomb incident.
- k. Describe the protection provided by a firefighter's personal protective gear at a suspected dirty bomb incident.
- l. Discuss radiation exposure considerations for firefighters at dirty bomb incidents.
- m. Discuss strategic considerations at an incident involving a clandestine drug lab.
- n. Discuss the problems associated with natural disasters.
- o. Discuss the strategic considerations needed for a natural disaster incident.

2. Learning Activities:

- a. Classroom lecture/discussion
- b. Reading assignments: Chapter 10, pages 494-563.
- c. Audio-visual Aids: Instructors' Preference

3. Unit Outline:

- a. Hazardous Materials and the Initial Responder
 - 1. Initial Concerns
 - 2. Hazardous Materials Indicators
 - 3. Hazardous Materials Scene Conditions
 - 4. Setting Up Zones
 - 5. Safety
 - 6. Incident Management System
 - 7. Evacuate or Protect in Place
 - 8. Decontamination
 - 9. Size-Up Factors for Hazardous Materials Incidents
 - 10. Strategic Considerations for Hazardous Materials Incidents
 - 11. Incident Management System Considerations/Solutions for an Offensive Attack
 - 12. Incident Management Systems Considerations/Solutions for a Defensive Attack and Nonintervention
- b. Tank Farm/Refinery Fires
 - 1. Facility Familiarization
 - 2. Storage Tanks
 - 3. Fire Extinguishment
 - 4. Water Supply
 - 5. Ground Fires
 - 6. Protecting Exposures

7. Boilover, Slopover, and Frothover
 8. Safety Officer
 9. Size-Up Factors for Tank Farm/Refinery Fires
 10. Strategic Considerations for Tank Farm/Refinery Fire Incidents
- c. Terrorism Incidents
1. Terrorism Incidents versus Hazardous Materials Incidents
 2. Weapons of Terrorism
 3. Dispatchers and Emergency Operators
 4. Actions of First-Arriving Fire Officer
 5. Identify the Type of Agent
 6. Scene Control
 7. Unified Command
 8. Interaction with Police
 9. Decontamination
 10. Personal Protection
 11. Stages of Response
 12. Response Concerns
 13. Size-Up Factors for Terrorism
 14. Strategic Considerations for Terrorism Incidents
- d. Dirty Bombs
1. Nuclear Bomb versus Dirty Bomb
 2. Radioactive Materials
 3. Bomb Construction
 4. Strategic Considerations
 5. On-Scene Considerations
 6. Needs Assessment
 7. Personal Protective Gear Protection
 8. Firefighters Exposed to Radiation
 9. Protecting the Injured and Exposed
 10. Cleanup of Radiation Sites
 11. Incident Command Organization
 12. Size-Up Factors for a Dirty Bomb Incident
- e. Clandestine Drug Labs
1. Methamphetamine
 2. Methamphetamine Production
 3. Cues that can Identify a Clandestine Drug Laboratory
 4. Planning the Tactical Operation
 5. Initial Entry Team
 6. Assessment
 7. Deactivation of the Laboratory
 8. Booby Traps
 9. Police Request for the Fire Department at a Drug Lab Seizure
 10. Fire Department Chief Officer's Role at a Clandestine Drug Lab

11. Hazardous Materials Unit
 12. Medical Response to a Clandestine Drug Lab
 13. Firefighters Encountering Clandestine Drug Labs
 14. Emergency Medical Responses
 15. Firefighters' Actions on Discovering a Clandestine Drug Lab
 16. Interior Signs of a Clandestine Lab
 17. Firefighting
 18. Clandestine Drug Lab Cleanup
 19. Size-Up Factors for a Clandestine Drug Lab
- f. Natural Disasters
1. Hurricanes
 2. Floods
 3. Earthquakes
 4. Wildland Fires
 5. Winter Storms
 6. Tornadoes
 7. Volcanic Eruptions
 8. Potential Problems
 9. Actions to Alleviate Problems
 10. Warnings of Disaster
 11. Planning for Natural Disasters
 12. Immediate Damage Assessment
 13. Conducting an Immediate Damage Assessment
 14. Standardized Damage Assessment Forms
 15. Communications at Natural Disasters
 16. Resource Assistance
 17. Incident Management Systems
 18. Size-Up Factors for Natural Disaster Incidents
 19. Strategic Considerations for Natural Disaster Incidents

K. **Unit Fourteen:** [Chapter 10 may be carried over into this session] Chapter 11:
After the Incident

1. Unit Objectives: Upon successful completion of this unit, the student will be able to:
 - a. Recognize the signs and symptoms of incident stress.
 - b. Recognize the benefit of both formal and informal critiques.
 - c. Understand how to perform a self-critique.
2. Learning Activities:
 - a. Classroom lecture/discussion
 - b. Reading assignments: Chapter 11, pages 564-573.
 - c. Audio-visual Aids: Instructors' Preference
3. Unit Outline:

- a. Incident Critiques
 - 1. Types of Critiques
 - 2. Individual Development
 - 3. Final Report
 - 4. Lessons Learned, Lessons Reinforced
- b. Critical Incident Stress
 - 1. Incident Commanders
 - 2. Debriefing
 - 3. Delayed Stress
 - 4. Taking Care of Our Own

J. **Units Fifteen and Sixteen:** Review and Final Examination

- 1. A comprehensive review and discussion before the final examination
- 2. Administer Final Examination; grade, return along with term papers and assign the final course grade

