National Fire Academy

N0312 – Command and Control of Incident Operations
Version: 5th Edition, 7th Printing, March 2019
Quarter:
ACE Credit: In the upper division baccalaureate, three semester hours in fire science or emergency management.
IACET Continuing Education Units: 3.4

Length of Course: 6 Days (34 hr., 20 min. contact hours, Sunday – Friday)
Prerequisite: Yes
Curriculum: Incident Management
Training Specialist: Richard Sexton
Instructor:
Instructor email/phone:
Classroom: J-
Meeting Time: 8 AM – 5 PM

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Course Description (Catalog)

N0312 – "Command and Control of Incident Operations." Is an intensive six-day educational opportunity designed specifically for the fire service officer. The course is part of the Volunteer Incentive Program (VIP), taught on campus at the NFA and through the NFA-Sponsored Off-Campus Program in the field.

During training, students study the Incident Command System (ICS) and proper fire command techniques for the control and extinguishment of fires ranging from small residential structures to multi-occupancy and commercial complexes. Topics include problem-solving and fire command; interagency and mutual aid; incident size-up, strategy and tactics; incident management and

strategic Command; building construction and fire behavior; and pre-incident preparation. Special emphasis is placed on firefighter safety and the development of decision-making skills through the use of classroom simulations.

Student Qualifications (Primary and Secondary Audience)

The primary target audience is people from smaller departments (volunteer, combination or paid) who may find themselves in positions of Command at emergency incidents. Students should be selected according to rank, with preference given to chief officers. Secondary audience members who may also benefit from training include people serving in an officer capacity and other firefighters.

Course Scope (Goal)

Course Objectives (Course Learning Outcomes – TLOs)

After successfully completing this course, you will be able to accomplish the following:

- Apply the ICS at emergency incident simulations.
- Determine strategies and identify appropriate tactical solutions for a variety of incident types.
- Use preincident information in incident scene decision-making.
- Manage incident operations to maximize personnel and scene safety.

Course Delivery Method

The National Fire Academy (NFA) offers specialized training courses and advanced management programs of national impact in an academic classroom environment on campus at the National Emergency Training Center (NETC) in Emmitsburg, Maryland and through their State, local, tribal, and US territories training partners. All course materials are designed for interactive classroom environments, in either paper notebook or electronic formats.

Course Schedule

The purpose of the course schedule is to give you, at a glance, the required preparation, activities, and evaluation components of your course.

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
MORNING	Unit 1: Introduction Unit 2: Incident Command System Review	Unit 3: Decision-Making Review Unit 4: Preincident Preparation	Unit 6: Interagency and Mutual Aid Unit 7: Tactical Company Operations	Simulation 3 Simulation 4	Simulation 6 Simulation 7	Simulation 9 Simulation 10
	Lunch	**Lunch**	**Lunch**	**Lunch**	**Lunch**	**Lunch**
AFTERNOON	Unit 2: Incident Command System Review (cont'd) Case Study: Homestead Road Gas Explosion	Unit 4: Preincident Preparation (cont'd) Unit 5: Building Construction and Fire Behavior Factors	Introduction to Simulations Simulation 1 Simulation 2	Simulation 4 (cont'd) Simulation 5	Simulation 7 (cont'd) Simulation 8	Simulation 10 (cont'd) Course Summary
	Supper	**Supper**	**Supper**	**Supper**	**Supper**	**Supper**
EVENING	Read Units 3, 4 and 5 Complete Activity 2.1	Read Units 6 and 7 **Simulation Materials/Questions for Day 3**	Read **Simulation Materials/Questions for Day 4**	Read **Simulation Materials/Questions for Day 5**	Read **Simulation Materials/Questions for Day 6**	

Course Resources (Instructional Materials)

In order to be fully prepared, obtain a copy of the required textbooks and other instructional materials prior to the first day of class.

Required Readings

The student must complete required readings during the course to be able to thoughtfully participate in discussions and activities.

None.

Suggested Reading/Resources

Suggested readings and resources are not evaluated, but may enhance the student's understanding, serve as additional sources for citation and promote discussion of course material.

None.

Required Resources (Course Textbook)

Student Manual.

Supplemental Resources (Supplemental Course Textbook)

None.

Grading Methodology (Evaluation Procedures)

A minimum, total score of 70 is required for successful completion of this course. The grade distribution for each student is weighted in the successful role play of 3 exercise simulations and represent 75% of the overall grade. A culmination of activities developed to provide the foundational knowledge needed to be successful in the exercise simulations equal 25% of the overall grade. The grades are assigned as follows:

Evaluation Method	Percent of Final Grade
ICS Functions Activity	5%
Fire Flow Calculations Activity	5%
Building Construction Case Study	5%
Fire Behavior Predictions Activity	5%
Quiz (Activity 6.1)	5%
Exercise Simulation 1	25%
Exercise Simulation 2	25%
Exercise Simulation 3	25%

Course Grading

Numerical Score	Letter Grade
100-90	A
89-80	B
79-70	C
69 or below	F

Application of Basic ICS Functions Activity: Ensures that students have the foundational knowledge to participate in the exercise simulations. This activity is pass/fail. Students who complete the group activity receive full credit of 5 points, students who fail to complete the activity receive no points. Students will demonstrate this foundational knowledge during the simulation exercises.

Fire Flow Calculations Activity: Ensures that students are familiar with fire flow calculation terminology and considerations. This activity is pass/fail. Students who complete the assignment worksheet will receive full credit of 5 points, students who fail to complete the assignments receive no points. Students will demonstrate this foundational knowledge during the simulation exercises.

Building Construction Case Study: Ensures that students are familiar with construction features that must be considered during an incident. This activity is designed to provide the knowledge to compensate for a lack of experience in this area. Since students cannot be faulted for a lack of experience, this activity is pass/fail. Students who complete the assignment worksheet will receive full credit of 5 points, students who fail to complete the assignments receive no points. Students will demonstrate this foundational knowledge during the simulation exercises.

Fire Behavior Predictions Activity: Ensures that students are familiar with basic fire behavior theory. This activity is designed to provide the knowledge to compensate for a lack of experience in this area. Since students cannot be faulted for a lack of experience, this activity is pass/fail. Students who complete the assignment worksheet will receive full credit of 5 points, students who fail to complete the assignments receive no points. Students will demonstrate this foundational knowledge during the simulation exercises.

Quiz (Activity 6.1): Ensures that students have the knowledge to assess (self-evaluate) their role and the role of their department/community's preparedness in emergency management. Since students cannot be faulted for the status of their own or their department/communities' risk status, this activity is pass/fail. Students who complete the quiz will receive full credit of 5 points, students who fail to complete the assignments receive no points. Students will demonstrate this foundational knowledge during the simulation exercises.

Simulation Exercises: Allow students to apply the knowledge and skills learned in the classroom through role play in a series of simulations. Eighteen simulations are available, reflecting a diversity of incident types and resource requirements. Instructor selection of the

simulations is based on student needs, experience and interest. The following rubric is used for each exercise:

Area	1 Point	3 Points	5 Points
Management: Manage position responsibilities in coordination with related position personnel.	Requires correction or guidance to perform 50% or more of position responsible tasks.	Performs position responsible tasks with 3 or less prompts from faculty. Requires at least 3 prompts from other students.	Performs position responsible tasks with 1 or less prompts from faculty and/or other students.
Communication: Receive information and provide appropriate briefings to perform position responsibilities.	Requires more than 3 faculty prompts to effectively receive and communicate directives.	Requires 3 or less faculty prompts to effectively receive and communicate directives. Requires 3 or less student/peer prompts to effectively receive and communicate directives.	Requires 1 or less prompt from faculty or peers to effectively receive and communicate directives.
Documentation: Complete position appropriate documentation.	Requires more than 3 faculty prompts to complete all position appropriate or required ICS/MCI forms.	Requires 3 or less faculty prompts to complete all position appropriate or required ICS/MCI forms accurately. Requires 3 or less student/peer prompts to complete all position appropriate or required ICS/MCI forms accurately.	Requires 1 or less prompt from faculty or peers to complete all position appropriate or required ICS/MCI forms accurately.
Decision Making: Demonstrate an effective decision-making process to perform position responsibilities.	Fails to logically defend all errors made in critical decision. OR Requires more than 3 faculty prompts to make effective decisions.	Requires 3 or less faculty prompts to make effective decisions. Requires 3 or less student/peer prompts to make effective decisions. Can logically defend all errors made in critical decisions.	Requires 1 or less faculty or student prompts to make effective decisions. Can logically defend any error made in critical decisions.

Area	1 Point	3 Points	5 Points
Accountability and Safety: Ensure the accountability and of all assigned personnel/resources.	Unsafe practices/activities are not identified and corrected. Personnel accountability is not maintained. Safety Officer is not assigned within first 3 responding resources.	Requires 3 or less faculty prompts to identify and correct unsafe practices/activities. Personnel accountability is maintained with prompts from the faculty or other personnel. Safety Officer is assigned within first 3 responding resources with prompts from the faculty or other personnel.	All unsafe practices/activities are identified and corrected immediately without prompt. Personnel accountability is maintained without prompt. Safety Officer is assigned within first 3 responding resources without prompt.
25 Total Points Possible			

EXAMINATION ADMINISTRATION PROCEDURES

Students will be given exams at the end of the class, and only the instructor will grade the exams. While the exams are being graded by the instructor, students will be asked to complete end-of-course evaluations.

Exams are to be completed individually and not as a group or a group activity, unless specifically directed within the instructor guide for the specific course. Students should use pencils to complete answer sheets if bubble sheets and a scoring key overlay are being used.

There should only be one answer for any given question marked by the student. A question with multiple answers is considered incorrect. Please mark number of incorrect answers on completed exam sheets, record score (percentage), and mark the appropriate letter grade.

Transfer the letter grades to the corresponding student name on the course roster.

If a student does not obtain a passing grade on the first attempt, the instructor will provide remediation[1] prior to a retest. Students who do no pass the first exam will be allowed to take one retest of a new exam before departing from the class. A second failure will result in a grade of "F" being recorded on the grade roster.

Once all exams have been graded, instructors should review the exam as a group.
In the event of unusual events (storm, fire response, family emergency) or early departure, the host agency or state representative may be asked to proctor the exam at a later date. The

instructor is responsible to notify the Training Specialist as soon as practical of the situation and name of person responsible for the exams and testing process.

Required Reading Assignments

Student completion of reading assignments will be done via evaluation of their class participation and will not be a separately graded activity.

Suggested Readings

Suggested readings are not evaluated, but may enhance the student's understanding and promote discussion of course material.

Course Outline

Unit 1: Introduction (Day 1)

Objectives

The students will:

1. Describe the course purpose, content, schedule and requirements.

2. Describe the course simulation process and benefits.

Unit 2: Incident Command System Review (Day 1)

Objectives

The students will:

1. Determine an appropriate Incident Command System (ICS) Operations Section organization for a fire situation.

2. Determine an appropriate ICS Operations Section organization for a multialarm incident.

Unit 3: Decision-Making Review (Day 2)

Objectives

The students will:

1. Understand the difference between classical and Naturalistic Decision-making.

2. Know how to determine whether classical or Naturalistic Decision-making is the appropriate decision-making model to use at a particular incident.

Unit 4: Preincident Preparation (Day 2)

Objectives

The students will:

1. Given a fire flow calculation form, determine the required fire flow for a structure.

2. Given a Resource Capability Matrix, assess a department's current resource capability.

3. Given a Quick Access Prefire Plan (QAP), identify and apply critical preplan information for target hazards.

4. Describe proper methods for incident scene communications.

Unit 5: Building Construction and Fire Behavior Factors (Day 2)

Objectives

The students will:

1. Identify the fire behavior characteristics of five building construction classifications.

2. Describe the causes and consequences of rollover, flashover and backdraft.

3. Given a specific structure and incident scenario, predict fire, heat and smoke travel.

Unit 6: Interagency and Mutual Aid (Day 3)

Objectives

The students will:

1. Describe the potential benefits of mutual-aid agreements for the department and community.

2. Identify key planning issues for mutual-aid and interagency operations.

3. Develop a list of organizations that could provide assistance to the fire department at a major emergency.

Unit 7: Tactical Company Operations (Day 3)

Objectives

The students will:

1. Identify truck, engine, squad/rescue, and Emergency Medical Services (EMS) tactical company functions and responsibilities.

2. Determine effective tactical company strategies and tactics at emergency incidents.

Simulation Modules

Introduction/Walk-Through

Objectives

The students will:

1. Identify the resources of the Liberty County Fire Department.

2. Describe the methodology used in performing simulations.

3. Given an incident scenario and a participant role, demonstrate effective strategic command practices and techniques during a group exercise.

Simulation A: Two-Story Dwelling

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to fires in single-family dwellings.

2. Apply the KSAs while performing a single-family dwelling fire simulation.

Simulation B: Sachs Truck Sales

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to fires in single-family dwellings.

2. Apply the KSAs while performing a single-family dwelling fire simulation.

Simulation C: Townhouse/Rowhouse

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to townhouses and rowhouses.

2. Apply the KSAs while performing a townhouse simulation.

Simulation D: Farm Complex

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to a farm complex.

2. Apply the KSAs while performing a farm complex simulation.

Simulation E: Grass/Brush Fire

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to grass/brush fires.

2. Apply the KSAs while performing a grass/brush fire simulation.

Simulation F: Small Shopping Center 1

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to small shopping centers.

2. Apply the KSAs while performing a small shopping center simulation.

Simulation G: Small Shopping Center 2 — Century Plaza

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to small shopping centers.
2. Apply the KSAs while performing a small shopping center simulation.

Simulation H: Restaurant

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to a restaurant.
2. Apply the KSAs while performing a restaurant simulation.

Simulation I: Grocery Store

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to grocery stores.
2. Apply the KSAs while performing a grocery store simulation.

Simulation J: Garden Apartment

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to garden apartments.
2. Apply the KSAs while performing a garden apartment simulation.

Simulation K: Small Hotel/Boarding House

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to a small hotel/boarding house.

2. Apply the KSAs while performing a boarding house simulation.

Simulation L: Church/School Complex

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to a church/school complex.

2. Apply the KSAs while performing a church/school complex simulation.

Simulation M: Lumberyard/Home Improvement Center

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to a lumberyard/home improvement center.

2. Apply the KSAs while performing a home improvement center simulation.

Simulation N: Multiple Casualty Incident

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to a multiple casualty incident (MCI).

2. Apply the KSAs while performing an MCI simulation.

Simulation O: Nursing Home

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to a nursing home.

2. Apply the KSAs while performing a nursing home simulation.

Simulation P: Chemical Storage/Distribution Facility

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to a chemical storage/distribution facility.

2. Apply the KSAs while performing a chemical storage/distribution facility simulation.

Simulation Q: Terrorism — Courthouse

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to a terrorism incident.

2. Apply the KSAs while performing a terrorism incident simulation.

Simulation R: Terrorism — Police Headquarters

Objectives

The students will:

1. Develop their knowledge, skills and abilities (KSAs) relating to a terrorism incident.

2. Apply the KSAs while performing a terrorism incident simulation.

Policies

Class Attendance and Cancellation Policy

Attendance

- You are required to attend all sessions of the course. If you do not, you may not receive a certificate.

- If you need to depart the training facility early and miss any portion of the course, you must make the request in writing to the sponsoring agency (e.g., State training director, etc.). The State training director may waive the attendance requirement in order to accommodate you with extraordinary circumstances as long as you complete all course requirements.

Course Failure

You can reapply for the failed course or any other NFA course and go through the random selection process. You don't have to successfully complete the failed course before attending another NFA course.

Student Code of Conduct Policy

Students, instructors and staff are expected to treat each other with respect at all times. Inappropriate behavior will not be tolerated.

Writing Expectations

Student writing will conform to the generally accepted academic standards for college papers. Papers will reflect the original work of the student and give appropriate credit through citations for ideas belonging to other authors, publications or organizations. Student written work should be free of grammatical and syntax errors, free of profanity or obscene language or ideas, and reflect critical thinking related to the course subject matter.

Citation and Reference Style

Attention Please: Students will follow the APA, Sixth Edition as the sole citation and reference style used in written work submitted as part of coursework to NFA. Assignments completed in a narrative essay, composition format, abstract, and discussion posts must follow the citation style cited in the APA, Sixth Edition.

Late Assignments

All assignments must be turned in by the established deadline. Late submissions could result in a 10 percent decrease in grade.

Disclaimer Statement

Course content may vary from the outline to meet the needs of this particular group.

Grading

Please review the following rubrics that explain how grades will be awarded.

Students who do not complete the entire course will be awarded an Incomplete (I) grade. In accordance with National Fire Academy academic policies, an Incomplete (I) grade must be removed by the end of the next semester following the course, or it automatically becomes a Failing (F) grade.

https://www.usfa.fema.gov/training/nfa/admissions/student_policies.html

Academic Honesty

Students are expected to exhibit exemplary ethical behavior and conduct as part of the NFA community and society as a whole. Acts of academic dishonesty including cheating, plagiarism, deliberate falsification, and other unethical behaviors will not be tolerated.

Students are expected to report academic misconduct when they witness a violation. All cases of academic misconduct shall be reported by the instructor to the State training director or host agency and to the NFA Training Specialist.

If a student is found to have engaged in misconduct and the allegations are upheld, the penalties may include, but are not limited to one or a combination of the following:

- expulsion,
- exclusion from future classes for a specified period; depending on the severity it could range from 1-10 years, and/or
- forfeiture of certificate for course(s) enrolled in at NETC.

Refer to NFA-specific Standard Operating Procedure 700.1 – *Academic Code of Conduct and Ethics* for more information.