FSCI 3720 - Forensic Fire and Explosion Investigation

Fall 2026 Syllabus, Section 01, CRN 42651,

Credit hours: 3

Instructor

Jeff Everly

Professional Qualifications:
Masters, Forensic Psychology, Argosy University
Bachelors, Technology & Management, University of Maryland
Associates, Fire Administration, Northern Virginia Community College
National Association of Fire Investigators (NAFI) Certified Fire & Explosion Investigator
Virginia Department of Fire Programs (VDFP) / National Fire Protection Association (NFPA) 1033 Certified Fire Investigator
Licensed Private Investigator – Delaware, Maryland and Virginia
Federal Bureau of Investigation (FBI) Certified Hazardous Devices/Bomb Technician [2001-2022]

Email: gceverly@ysu.edu

Preferred Contact Method: Email

Communication Expectations:

Email is the “official” means of communication for this course. Emails will typically be responded to within twenty-four (24) hours. All email communications between students and the University must be done using your Youngstown State University (YSU) email address. DON’T USE BLACKBOARD MESSAGING AS A COMMUNICATIONS MECHANISM! Messages in Blackboard will not receive responses.

In this course, instructions are provided and/or communications sent via email to promote smooth and effective facilitation of the course throughout the semester, inform students of changes and, where necessary, to take corrective actions. Students are expected to check their YSU email accounts at a minimum every two (2) days.

Course Description

3720. Forensic Fire and Explosion Investigation. Principles of science including fire chemistry, explosion physics, the application of forensics, and investigation of both fire and explosion scenes. Special emphasis on concepts of fire progression, cause and origin determinations, arson investigation, and bombings. Restrictions: Sophomore status or higher, or permission of forensic coordinator; it is urged that YSU campus students take FSCI 3714/L before this course. Prereq.: none. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Required	KIRK’S FIRE INVESTIGATION – 8th Edition, Pearson	DeHaan, John D.	9780134237923
Required	Tyler v Michigan 436 U.S. 499 (1978)	U.S. Supreme Court	
Required	Trial By Fire : New Yorker (2009)	David Grann	
Required	Report AL Solutions, Inc, New Cumberland, WV	U.S. Chemical and Hazard Investigation Board	
Required	Letters From An Arsonist : Washington City Paper (2007)	Dave Jamieson	
Required	Academic Honesty Tips	University of Rochester	

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Preface and Chapter 1 topics 1.1 thru 1.6 Chapter 11 topics : 11.1	Presentations: Why should I be learning about fire PP, Fire Problem in the US PP, Let's talk about arson PP, UL Lab 1 – There's Been A Fire	All due Saturday 29 Aug Academic Honesty Information & Assessment Academic Honesty Form Discussion: Introduce Yourself Scenario A
8/31	Michigan v Tyler	Presentation: Legal Concepts You Need To Know PP	All due Saturday, 5 Sep Syllabus/Tips for Success Information & Assessment Scenario B
9/7	Chapter 2 topic(s) 2.1 thru 2.8	Presentations: Basics of Fire PP, How Fires Start and Move PP, UL Lab 2 – Invest Academy	Due Saturday, 12 Sep Homework 1
9/14	Chapter 2 topic(s) 2.10 thru 2.11	Presentation: What Burns In a Fire PP	All due Saturday, 19 Sep Discussion – Flammable Liquids & Gases Research project topic submission & approval Scenario C
9/21	Chapter 2 topic(s) 2.9	Presentations: How Solids Burn PP, Ignition Sources PP, UL Lab 3 – Guided Investigation	Due Saturday 26 Sep Discussion – Combustible Solids
9/28	Chapter 4 all Chapter 5 topic(s) 5.1, 5.2, 5.4, 5.5 Chapter 7 topic(s) 7.6-7.8	Presentations: Electrical Fires PP, Vehicle Fires PP	
10/5	Chapter 6 all Chapter 7 topic(s) 7.1.1 thru 7.1.3, 7.4	Presentation: Fire Scene Examination Pt 1 PP	Due Saturday 10 Oct Scenario D Due next Wednesday Mid-Term Exam
10/12		Mid-Term Exam, Wednesday, Available from 0500 [5:00AM] to 2200 [10:00PM]	Due Wednesday, 14 Oct @ 2200 [10:00PM]
10/19	Chapter 11 topic(s) 11.2 thru 11.10	Presentation: Fire Scene Examination Pt 2 PP	Due Saturday, 24 Oct Homework 2
10/26		Presentations: Arsonists PP, Motives for Arson PP, Hunt for the Serial Arsonist video	All due Saturday, 31 Oct Discussion - Arson Cases Scenario E Homework 3
11/2	New Yorker Article : Trial by Fire	Presentations: Myths in Fire Investigations PP, Case Studies PP	Due Saturday, 7 Nov Homework 4
11/9	Chapter 3 topic(s) 3.1 thru 3.6 AL Solutions, Inc. Report	Presentations: Explosions PP, Explosives PP, Criminal Use of Explosives PP	All due Saturday, 14 Nov Homework 5 Research Project
11/16	Chapter 8 - all	Presentations: Bomber Characteristics, Traits & Motives PP, UNABomber Video	Due Saturday, 21 Nov Scenario F
11/23		Presentations: Faces of Violence PP, Accelerant K9s PP	Due Saturday, 28 Nov Homework 6
11/30		Presentations: Evidence in the Lab PP, Non-Arson Evidence PP	Due Saturday, 5 Dec Scenario G Due next Wednesday Final Exam
12/7		Final Exam, Wednesday, Available from 0500 [5:00AM] to 2200 [10:00PM]	Due Wednesday, 9 Dec @ 2200 [10:00PM]

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.