

# FIRE BEHAVIOR AND COMBUSTION

ESFO 1100

Fall Semester 2022: Block 1



## EMERGENCY SERVICES

College of Health and Public Services

### Class Information:

Fall Semester: Aug. 22 – Oct. 10, 2022

Delivery: Internet

Time: All Day

Room: CANVAS

No Class:

### Instructor:

Gary Noll

Faculty

CELL: 801-362-9116

Primary email: CANVAS Email

Office Hours: Schedule for appointment

### Course Description:

*Fire Behavior and Combustion*

Explores the theories and fundamentals of how and why fires start, spread and how they are controlled. Addresses the fire problem in America, background of research, and how to approach the study of fire. Provides an overview of various flames, smoldering, and spontaneous combustion.

### Books & Other Materials:

#### Optional Texts

Shackelford, R. (2009). *Fire behavior and combustion processes*. Clifton Park, NY: Delmar/Cengage.

American Psychological Association [APA]. (2020). *Publication manual of the American Psychological Association, 7<sup>th</sup> ed.* Washington, DC: APA

### Attention Students with Disabilities:

Students who need accommodations because of a disability may contact the UVU Accessibility Services Department (ASD), located on the Orem Campus in LC 312. To schedule an appointment or to speak with a counselor, call the ASD office at 801-863-8747.

### Equal Opportunity Statement:

Utah Valley University is committed to the concept of equal opportunity, without regard to race, color, disability, religion, age, sex, national origin, or other legally impermissible factors.

### Reading Assignments:

The student is responsible for knowing and understanding the information of the reading assignments. The student should read and be familiar with each chapter in the order they are found in the book prior to creating his or her posts in the “discussions” online. All course examinations will be based on the text content and supplemental materials provided by the instructor. The student is responsible for being acquainted with all of the course materials.

### Discussion Questions:

The writing performed by each student must be produced according to the Publication Manual of the American Psychological Association, 7th ed. (APA, 2020).

There are discussion questions for each learning module that need to be addressed. The discussion questions will be part of a student’s “participation points which may add up to twenty (20) total points. Students will be presented with five (5) questions per module. The student needs to choose **three (3)** of the five questions to

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answer. **Two-thirds** of the points possible (15) will be given for the **quality and completeness** of the student's response to the questions. Each student is then encouraged to respond to other students' postings, either by adding information not found in the text (meaning from internet sources, other texts, experience, etc) or by collegial conversation/questions. The balance of the points (5 or more) will be given for the degree with which the student dialogs with other students in each section. **The instructor will make a judgment about the value of such exchanges because some topics are easier to dialog than others.** The student is encouraged to engage one another in a respectful and collegial manner.

**In order to help you stay on track during the semester, discussion postings will have deadlines to meet; pay attention to those deadlines.** Please do not fall behind in your discussion postings! Because we do not meet in a classroom, the opportunity to interact with one another comes only from the discussion board. Not staying engaged and current on our postings denies everyone the opportunity to receive the maximum number of points possible.

### Late Work:

Because this is a BLCOK course, the intensity of this course is increased. Assignments, readings, quizzes, and postings are all due by the respective due dates. Late work is not allowed, nor should it be requested or negotiated...once a lesson ends, no work is accepted. Any late work, (yes, even a minute or less) will be given a ZERO. **The exceptions to the late rule (excluding discussion participation) are family tragedies, hospitalizations, and no-notice military/task-force deployments.** In that case, the instructor will work with the student and academic advisor on a one-on-one basis.

Don't let your education be an afterthought. Don't procrastinate.

Also, missing a discussion posting will end in a score of zero. If you wish to maintain a record of informative/interesting posts/answers, make sure to cut and paste them into a Word document for keeping.

### Supplemental Material:

In order to provide both breadth and depth to your learning experience, there are supplemental materials in the form of PowerPoint presentations and web video's contained within each learning module. Please use these materials to your full advantage. **Not all of the material you will be tested on comes from the textbook.**

### Course Work Submission:

All final papers and assignments are to be submitted electronically through the assignment drop box in Canvas. **Do not turn in a paper copy!** The instructor intends to use electronic editing tools to make comments, grade, and provide feedback to the student. Therefore, only documents submitted in **Microsoft Word** will be accepted. If your paper is not in Microsoft Word and I have to return it, the clock still runs on it for submission. For the paper to be on time, it must be submitted in Microsoft Word by 11:59 PM the date it is due. **No papers will be accepted after 11:59 pm, October 10, 2022.** Your paper is required to be in APA (7<sup>th</sup> ed.) formatting. If you are unfamiliar with this style of writing, I highly suggest using all available resources in order to receive the best grade possible on your paper. Again, NO LATE work is accepted. Please work ahead!

### Academic Integrity:

No academic dishonesty will be tolerated in this course. Academic dishonesty includes, but is not limited to cheating and plagiarism as defined in the Utah Valley University Student Rights & Responsibilities Code, accessible online at: <https://www.uvu.edu/catalog/2018-19/policies-requirements/student-rights-and-responsibilities.html>

### Student Assistance Sites:

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On-Line Writing Center - <https://www.uvu.edu/writingcenter/>

On-Line Math Lab - <http://www.uvu.edu/mathlab/>

On-Line Academic Tutoring - <https://www.uvu.edu/academictutoring/>

Student Health Services - <http://www.uvu.edu/studenthealth/>

### **The Learning Strategies Support Center:**

“The Learning Strategies Support Center assists students in developing increased self-awareness of their learning challenges, and utilizing resources to create and implement a self-improvement plan to become active and independent learners and to achieve academic success” Contact the Learning Strategies Support Center at: <http://www.uvu.edu/learningstrategies/> [online] or Pat Nelson, LA 030G, Telephone: 801-863-7418.

### **Course Examinations:**

It is essential to any learning experience that acquired knowledge, skills, and abilities be evaluated to verify and measure the degree to which learning has occurred. In this course, the students will take one written examination per chapter providing them with an opportunity to demonstrate their knowledge and understanding of the course content. The examination may include test-items formatted in the following ways: true/false, multiple-choice, matching, fill-in-the-blank, short answer, and short essay. **Each section quiz will have deadlines to meet. Pay attention to those deadlines.** Although the quizzes may still be visible during the entire semester, you will not be able to gain access to them after the deadline. A missed quiz will receive a score of zero. The student should prepare himself or herself to take a comprehensive final examination which will be available for two-weeks during the twelfth and thirteenth weeks of the semester. The number of items answered correctly will produce the score that will factor-in toward the student’s final grade for the course. Examinations will be proctored by the instructor electronically through Canvas.

### **Course Schedule**

An online course is intended to create a cohort of students to work together without having to meet physically in the same place at the same time. So as far as that is concerned, there is some added flexibility with an online course that a live course or tele-net course does not offer. This fire behavior and combustion course has been designed around the 10 chapter text. Roughly speaking, that means that unit completion, with each of their online discussions and assignments should be completed weekly. With a 7week semester, this allows for 10 unit discussions, chapter quizzes, a research paper, and the final exam to all be completed within the scheduled semester. **Do Not Get Behind!** The only gauge of your participation the instructor has is your activity on the Quizzes and Discussions. Each student is expected to create their own posts, but also respond to, pose questions, extend, or otherwise appropriately interact with his or her cohort.

### **Capstone Project (research paper):**

Using the textbook, the Internet, as well as professional journals or articles and other academically recognized sources, research a fire that has occurred in the United States and write a **5 page (not including cover and reference pages), APA formatted paper** about the following:

- Give a history of the fire (location, impact, # of alarms)
- What was the fire's cause?
- What fire behavior dynamics were noted (high heat, transfer, spread)?
- What actions were taken by the fire companies that responded?
- What (if any) were the major failures?
- What became of the fire such as the development of NFPA Guidelines, OSHA Regulations, State & Federal Laws, or Building Code?

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### Grading:

<b>Participation</b>	240	<b>A</b>	95 – 100%	<b>C</b>	74 – 76%
<b>Ch. Quizzes</b>	100	<b>A-</b>	90 – 94%	<b>C-</b>	70 – 73%
<b>Final Exam</b>	300	<b>B+</b>	87 – 89%	<b>D+</b>	67 – 69%
<b>Writing Assignment</b>	400	<b>B</b>	84 – 86%	<b>D</b>	64 – 66%
<b>Extra Credit</b>	**	<b>B-</b>	80 – 83%	<b>D-</b>	60 – 63%
		<b>C+</b>	77 – 79%	<b>E</b>	≤ 59%
<b>Total points: 1040</b>					

**Extra Credit:** There is NO EXTRA CREDIT given in this course. Please don't ask for it, because it will not be provided.

### ***Disclaimer:***

*While the curriculum and materials used in this course are approved by Emergency Services of Utah Valley University, the answers to questions, examples given, opinions and illustrations used by the instructor to support the learning process are not necessarily the opinion of Utah Valley University, its administration, faculty, staff, or any other agent of the institution. All such expressions are based on the knowledge, experience, and education of the instructor and are intended to provide added value to the course materials for the general benefit of the students.*