

FT 205 -Fire Behavior and Combustion

Spring 2015 Section # 1102 (3) units course work

West Los Angeles College - Fire Technology Program-

SYLLABUS

This course meets Mondays and Wednesdays in General classroom 420 or in classroom reassigned after the first meeting day at 0935 to 1100 hours. Students are expected to attend every class session, to arrive on time and stay throughout the class period. Students may be dropped from class for excessive tardiness, or for failure to attend class during the entire first week of the class or if the total number of absences exceeds twice the number of hours the class meets per week. On-line students are required to enter and complete assignments, as per the schedule of the course modules.

Course Description –

This course covers the theory and fundamentals of how and why fires start, spread and are controlled; Included in this class is an in-depth study of fire chemistry, physics and the fire characteristics of materials; extinguishing agents and a variety of fire control techniques.

Instructor:

Antoine McKnight, Battalion Chief, LAFD

Office: GC 380 B

Phone: Office: 310 287-4231, Cell: 951 903-8461

e-mail address: chiefmck@gmail.com

The instructor is available to answer questions prior to class and after class on Mondays and Wednesdays. However, you need to make an appointment to make sure he is available. His office hours are Mondays and Wednesday 0700 hours to 0800 hours or 1100-1200. Call or send e-mail to schedule an appointment.

Required textbook: Principles of Fire Behavior & Combustion- Fourth Edition, Richard G Gann, Raymond Friedman - Jones & Bartlett Publishers, 2015 ISBN: 978-0-7637-5717-5

Available at the college bookstore

Student Learning Outcomes:

1. Identify physical properties of the three states of matter.
2. Categorize the components of the fire process.
3. Recall the physical and chemical properties of fire.
4. Describe and the process of burning to a confined structure fire.
5. Define and use basic terms and concepts associated with the chemistry and dynamics of fire.
6. Describe the dynamics of fire when confined and un-confined.
7. Discuss various materials and their relationship to fires as fuel loads.
8. Demonstrate knowledge of the characteristics of water as a fire suppression agent.
9. Articulate other extinguishing suppression agents and strategies. Include in this discussion a comparison of other methods and techniques of fire extinguishments.

Assessment of Student Learning Outcomes

Students will be given short answer essay questions, fill-in questions, and a series of multi-choice questions. Students will make oral presentations on research topics. In addition, term papers are required with topics assigned by the instructor. Students will describe the four phases of fire with a description of the fire behavior occurring in each stage. Include an explanation of the three fire events (fire rollover, flashover, back draft) with the expected consequences of each event. Students will discuss in class all aspects of flammable solids, liquids and gases and explain the fire behavior and resulting problems that might be expected to occur in each state. Students will be required to give a

5 to 10 minute class presentation on the upper and lower limits of the flammability of gases. Students will understand and explain the difference between atoms, molecules and ions. Included will be a description of their flammability, and reactivity based upon their molecular structure. Students will identify five hazardous materials, explaining their safety hazards they present to fire fighters. Students will identify and explain the various five classifications of fire and the methods used to extinguish each of the five classifications.

Students in on-line classes will present their presentation on line at the time agreed upon with the instructor.

All West Los Angeles College Policies and regulations are strictly adhered. A copy of these policies can be found in the course schedule, in the College Library and on-line as well. The goals and objectives for the course as well as the course content has been approved State-wide for fire fighters by the California State College Chancellor's and the Office the California State Fire Marshal as well as the National Fire Higher Education Committee.

EXERCISES: All exercises and assignments for this class can be completed on line. There are 14 quiz/exercises with 10 multiple-choice questions for each chapter of the book. You will find the quiz in Etudes portal on the left hand side under assignments, tests and surveys, answer all the questions. Complete the first 7 exercises before attempting the mid-term examination. The mid-term will have 50 randomly selected questions from the information found in the first 7 chapters of the textbook. It is recommended that you print out the questions then answer them off-line. After answering them, paste them back into the exercise section and submit them. Each question is worth one point for a max of 10 pts per chapter.

Total points Quiz/exercises = 140 pts.

Mid-term: 50 pts

Final Exam: 100 pts.

Written Assignments: 125 pts (5 assignments @ 25 pts each)

Student Surveys: 25 pts

The Mid-Term will open on March 2 @ 0800 hours. The Final exam will open June 1 @ 0800 hours and remain open until June 7, 2015.

In addition to the multiple choice exercises there are five written assignments that must be completed as per the schedule. You find them under Discussion and Private Messages on etudes. Each question must be answered according to the date schedule. They are worth 25 points each for a total of 125 points. The instructor will grade each written assignment and return your grade with comments. Be as concise as possible; however, make sure you completely answer the question. Pay attention to the time schedule.

GRADING:

Grading Policy for this course:

415 to 402 points = A

401 to 332 points = B

331 to 290 points = C

289 to 249 points = D

248 and below = F

Academic dishonesty policy*: The syllabi should reference the LACCD student code of conduct as it relates to student dishonesty (Board Rule 9803.28) as follows: “Violations of academic integrity of any type by a student provides grounds for disciplinary action by the instructor or college. Violations of Academic Integrity include, but are not limited to, the following actions: cheating on an exam, plagiarism, working together on an assignment, paper or project when the instructor has specifically stated students should not do so, submitting the same term paper to more than one instructor, or allowing another individual to assume one’s identity for the purpose of enhancing one’s grade. For more information on the Standards of Student Conduct refer to the college catalog available in hardcopy and online at www.lattc.edu.”

Disability Support Services (DSS) Accommodation Statement* “Students with disabilities who need any assistance or accommodations should contact the instructor”. Students should also contact the Disabled Student Programs & Services (DSPS) center located in SSB 320 or call 310-287-4420.” dsps@wlac.edu

Change in Policy on W’s 3 W’s: Last year we added wording about receiving a “W.” “W’s” now count toward attempts at any one course. The last date to drop without a “W” in person is February 20, 2015, or by web May 8, 2015, TO DROP WITH a “W”.