SYLLABUS

DATE OF LAST REVIEW : 02/2013

CIP CODE: 43.0205, 43.0202, 43.0203

SEMESTER: Departmental Syllabus

COURSE TITLE: Fire Fighting Tactics And Strategy

COURSE NUMBER: FRSC-0111

CREDIT HOURS: 3

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: Departmental Syllabus

EMAIL: KCKCC issued email accounts are the official means for electronically communicating with our students.

PREREQUISITE(S): None

REQUIRED TEXT AND MATERIALS:
Please check with the KCKCC bookstore, http://www.kckccbookstorecom/, for the required texts for your particular class.

COURSE DESCRIPTION:
Efficient and effective utilization of manpower, equipment and apparatus are studied in this course. Emphasis is placed on preplanning, fire ground organization problem solving related to fire ground decision making, and attack tactics and strategy.

METHOD OF INSTRUCTION:
A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:
The course outline is indicated below and is subject to change as course development dictates.
I. Fire Behavior
   A. Combustion
   B. Heat
   C. Determining flashover Time
   D. Flashover
   E. Backdraft

II. The Mechanisms of Fire Extinguishment
   A. Water Flow and Form
   B. Fog: Theory and Practice
   C. Critical Rate for Each Fire
   D. Steam Extinguishment
   E. Solid and Straight Streams
   F. Disadvantages of Fog
   G. When Not to Use Water
   H. Firefighting Foams
   I. Other Water Additives
   J. Fire-Extinguishing chemicals

III. The Development of firefighting
   A. Expansion of Ladder Company functions
   B. Staffing a company
   C. Staffing Trials
   D. Personnel on First Alarm
   E. Establishment of Rescue Companies
   F. Salvage
   G. Influence on the fire Service by the Insurance Industry
   H. Progress in firefighting
   I. European Methods

IV. Firefighting Strategies
   A. Personnel Requirements
   B. Apparatus Response time
   C. Need for communications
   D. Chain of command at Fires
   E. Establishment of a command Post
   F. Span of Control
   G. Incident command System

V. Firefighting Tactics
   A. Tactical considerations
   B. Life Hazard
   C. Location of the Fire
   D. Extension Probability
   E. Type of Fire
   F. Size of the fire
G. Analysis of the Fire Situation

VI. The Action Plan—working at a Fire
   A. Finding the Fire
   B. Rescue
   C. Search
   D. Entry
   E. Ventilation
   F. Protection of Exposures
   G. Safety
   H. Communication
   I. Call for Additional Help
   J. Extinguishment
   K. Salvage
   L. Cooperation of Other Agencies
   M. Overhauling

VII. Fire Ground Control and Coordination
   A. Stress Situations
   B. Coordination
   C. Application of the Tactics

VIII. Ladder Operations
   A. Stress Situations
   B. Coordination
   C. Smoke Inhalation
   D. Electrocution
   E. Safety and Building Collapse
   F. Safety Aids
   G. Work on Peaked Roofs
   H. Use of Safety Belts
   I. Laddering Damaged Stairs
   J. Rescue Carry
   K. Smoke—A High Hazard
   L. Heat Hazard and Clothing
   M. Clothing Limitations and Problems
   N. Importance of Visibility
   O. Protection of the Head and the Extremities
   P. Electrical Hazards
   Q. Handling Live Wires
   R. Secondary Injuries
   S. Getting Lost
   T. Critical Incident Stress

IX. Engine Operations
   A. Vertical Spread of Heat and Smoke
B. Clues Given by a Building’s Age
C. Structural Failure
D. Building Collapse
E. Mill Construction
F. Collapse from Water

X. Sprinkler Operations
   A. Checking the Supply
   B. Sprinkler Flow
   C. Automatic Wet-Pipe System
   D. Automatic Dry-Pipe System
   E. Deluge Systems
   F. Non-Automatic Systems

XI. Ladder Company Operations
    A. Some common Mistakes
    B. Ladder Company Positioning
    C. Necessity of Assigning Tools
    D. Use of Ground Ladders
    E. Need for Scaling Ladders

XII. Engine Company Operations
     A. Hydrants
     B. Tandem Pumping
     C. Hydrant-to-Pumper Layouts
     D. Hose Operations
     E. Large-Diameter Hose
     F. Hydrant Selection
     G. Lines Taken from a Pumper
     H. Restricted Inlet Flow
     I. Delivering the Water
     J. Interior Firefighting
     K. Exterior Attack

XIII. Pre-Fire Planning
      A. Post-fire Analysis
      B. A Questionnaire Guide
      C. Evaluation Standards

XIV. Major Fires
     A. Command Structure
     B. Staging Area
     C. Lack of Experience
     D. Need for Brand Patrols
     E. Learning from the Past
     F. Holding Actions
G. Fire Officials of Disaster Area
H. Mutual-Aid Providers

XV. The Everyday Fire
A. Plastics
B. Oil burners
C. Chimney fires
D. Basement Fires in Dwellings
E. Attic Fires
F. Mercantile Fires
G. Taxpayer Fires
H. Multiple-Dwelling Fires
I. Garden Apartments
J. Factory Fires

XVI. Special-Problem Fires
A. High-rise Buildings
B. Electrical Fires
C. Flammable-Liquid Fires
D. Pyrophoric Metals
E. Hazardous Materials
F. Chemical Fires
G. Radioactive Materials
H. Aircraft Fires
I. Fires in Places of Assembly
J. Fires in Places of Worship
K. School Fires
L. Motor Vehicle Fires
M. Rapid Transit Fires
N. Freight Train Fires
O. Ship Fires
P. Pier Fires
Q. Rural Fires
R. Fires in Hospitals and Nursing Homes
S. Fires in Shopping Centers
T. Fires in Enclosed Malls
U. Lumber and Other Outdoor Storage Fires

EXPECTED LEARNER OUTCOMES:
A. The learner will be able to explain fire behavior.
B. The learner will explain the mechanisms of fire extinguishment.
C. The learner will identify the history of the development of firefighting tactics.
D. The learner will be able to explain firefighting strategies.
E. The learner will be able to explain firefighting tactics.
F. The learner will be able to develop an action plan for a working fire.
G. The learner will be able to explain fire ground control and coordination efforts.
H. The learner will be able to explain ladder operations.
I. The learner will be able to explain engine company operations.
J. The learner will be able to develop a pre-fire plan.
K. The learner will be able to distinguish between major fires and every day fires.
L. The learner will be able to identify special-problem fires.

COURSE COMPETENCIES:
The course content may vary, however, it may include such objectives as:

The learner will be able to explain fire behavior.

1. The student will be able to explain fire combustion.
2. The student will be able to explain fire dynamics.
3. The student will be able to explain flashover and backdraft conditions.

The learner will explain the mechanisms of fire extinguishment.

4. The student will be able to explain water flow and its proper use.
5. The student will be able to explain the proper use of fog patterns and steam to extinguish fires.
6. The student will explain the various support activities.
7. The student demonstrate how to use scientific principles in fighting fires
8. The student will be able to distinguish between straight and fog streams.
9. The student will be able to explain the use of water additives to extinguish fire.

The learner will identify the history of the development of firefighting tactics.

10. The student will explain the various functions of the ladder company.
11. The student will be able to identify the personnel needed on a first alarm.
12. The student will develop an adequate firefighting force for a given situation
13. The student will be able to identify the influence the insurance industry has on fire fighting.

The learner will be able to explain firefighting strategies.

14. The student will be able to determine the proper personnel requirements for response.
15. The student will identify the proper time for apparatus to respond to emergencies.
16. The student will draw a fire preplan for a given situation
17. The student will explain the role of the Incident Command System
18. The student will explain the duties of the safety officer on the fire ground
19. The student will explain the need for salvage operations

The learner will be able to explain firefighting tactics.

20. The student will be able to identify tactical considerations.
21. The student will be able to identify various hazards to life.
22. The student will be able to identify the size of fire and probability of extension.

The learner will be able to develop an action plan for a working fire.

23. The student will be able to explain search and rescue operations.
24. The student will be able to explain ventilation and fire suppression.
25. The student will explain how to manage water during a fire emergency.
26. The student will explain the mechanical operation of a fire hydrant.
27. The student will outline the requirements of a drafting operation.
28. The student demonstrate how to use size-up for a given fire emergency.
29. The student will demonstrate how to remove victims from a burning building.
30. The student will explain communications during emergency situations.

The learner will be able to explain fire ground control and coordination efforts.
31. The student will be able to identify stress situations.
32. The student will be able to explain the application of fire ground tactics.

The learner will be able to explain ladder operations.
33. The student will be able to explain various fire ground hazards.
34. The student will be able to identify stress related issues.
35. The student will be able to identify equipment related hazards.

The learner will be able to explain engine company operations.
36. The student will demonstrate how to connect to a hydrant.
37. The student will explain an understanding of pump operations.

The learner will be able to develop a pre-fire plan.
38. The student will be able to explain the importance of a preplan.
39. The student will be able to explain the importance of post fire analysis.

The learner will be able to distinguish between major fires and every day fires.
40. The student will be able to identify the command structure in major fires.
41. The student will be able to identify mutual aid providers in major fires.

The learner will be able to identify special-problem fires.
42. The student will be able to identify fires that present special problems.

ASSESSMENT OF LEARNER OUTCOMES:
Assessment methods may include, but are not limited to, the following: Homework, Assignments, Quizzes, Class Participation, Chapter Tests, and Final Exam. The grading scale and the process for calculating the course grades are to be determined by the individual instructors. This information will be included in each instructor’s syllabus.

SPECIAL NOTES:
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff.
that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college’s policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact The Director of Academic Resource Center, in Rm. 3354 or call at: 288-7670.