SYLLABUS

DATE OF LAST REVIEW: 02/2013

CIP CODE: 43.0205, 43.0202, 43.0203

SEMESTER: Departmental Syllabus

COURSE TITLE: Fire Service Computers and Intelligent Machines

COURSE NUMBER: FRSC-0220

CREDIT HOURS: 3

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: 913-334-1100

PREREQUISITE(S) None

REQUIRED TEXT AND MATERIALS:
Please see bookstore for current textbook(s) and other required material.

DESCRIPTION OF COURSE:
An introduction to computer applications in the fire service field. Fire Service Computers covers the technology and theory behind the use of robots in the fire service. This course is of particular value to the fire service manager.

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:
1. Overview of the basic elements of data processing
2. A review of computer equipment
3. An overview of the computers will help in the decision process
4. An overview of how artificial intelligence can help in fire productivity and safety
5. An introduction to artificial intelligence, intelligent machines as they relate to the fire service
6. An analysis of computers and fire planning
7. An analysis of computers and fire administration
8. An analysis of computers and emergency operations
9. An analysis of computers and emergency operations
10. An overview of current programs available for the fire service
11. Representation for computer problems of the fire service
12. Choosing the search field
13. Problem solving methods and computers
   A. Background
   B. Formal approaches
   C. Informal approaches
   D. Combined approaches
14. Perception and perceptual understanding systems
15. Robots and the fire service
16. The fire service frontier and applications for computers and robots
17. Use of artificial intelligence in fire service operations
18. An overview of the management functions related to data processing

EXPECTED LEARNER OUTCOMES
1. The student will be able to use specific software
2. The student will be able to explain computer hardware
3. The student will be able to construct a narrative in a specific format
4. The student will be able to use Windows format

COURSE COMPETENCIES:
1. The student will demonstrate an understanding of topics and technology in the field of computers and intelligent machines as they relate to the fire service.
2. The student will demonstrate the technical processes in making decisions with the use of computers.
3. The student will explain the procedures, methods, and processes which can be used in the problem solving process.
4. The student will discuss ways which machines can improve fire service productivity and safety.
5. The student will identify a fire service need, through the use of analysis of organizational needs, and then develop an adequate computer solution to the problem.
6. The student will explain computer hardware
7. The student will explain computer software.
8. The student will explain data files.
9. The student will explain word processing.
10. The student will explain how to use a spreadsheet.
11. The student will demonstrate how to use a computer for training.
12. The student will demonstrate how to use a computer for fire investigation.
13. The student will demonstrate how to use the computer for management.
14. The student will explain how to use the computer for fire prevention.
15. The student will explain how to use the computer for fire planning.
16. The student will demonstrate how to use a computer for fire service budgeting.
17. The student will demonstrate how to use a computer for fire hydrant maintenance.
18. The student will explain how to use robots in the fire service.
19. The student will outline how to select hardware.
20. The student will outline how to select software.
21. The student will discuss vehicle maintenance programs.
22. The student will discuss how to use a computer for inspections.
23. The student will explain how to use a computer for fire education.
24. The student will outline how to use a computer for hose inventory.
25. The student will explain how to use a computer for management projections.
26. The student will demonstrate how to use a computer for homeland security.
27. The student will explain how to use a computer to develop a fire department history.
28. The student will explain how to use a computer for water resources.
29. The student will explain future operations for computers in the fire service.
30. The student will develop a computer based accountability chart.
31. The student will explain how to use a computer for terrorism prevention.

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.

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