COURSE TITLE: Hazardous Materials Map & Terrain Analysis
COURSE NUMBER: HZMT-0115
CREDIT HOURS: 2
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.

COURSE DESCRIPTION:
With hazardous materials stored, transported, used and produced throughout the country, it has become increasingly necessary to rely on maps to supply information to Haz-Mat elements, and to help resolve problems caused by emergencies in remote areas of the United States. Equipment, personnel and materials must be transported and phased into a Haz-Mat operation at the proper time and place. Maps are one tool which are used to perform these tasks.

The second part of the course deals with the skills required to analyze the local terrain and make sound command decisions. Topics are covered which improve the ability to determine local terrain conditions and potential problems when dealing or planning for a chemical release or spill.

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:
A. Unit 1 Introduction to Terrain and Map Analysis
B. Unit 2 Topographical Maps
C. Unit 3 Aerial Photography
D. Unit 4 Hazardous Materials and the Environment
E. Unit 5 Site Control
F. Unit 6 Coordinate Determination
G. Unit 7 Map Profiles
H. Unit 8 Map Calculations
I. Unit 9 Command Post Exercise
J. Unit 10 Map Care
K. Unit 11 The Compass and Its Uses (Part I)
L. Unit 11 The Compass and Its Uses (Part II)
M. Unit 12 Estimating and Measuring Distances
N. Unit 13 Map Exercise One
O. Unit 14 Map Exercise Two
P. Review and Summary of Training

EXPECTED LEARNER OUTCOMES:
1. Ability to read a topographical map
2. Ability to use a compass
3. Ability to use a GPS unit
4. Able to convert coordinates from a map
5. Able to use an aerial photograph
6. Able to follow a course when provided a compass
7. Able to determine the location of your position on a map
8. Able to draw a cross section of a set of coordinates
9. Able to determine longitude and latitude
10. Able to determine the hazardous zones for a chemical release

COURSE COMPETENCIES:
To develop the analytical and critical thinking skills of the student when using maps and on-site terrain analysis for planning and response to chemical incidents:

1. Student should be able to read a three-dimensional map and aerial photograph.
2. Student should be able to analyze the local terrain conditions and make accurate predictions about how chemicals will respond to the environment.
3. Student should be able to communicate about local conditions based on map analysis.
4. Student should be able to make calculations based on local conditions as to the movement of chemicals if released into the environment.
5. Student should be able to present graphic drawings of the local area and show the results and predictions of chemicals when released or planning for a release into the environment.
6. Student will be able to assist the Incident Commander in establishing site control for potential and actual chemical emergencies.
7. The student will demonstrate the use of a compass
8. The student will demonstrate the use of a topographical map
9. The student will demonstrate how to read an aerial photograph
10. The student will demonstrate how to calculate a declination constant for a given map
11. The student will demonstrate how to make an annotation to a published map
12. The student will demonstrate how to make a map transparency
13. The student will calculate distances utilizing a given map
14. The student will discuss map care
15. The student will discuss how to purchase various maps
16. The student will demonstrate how to field check a topographical map
17. The student will demonstrate how to verify their position using a map and compass
18. The student will demonstrate how to use a Global Positioning Unit
19. The student will discuss how to repair maps
20. The student will demonstrate how to prepare a map for adverse weather.

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 the Academic Resource Center at (913) 288-7670 V/TDD.