

**NEOSHO COUNTY COMMUNITY COLLEGE  
MASTER COURSE SYLLABUS**

**COURSE IDENTIFICATION**

Course Code/Number: AERO 113

Course Title: Aerospace Safety

Division:  Applied Science (AS)  Liberal Arts (LA)  Workforce Development (WD)  
 Health Care (HC)  Lifetime Learning (LL)  Nursing  Developmental

Credit Hour(s): One (1)

Effective Date: Fall 2013

Assessment Goal Per Outcome: 80%

**COURSE DESCRIPTION**

This course is worth 1 hour of college credit. It provides an overview of OSHA regulations, information on safety tools, equipment, and safe procedures, hazardous waste, first aid and cardiopulmonary resuscitation, and blood borne pathogens.

**MINIMUM REQUIREMENTS/PREREQUISITES AND/OR COREQUISITES**

High school diploma or GED or ability to benefit

**TEXTS**

\* The official list of textbooks and materials for this course is found on *myNeosho*.

<http://www.neosho.edu/ProspectiveStudents/Registration/CourseSyllabi.aspx>

**GENERAL EDUCATION OUTCOMES**

1. Practice Responsible Citizenship through:
  - identifying rights and responsibilities of citizenship,

- identifying how human values and perceptions affect and are affected by social diversity,
  - identifying and interpreting artistic expression.
2. Live a healthy lifestyle (physical, intellectual, social) through:
    - listing factors associated with a healthy lifestyle and lifetime fitness,
    - identifying the importance of lifetime learning,
    - demonstrating self-discipline, respect for others, and the ability to work collaboratively as a team.
  3. Communicate effectively through:
    - developing effective written communication skills,
    - developing effective oral communication and listening skills.
  4. Think analytically through:
    - utilizing quantitative information in problem solving,
    - utilizing the principles of systematic inquiry,
    - utilizing various information resources including technology for research and data collection.

### **COURSE OUTCOMES/COMPETENCIES** (as Required)

- 1) The student will be able to apply OSHA regulations to the lab and work place.
  - a. Refer to applicable sections of OSHA regulations.
  - b. Identify monitoring agencies from which safety regulations can be requested.
  - c. Discuss the Material Safety Data Sheets (MSDS) Right-to-Know-Law.
  - d. Obtain MSDS information concerning the hazards of the workplace.
  - e. Identify types of fires, extinguishers, and protective clothing.
  - f. Identify the appropriate action for reporting fires and appropriate firefighting procedures.
- 2) The student will be able to demonstrate the effective use of safety tools, equipment and procedures in the lab.
  - a. Identify and discuss the use of safety tools and equipment.
  - b. Discuss appropriate protective apparel for various tasks.
  - c. Demonstrate the safe use of hand and power tools.
  - d. Select the proper ladder and/or scaffold for equipment inspection, maintenance, troubleshooting, and system component replacement.
  - e. Demonstrate safe use of ladders and scaffolds.
  - f. Identify rigging materials and discuss the process of rigging.
  - g. Demonstrate the selection and use of rigging materials.
  - h. Identify fall protection procedures
  - i. Identify standards for fall protection.
  - j. Identify fall protection equipment for individual and facility.
  - k. Demonstrate how to fit fall protection equipment.
  - l. Identify walking and working surface hazards.
  - m. Identify industry standards for walking and working surfaces.
  - n. Identify corrective measures needed based on facility.
  - o. Demonstrate material handling techniques.
  - p. Discuss safety zones and safety zone identification.

- q. Identify types of chemicals used by aviation and/or manufacturing technicians and their particular safety requirements.
- r. Identify proper ventilation, filtration, lighting, heating, grounding, clothing, and communication requirements for work in confined spaces.
- s. Use proper ventilation, lighting, heating, grounding, clothing, and communication.
- t. Wear approved flame-resistant clothing.
- u. Change to clean clothing when present clothing becomes soiled.
- v. Select shoes appropriate to the work site.
- w. Wear a hard hat in designated areas.
- x. Wear eyeglasses/face shields in designated areas.
- y. Wear gloves appropriate to the materials being handled.
- z. Identify electrical service protective clothing and equipment.
- aa. Identify basic electrical safety standards.
- bb. Identify safe practices for working with electricity.
- cc. Identify electrical safety hazards.
- dd. Identify grounding and circuit control box tagging procedures.
- ee. Use grounding and circuit control box tagging procedures.
- ff. Identify lock-out tag out.
- gg. Identify accepted standards/regulations for lock – out tag out.
- hh. Mount a lock-out tag for use with a padlock.
- ii. Mount a padlock on a breaker box/lock-out tag.
- jj. Use a fuse puller to remove a fuse.
- kk. Prepare a tools and equipment pouch for on-site maintenance tasks.
- ll. Identify secondary sources of safety information related to industry.
- mm. Describe value of dust removal.
- nn. Identify operation or shutdown procedures necessary during severe weather, fire, or flood conditions.

3) The student will be able to demonstrate effective hazardous waste procedures.

- a. Identify proper storage processes.
- b. Identify waste reduction techniques.
- c. Identify solvents and their alternatives.
- d. Demonstrate proper handling of prepreg solid waste.
- e. Demonstrate proper handling of lab clothing.
- f. Demonstrate proper handling of tags and brushes.
- g. Identify proper hazardous waste disposal techniques.
- h. Define legal requirements and responsibilities.
- i. Define documentation and tracking requirements and responsibilities.

4) The student will be able to identify first aid procedures.

- a. Identify proper first aid and/or Cardiopulmonary Resuscitation (CPR) practices.
- b. Develop an emergency/first aid plan for the shop or work site.
- c. List methods of preventing shock, burns, fires and explosions.

- 5) The student will be able to identify blood borne pathogens procedures.
  - a. Identify blood borne pathogens.
  - b. Identify standards and procedures when working with blood borne pathogens.
  - c. Identify Personal Protective Equipment (PPE) used in blood borne pathogens situations.
  - d. Identify proper disposal of blood borne pathogens and equipment.
- 6) \*The student will achieve an average of 3.0 on the Employability Skills Competency Profile.

## **MINIMUM COURSE CONTENT**

The following topics must be included in this course. Additional topics may also be included.

- I. Review Basic Safety
- II. Introduction to Hand Tools
- IV. Introduction to Power Tools
- V. Lab Processes
- VI. Hazardous Waste
- VII. First Aide
- VIII. Blood Boren Pathogens
- IX. Review Employability Skills

## **STUDENT REQUIREMENTS AND METHOD OF EVALUATION**

### INSTRUCTIONAL METHODS

1. Lecture
2. Example and demonstration
3. Review of student applications
4. Computerized skills tests (performance-based)

### STUDENT REQUIREMENTS

Evaluation of student performance is determined primarily from results of written and performance tests to validate mastery of course competencies. Due to the nature of the class, student participation, teamwork, courtesy, and adherence to policies are required. Students are required to take the 3<sup>rd</sup> party testing examination.

### GRADE SCALE

- A = 90 to 100%  
B = 80 to 89%  
C = 70 to 79%  
D = 60 to 69%  
F = 59% and below

## **ASSESSMENT OF STUDENT GAIN**

Students will be assessed through written testing. Practical application will be assessed on the first attempt at the skill and again at the conclusion of the course. Comparison will determine the extent of student gain.

### **Attendance Policy**

1. NCCC values interactive learning which promotes student engagement in the learning process. To be actively engaged, the student must be present in the learning environment.
2. Unless students are participating in a school activity or are excused by the instructor, they are expected to attend class. If a student's absences exceed one-eighth of the total course duration, (which equates to one hundred (100) minutes per credit hour in a face-to-face class) the instructor has the right, but is not required, to withdraw a student from the course. Once the student has been dropped for excessive absences, the registrar's office will send a letter to the student, stating that he or she has been dropped. A student may petition the chief academic officer for reinstatement by submitting a letter stating valid reasons for the absences within one week of the registrar's notification. If the student is reinstated into the class, the instructor and the registrar will be notified. Please refer to the Student Handbook/Academic Policies for more information
3. Absences that occur due to students participating in official college activities are excused except in those cases where outside bodies, such as the State Board of Nursing, have requirements for minimum class minutes for each student. Students who are excused will be given reasonable opportunity to make up any missed work or receive substitute assignments from the instructor and should not be penalized for the absence. Proper procedure should be followed in notifying faculty in advance of the student's planned participation in the event. Ultimately it is the student's responsibility to notify the instructor in advance of the planned absence.

## **ACADEMIC INTEGRITY**

NCCC expects every student to demonstrate ethical behavior with regard to academic pursuits. Academic integrity in coursework is a specific requirement. Definitions, examples, and possible consequences for violations of Academic Integrity, as well as the appeals process, can be found in the College Catalog, Student Handbook, and/or Code of Student Conduct and Discipline.

## **ELECTRONIC DEVICE POLICY**

Student cell phones and other personal electronic devices not being used for class activities must not be accessed during class times unless the instructor chooses to waive this policy.

## **NOTE**

Information and statements in this document are subject to change at the discretion of NCCC. Students will be notified of changes and where to find the most current approved documents.

## **ACCOMMODATIONS**

If you are a student with a disability who may need accommodation(s), in compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990, please notify the Dean of Student Services in the Student Services Office, Sanders Hall, 620-432-0304, on the Chanute Campus, or the Dean for the Ottawa and Online Campuses, 785-248-2798, on the Ottawa Campus as soon as possible. You will need to bring your documentation for review in order to determine reasonable accommodations, and then we can assist you in arranging any necessary accommodations.

## **NON-DISCRIMINATION POLICY**

The following link provides information related to the non-discrimination policy of NCCC, including persons with disabilities. Students are urged to review this policy.

<http://www.neosho.edu/Departments/NonDiscrimination.aspx>

## **SEXUAL MISCONDUCT POLICY (TITLE IX)**

At NCCC, it is the responsibility of an instructor to help create a safe learning environment in the classroom, including both physical and virtual classrooms. All instructors are considered mandatory reporters at NCCC, therefore any information regarding sexual misconduct that is shared by a student in one-on-one meetings with the instructor must be reported to appropriate personnel at the College. Instructors will keep the information private to the greatest extent possible, but it is not confidential. Generally, climate surveys, classroom writing assignments or discussions, human subjects research, or events such as Take Back the Night events do not provide notice that must be reported to the Coordinator by employees, unless the reporting party clearly indicates that they wish a report to be made.

The following link provides information related to the sexual misconduct policy of NCCC, including resources, reporting options, and student rights. Students are urged to review this policy.

<http://www.neosho.edu/TitleIX.aspx>

## **COURSE NOTES**

I understand that this course utilizes computer-based modules and each phase of the module must be successfully completed in order to progress to the next phase.

I understand that this course is one course in a series of courses in the Aerostructures Program. I must successfully complete this course and all other computer module courses in the program in order to advance into the Aerostructures Assembly (lab) course.

Additionally, I understand that I must pass the Aerostructures Assembly (lab) course at 80% competency or better to receive the official program certificate.

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SIGNATURE

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DATE