BARTON COMMUNITY COLLEGE
COURSE SYLLABUS

I. GENERAL COURSE INFORMATION

Course Number: HZMT 1940
Course Title: Introduction to Ergonomics
Credit Hours: 3 credit hours
Prerequisites: none
Division/Discipline: Technical and Military Outreach
Course Description: This course provides the student the fundamental knowledge about human structure, behavior, and common work practices. Knowledge gained in class will enable the student to evaluate work systems and recommend changes that will reduce work related musculoskeletal disorders (MSD) and other workplace ergonomics related injuries.

II. INSTRUCTOR INFORMATION

Instructor Name:

Contact Data:

III. COLLEGE POLICIES

Students and faculty of Barton Community College constitute a special community engaged in the process of education. The College assumes that its students and faculty will demonstrate a code of personal honor that is based upon courtesy, integrity, common sense, and respect for others both within and outside the classroom.

Plagiarism on any academic endeavors at Barton Community College will not be tolerated. The student is responsible for learning the rules of, and avoiding instances of, intentional or unintentional plagiarism. Information about academic integrity is located in the Student Handbook.

The College reserves the right to suspend a student for conduct that is determined to be detrimental to the College educational endeavors as outlined in the College Catalog, Student Handbook, and College Policy & Procedure Manual. (Most up-to-date documents are available on the College webpage.)

Any student seeking an accommodation under the provisions of the Americans with Disability Act (ADA) is to notify Student Support Services via email at disabilityservices@bartonccc.edu.

IV. COURSE AS VIEWED IN THE TOTAL CURRICULUM

Introduction to ergonomics is a required course for the Certificate in Environmental Health & Safety and the AAS degree. This course provides students with an overview of how ergonomics affects workers and management decisions. The skills obtained in this class combined with other required classes in the program provide the student with broad knowledge of the health and safety field.

V. ASSESSMENT OF STUDENT LEARNING

Barton Community College is committed to the assessment of student learning and to quality education. Assessment activities provide a means to develop an understanding of how students learn, what they know, and what they can do with their knowledge. Results from these various activities guide Barton, as a learning college, in finding ways to improve student learning.

Course Outcomes, Competencies, and Supplemental Competencies:

A. Define Cumulative Trauma Disorders (CTD) and Musculoskeletal Disorders (MSD) and the jobs/tasks that are commonly associated with them.
   1. Identify jobs, tasks, cycles and elements that are prone to CTD or MSD.
   2. Identify the key body components that are prone to soft tissue injury.
   3. Identify the risk factors associated with CTD's or MSD's.

B. Explain the process of a job hazard analysis (JHA).
   1. Conduct an introductory job hazard analysis.
   2. Identify job hazards based on job analysis.
   3. Identify exposure to temperature hazards when reviewing job and daily living tasks.
   4. List methods for reducing exposure to heat and cold sources in a working environment.

C. Describe the following terms and the factors associated with each: Task and human-machine interaction analysis, basic body mechanics and cognitive ergonomics.
   1. Define and explain force.
   2. List grip factors that affect hand exertion.
   3. List lifting factors that affect whole body exertion.
   4. List corrective actions to reduce force exertion on the hand, arm and whole body.
   5. Define localized pressure and its potential negative impact on the body.
   6. Provide work area organization alternatives to minimize awkward postures of a multi-task job.

D. Develop and ergonomics program for a workplace.
   1. Explain and create an ergonomics program for a specific workplace.
   2. Describe and provide examples of the benefits of an effective ergonomics program for employees.

VI. INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS

VII. TEXTBOOKS AND OTHER REQUIRED MATERIALS

VIII. REFERENCES

IX. METHODS OF INSTRUCTION AND EVALUATION

X. ATTENDANCE REQUIREMENTS

XI. COURSE OUTLINE