

Master Course Syllabus

Department: Engineering Technology **Course Prefix/Number:** MET 3263

Official Course Title: Ergonomics and Work Methods

Master Syllabus Approved by Department on: 08 / 11 / 04
month date year

- I. **Catalog Description:** Introduction to the design of man-machine systems with particular emphasis on the application of ergonomics to the manufacturing workplace and environment. Use of anthropometric data in design; limitations of human performance; effects of environmental stress on work performance, safety, and health.
- II. **Prerequisites:** MATH 1073 and 3 hours of statistics (concurrent enrollment).
- III. **Expanded Course Description:** Students are introduced to the technical accomplishments of key individuals in history. The benefits of productivity improvements to society from “working smarter, not harder” is explained. Also explained is the difference between scientific method and engineering design. Various charts, diagrams, and occurrence sampling techniques are provided to show how they are used to analyze plant operations. The use of anthropometric data demonstrates how to “fit the job to the person”. Ten key guidelines for the organization of workstations are presented. Simple biomechanics is explained. Fairly detailed descriptions of numerous “cumulative trauma disorders” common to the manufacturing workplace are provided. Students are required to submit a written report and provide a PowerPoint presentation of a topic familiar to the field of ergonomics.
- IV. **Knowledge Outcomes:** Students are expected to have knowledge of the importance of the following topics. Should be proficient in the systematic layout of multiple items, balancing flow lines, and using flow diagrams, process charts, multi-activity charts, Pareto charts and in designing and conducting occurrence sampling. To be able to use anthropometric charts to design simple workstations while considering both non-progressive and progressive assembly, minimizing material handling costs, and the use of task decoupling. Should have significant familiarity with the ergonomic considerations (cumulative trauma disorders) of workstation design.
- V. Unless otherwise stipulated in this master syllabus by the department, the following items are subject to faculty discretion as described in each faculty member’s individual course outline/syllabus:
 - a) Course Requirements? (grading/evaluation procedures; class attendance policy; term papers, projects, field assignments; examinations; class participation, etc.)
 - b) Required Text(s)?
 - b) Bibliography?

- VI. Academic Honesty: Cheating, plagiarism (submitting another person's materials or ideas as one's own), or doing work for another person who will receive academic credit are all-impermissible. This includes the use of unauthorized books, notebooks, or other sources in order to secure or give help during an examination, the unauthorized copying of examinations, assignments, reports, or term papers, or the presentation of unacknowledged material as if it were the student's own work. Disciplinary action may be taken beyond the academic discipline administered by the faculty member who teaches the course in which the cheating took place.
- VII. Students With Disabilities Policy: It is the policy of Tarleton State University to comply with the Americans with Disabilities Act (ADA) and other federal, state, and local laws relative to the provision of disability services. Students with disabilities attending Tarleton State University may contact the Office of Disability Services at (254) 968-9478 to request appropriate accommodation. Furthermore, formal accommodation requests cannot be made until the student has been officially admitted to Tarleton State University.

Department Head Signature/Date:

Signature

____/____/_____
Date