



TED140 Machine Design Syllabus

Course Information

Credits	6
Campus	Washburn Institute of Technology
Address	5724 SW Huntoon
City/State/Zip	Topeka, Kansas 66604
Office Fax	785-273-7080

Description

This course is an introductory to fundamentals, theory, terminology, and practical construction methods in the machine disciplines. Use of actual working drawing used as reference to industry standards. Students will use a combination of drawing board and CAD in this segment. Practical skills refinement in methods, materials identification and labeling, and drafting techniques and standards used in various types of drawings used in the machine industries. Recommended prerequisite or co-requisites: TED100; TED135

Textbooks

none

Student Learning Outcomes:

- A. Communicate effectively
- B. Integrate technology
- C. Learn effectively
- D. Demonstrate cooperative teamwork skills
- E. Apply safety in the workplace
- F. Think critically and creatively
- G. Demonstrate responsible work ethics

Competencies

1. Identify terms, definitions, and abbreviations
2. Describe basic machining operations
3. Identify types of threaded fasteners
4. Identify types of nonthreaded fasteners
5. Identify types of springs
6. Identify types of weldments
7. Identify and use precision measuring instruments
8. Identify and use functional drafting techniques and equipment
9. Identify and use different types of reference material
10. Describe and use basic dimensioning techniques

11. Describe and use tolerancing techniques
12. Describe and use surface finish
13. Describe and use geometric dimensioning and tolerancing techniques
14. Describe and make design sketches and layouts
15. Describe and make different types of detail drawings
16. Describe and make revisions
17. Use correct conventions on a weldment drawing
18. Demonstrate the proper use of dimensioning on working drawings
19. Use correct conventions on a design layout drawing
20. Use correct conventions on a section assembly drawing
21. Use correct conventions on a details sheet
22. Apply machine drawing principals to the CAD system

Guidelines for Success

Assessment Plan

Assessment is an integral part of the educational process at Washburn Tech and accurate feedback is an important tool in continuously improving the institution's technical programs. Students can expect to participate in assessment activities prior to entry into programs, within specific courses and following program completion for specific fields of study.

Grading Criteria:

- A 92% - 100%
- B 84% - 91%
- C 76% - 83%
- D 68% - 75%
- F 67% or below

Attendance

A student can receive 1 hour make-up by completing a two page typed paper, on an approved subject, double spaced, 12 point font, and with at least 2 sources identified.

Disability

The Special Support Services (SSS) Office is responsible for assisting in arranging accommodations and for identifying resources at Washburn Institute of Technology for persons with disabilities. Qualified students with disabilities MUST register and provide documentation with the office to be eligible for services. New requests for accommodations should be submitted two months or more prior to the date services should begin; however, contact the SSS Office as soon as a need may arise. Depending on the accommodation request, four to eight week lead time may be needed for timely and effective provision of services. SSS coordinates and assist in arranging services it deems appropriate of eligible students on a case-by-case basis.

If you are a student with a disability that may substantially limit your ability to participate in this class and believe you will need accommodations, it is your responsibility to contact:

Special Support Services Coordinator

Phone: 785-228-6356

E-Mail: ssscoordinator@washburn.edu

