

Instructor: Mike Hubka **Phone:** 331-5270 **E-Mail:** hubka@NWSCC.edu
Course: DDT-211 Intermediate Machine Drafting
Credit Hours: 3 **Contact:** 5

Course Description: This is an advanced theory course designed as a continuation of DDT-131 Machine Drafting Basics. The course also provides additional instruction in performance of exacting mechanical design. It focuses on the transition from student to practical designer by bridging the gap between fundamental drafting, manufacturing processes, mechanics, and strength of materials, as well as CAD and solid modeling. Continued analysis of the design process is stressed and made practical by application to the solution of design situations.

Program: Associate in Applied Science, Drafting and Design Technology

Prerequisites: DDT 131, or permission of the instructor.

Text: Engineering Drawing and Design - Second Edition
Madsen, Shumaker, Turpin, and Stark
Delmar Publishers

Reference: Machinery's Handbook
Industrial Press, Inc.

Supplies: 1 - 100 MB Zip Disk, or Multiple 3.5" 1.44MB Floppy
Scientific function calculator

Course Rationale:

Design is the creative part of engineering. Without this creative ability, and the knowledge to apply it effectively, a potentially great designer may become no more than a mediocre detail drafter. A key to becoming an outstanding designer is a solid, in-depth understanding of the creative process of design, mechanics and manufacturing processes.

Course Objectives:

Upon completion of this course, the student will be able to:

1. Outline the systematic approach to creative mechanical design.
2. Identify basic skills in the design layout and graphic presentation of mechanical designs.
3. Identify basic skills in mechanical design problem solving and critical thinking skills.
4. Outline the necessary team skills needed to function as a mechanical designer.
5. Be able to take a design from concept, through the professional design process, and on to the finished product.

Semester Schedule

**NORTHWEST-SHOALS COMMUNITY COLLEGE
DRAFTING AND DESIGN TECHNOLOGY
COURSE SYLLIBUS**

PAGE 2

Wk	Lecture Topic	Assignments/Read	Date
1	Course Introduction	Handout	1/14/03
2	Team Problem Solving Solving Analysis Problems The Design Process		1/21/03
3	Communication and the design process Scheduling and Planning a Project Problem Assignment (Group)		1/28/03
4	Team Meeting- Project Discussion Schedules		2/04/03
5	Test #1 Project Development		2/11/03
6	Microsoft Office Excel Project Development		2/18/03
7	Microsoft Office PowerPoint Project Development		2/25/03
8	Field Trip (TBA)		3/04/03
9	Microsoft Office Word Project Development		3/11/03
10	Test #2 Project Development		3/18/03

11	Spring Break	3/25/03
12	Reading Schematics & Symbols Project Development	4/1/03
13	Schematics Electrical Symbols & Diagrams	4/08/03
14	Schematics Piping, Hydraulic & Pneumatics'	4/15/03
15	Test #3 Project Development	4/22/03
16	Presentations Projects and Notebooks Due	4/29/03
17	Final	

Grading Policy

The student will receive a grade for work accomplished as follows:

	Points
Quizzes (3)	300
Attitude and Participation	200
Design Problem	300
Final	200
Total	1000 points

Grade	Points
--------------	---------------

A	900-1000
B	800-899
C	700-799
D	600-699
F	0-599

Special Instructions/Notes:

Notebook Assignment: Each student will prepare and assemble their research, calculations, sketches, data, etc., on each exercise and problem as a bound notebook.

The format for all work shall be as follows:

1. Use engineering format: i.e. Graph paper, identify designer, and date all pages, document and fully describe formulas used and source of information.
2. Use one or more A size graph sheets to document designs, including general notes and dimensions.
3. All lettering shall be printed standard engineering gothic uppercase **only**.
4. Spelling, grammar, organization, and appearance counts!

Design Problem Assignment: The class will be organized with one or two team leaders, appointed by the instructor. The leaders will assign and coordinate the work of all students. All team members will observe standard industry practice for the flow of information to (follow the chain of command and control). The instructor at first or second class meeting will assign the design problem.

NOTE: Northwest-Shoals Community College's policy regarding academic honesty will be **strictly enforced!** As a common courtesy to the instructor, you should attend classes promptly at specified starting times. If you are going to be absent, for any reason, you should contact the instructor as soon as possible. This will establish communications with the instructor about the possibility of making up your work. Make-up test and assignments shall be given on an individual basis and only with a proper excuse. At no time may a student miss more than 20% of class meetings, doing so may result in a "F"

It is "**your**" responsibility to contact the instructor for make-up test and missed assignments. If you are absent for a test or assignment, because of a proper excuse, you must take the test or make up the assignment, at the next regularly scheduled class meeting.

AMERICANS WITH DISABILITIES ACT (ADA)

It is the policy of Northwest-Shoals Community College to comply with the Americans with Disabilities Act (ADA). Any student covered under this act needing and desiring reasonable accommodations for this class should notify the instructor during the first week of class.