

VERNON COLLEGE  
SYLLABUS

DIVISION: Information & Technology

DATE: 2011-2012

COURSE NUMBER AND TITLE: MCHN 1458 Intermediate Lathe Operations

CREDIT HRS: 4    HRS/WK LEC: 2    HRS/WK LAB: 6    LEC/LAB COMB: 8

I.    VERNON COLLEGE GENERAL EDUCATION PHILOSOPHY STATEMENT

General education at Vernon College reflects the institution's deep conviction that successful, satisfying lives require a wide range of skills and knowledge. We are dedicated to providing educational opportunities that develop the academic, career, and personal capabilities of individuals so they may achieve self-fulfillment and participate fully and positively in a democratic society. Vernon College has identified the following college-level competencies generated from the general education core:

GENERAL EDUCATION CORE COMPETENCIES:

- A.    Critical Thinking: Students will evaluate the validity of ideas through a creative process of questioning, analyzing, and synthesizing.
- B.    Communication/Interpersonal: Students will develop effective reading, writing, speaking, and listening skills to communicate verbally and nonverbally.
- C.    Scientific and Mathematical Literacy: Students will apply an understanding of mathematical, natural, and behavioral scientific principles and methods to solve abstract and practical problems.
- D.    Information Literacy: Students will develop the information literacy skills to confidently and competently locate, use, and evaluate information.
- E.    Cultural Literacy: Students will develop an appreciation of human culture and its diversity and the role of the creative arts in society.

II.    CATALOG DESCRIPTION:

Continuation of Basic Lathe Operations with emphasis on continued proficiency in lathe operations. Identification and operation of lathe machine tools, including basic tapered form turning and basic threading operations. Prerequisite: MCHN 1438. Lab Fee: \$24.00; Special Fee: \$62.00

III.    REQUIRED BACKGROUND:

Prerequisite: MCHN 1438 Basic Machine Shop I

IV.    TEXTS, AND OTHER REFERENCE MATERIALS:

Richard Kibbe, Roland Meyer, John Neely, Warren White, Machine Tool Practices. Prentice Hall, Current (9<sup>th</sup>) Edition, ISBN-13: 978-0-13-501508-7

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## V. METHODS OF INSTRUCTION:

Lecture, hands-on experience, demonstration, and labs

Students desiring auxiliary aids and services should make their request to the instructor and the Special Services Director

## VI. COURSE CONTENT:

1. Shop Safety
  - a. General Machine Safety
  - b. Tool Safety
2. Intermediate Lathe Applications
  - a. General Overview
  - b. Ball Peen Hammer Project
  - c. Ball Point Pen Project

## VII. COURSE OUTCOMES:

By the end of this course each student should be able to:

1. Apply blueprint reading to machine technology (C5-7,18-19) (F1,3-4,7-12)
2. Apply good housekeeping, proper safety, and preventative maintenance (C5-6,16,20) (F8-9,12-13)
3. Perform work within given tolerances (C5-6) (F3-4,12)
4. Show logical steps in planning part processes (C5-6,17-19) (F2-4,7-12)
5. Demonstrate the proper use and setup of the conventional lathe (C18) (F8,10-12)
6. Perform needed calculations for boring, threading, and tapering (C5-6) (F3-4,9-12)
7. Identify and apply proper tooling and fixtures for a given project (C18) (F8,10,12)
8. Determine the degree of precision measurement required (C5) (F1,3,8,12)
9. Inspect, measure, and validate part dimensions from blueprints (C5-7,18) (F1,3,12)

## VIII. ASSESSMENT:

The students will demonstrate proficiency in the outcomes listed above through participation in class activities/ projects and performance on quizzes and/or examinations. (See course outline for time schedules of examinations and grading computations.)