

Machine Drafting

Department of Computer-Aided Drafting & Design
Kellogg Community College

Drafting 120

Syllabus

INSTRUCTOR: Douglas Mann

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COURSE TITLE: Drafting 120, **MACHINE DRAFTING**

COURSE DESCRIPTION: Prerequisite: **Drafting 101 or departmental approval.**

This course advances the use of engineering graphics to produce functional drawings of machine mechanisms and basic machine elements. Included are fasteners, cams, gear trains and fabrication. Dimensioning and tolerancing in accordance with ANSI standard Y14.5M 1994 are used throughout the course. CAD technology is used exclusively to complete lab assignments. This course or departmental approval is required prior to enrollment in DRAF 211.

LENGTH: One semester, 80 hours instruction, 3 credit hours

TEXTBOOKS: Engineering Graphics with AutoCAD by James D. Bethune
Shop Reference for Students and Apprentices from Machinery's Handbook (2nd Edition)

ATTENDANCE POLICY: Regular attendance and participation are necessary for successful completion of the course. Students may miss up to one week of class time (2 class periods) without penalty. ***After one week of absences each absence in the class will reduce your final grade by 5%.*** Three tardies will count as one absence.

DERIVATION OF GRADE: The final grade is computed from averages of drawings, tests, quizzes, and/or special assignments, adjusted if appropriate due to excessive absence. All assigned work is to be considered required. Extra credit assignments may be available during the semester. The final grading scale will be as follows:

	100-93.3 = A	93.2-90.0 = A-
89.9-86.6 = B+	86.5-83.3 = B	83.2-80.0 = B-
79.9-76.6 = C+	76.5-73.3 = C	73.2-70.0 = C-
69.9-66.6 = D+	66.5-63.3 = D	63.2-60.0 = D-

LATE POLICY: Each individual problem that is assigned in class will be given a due date that will be posted at some point during class session (typically at the end of class one week beyond date assigned). A **10% late penalty** will be deducted from the total value of the assignment for **EACH SCHOOL DAY** that the assignment is overdue. After five days, hence 50% reduction in grade, the value for the second five days will be constant at 50% of assignment value. After ten days beyond due date the value of any assignment is zero.

INSTRUCTOR SYLLABUS RIGHTS STATEMENT: Information contained in this syllabus was to the best knowledge of the instructor considered correct and complete when distributed for use at the beginning of the semester. However, this syllabus should not be considered a contract with Kellogg Community College and any student, nor between the instructor and any student. The instructor reserves the right, acting within the policies and procedures of Kellogg Community College, to make changes in the course content or instructional techniques without notice or obligation.

ACADEMIC INTEGRITY: All courses offered by the Computer-Aided Drafting and Design Department will be conducted with the highest standards of academic honesty. Each student is expected to support these standards by neither giving nor accepting assistance on quizzes, tests or exams, and by submitting only his or her own work for credit. The Kellogg Community College policy on Academic Integrity is spelled out in the student handbook. If it is suspected that you are cheating, fabricating, facilitating academic dishonesty, or plagiarizing, there may be serious consequences. The incident will be documented and may be reported to the academic chair and/or program director for possible disciplinary actions up to and including course, program, or college expulsion.

ADA and SECTION 504 STATEMENT: Kellogg Community College does not discriminate in the admission or treatment of students on the basis of disability. KCC is committed to compliance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act.

Topic Outline (Tentative)

- I. Shape Description
 - A. First and third angle projection
 - B. Runouts and Intersections
 - C. Advanced Sections
 - D. Advanced Auxiliaries

- II. Fasteners
 - A. Shop Reference Fun
 - B. Capscrews
 - C. Threaded fasteners
 - D. Threaded fasteners-Metric

- III. Power Transmission
 - A. Cam Development
 - B. Gear Drive Train
 - C. Springs

- IV. Weldments
 - A. Details and Weldment Assembly

- V. Dimensioning and Tolerancing
 - A. Fits and Limit dimensioning

- VI. Misc.

- VII. Final Project
 - A. Comprehensive set of working drawings
 1. Details
 2. Assembly