

INSTRUCTOR: Randy Kopf

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COURSE TITLE: DRAF 261, **Manufacturing Design**

COURSE DESCRIPTION: Prerequisite: Drafting 120 or departmental approval. The application of design principles in solving problems related to the manufacturing of simple work pieces. Students will be involved in the design of jigs, fixtures, gages, and other work- holding devices along with the production of detail drawings of their designs. All drawings will be done using AutoCAD.

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

TEXTBOOK(S): None.

ATTENDANCE POLICY: See the attached sheet "Grade Calculation".

DERIVATION OF GRADE: Your projects/drawings will be evaluated on their completeness, adherence to standards (ASME Y14.5M), dimensioning practice, clarity, tolerance calculations, and the appropriateness of your design for the given problem. Your final grade will be calculated according to the attached sheet "Grade Calculation".

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

- Introduction to Tool Design
 - Tool design sequence
 - Drawing formats and standards

- General Hardware
 - Materials
 - Locators
 - Clamps
 - Fasteners

- Jig Design
 - Purpose of jigs
 - Construction and design

- Fixture Design
 - Purpose of fixtures
 - Construction and design

- Gage Design
 - Purpose of gages
 - Construction and design