

Course Title: Machine Design II

Course Prefix: MCEG

Course No.: 4043

Section No.: P02

Department of | Mechanical Engineering

College of | Engineering

Instructor Name:

Abdulkhikim Agll

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Office Hours: | Posted

Virtual Office Hours: | None

Course Location: | *Gilchrist Engineering Building 109*

Class Meeting Days & Times:

8:00 – 9:50 Monday and Wednesday

Catalog Description:

GEARING - GENERAL, FAILURE RESULTING FROM VARIABLE LOADING, SHAFT, AXLES, AND SPINDLES, BEARINGS, CLUTCHES, BRAKES, COUPLINGS, FLEXIBLE MECHANICAL ELEMENTS.

Prerequisites:

MCEG 3043 Machine Design I

Co-requisites:

MCEG 3053 Kinematics Design and Analysis

Required Text:

Budynas, R. G. and Nisbett, J. K., Shigley's Mechanical Engineering Design, 10th edition, McGraw-Hill Book Company, ISBN 9780073398204.

Recommended Text/Readings:

Provided in Clas s

Access to Learning Resources:

PVAMU Library:

phone: (936) 261-1500;

web: <http://www.tamu.edu/pvamu/library/>

University Bookstore:

phone: (936) 261-1990;

web: <https://www.bkstr.com/Home/10001-10734-1?demoKey=d>

Course Goals or Overview:

This course is designed to introduce seniors in mechanical engineering to the process of mechanical design. The student will design mechanical system using concepts developed in design of machine elements, engineering graphics and other related courses.

Course Outcomes/Objectives

At the end of this course, the student will

- 1 | The skills for mechanical systems design;
- 2 | An ability to analyze mechanical engineering systems;
- 3 | Knowledge of various machine elements;
- 4 | An ability to complete a mechanical system design project.

Course Requirements & Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Assignment and Quizzes – homework and quizzes on machine design

Design Project – a design project on mechanical design

Midterm Exam – the midterm test

Final Exam – the final exam

Grading Matrix (*points will vary according to instructor's grading system*)

Instrument	Value (points or percentages)
Attendance & Participation	5%
Assignments	5%
Quizzes	20%
Design projects	20%
Midterm exam	20%
Final exam	30%

Grade Determination:

A = 90 – 100pts;

B = 80 – 89pts;

C = 70– 79pts;

D = 60 – 69pts;

F = 59 pts and below

Course Procedures

Formatting Documents:

Microsoft Word is the standard word processing tool used at PVAMU. If you're using other word processors, be sure to use the "save as" tool and save the document in either the Microsoft Word, Rich-Text, or plain text format.

Exam Policy

Exams should be taken as scheduled. No makeup examinations will be allowed except under documented emergencies (See Student Handbook).

Homework assignments should be submitted on the due date listed on the cover sheet.

16 WEEK CALENDAR

Week One - Three:

Chapter (s):

Assignment (s):

GEARING - GENERAL

13

Week Four - Five:

Chapter (s):

Assignment (s):

SPUR AND HELICAL GEARS

14

Week Six - Seven:

Chapter (s):

Assignment (s):

FAILURE RESULTING FROM VARIABLE LOADING

6

Week Eight - Nine:

Chapter (s):

Assignment (s):

SHAFT, AXLES, AND SPINDLES

7

Week Eight:

MIDTERM EXAM

Week Nine:

DESIGN PROJECT ILLUSTRATION

Week Ten - Eleven:

Chapter (s):

Assignment (s):

BEARINGS

11,12

Week Twelve - Thirteen:

Chapter (s):

Assignment (s):

CLUTCHES, BRAKES, COUPLINGS, AND FLYWHEELS

16

Week Fourteen - Fifteen:

Chapter (s):

Assignment (s):

FLEXIBLE MECHANICAL ELEMENTS

17

Week Fifteen:

DESIGN PROJECT PRESENTATIONS

Week Sixteen

FINAL EXAM

University Rules and Procedures

Disability statement (See Student Handbook):

Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

Academic misconduct (See Student Handbook):

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of academic dishonesty:

1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.
2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.
3. Fabrication: use of invented information or falsified research.
4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism.

Nonacademic misconduct (See Student Handbook)

The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct (See Student Handbook):

Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Attendance Policy:

Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class.

Student Academic Appeals Process

Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

Technical Considerations for Online and Web-Assist Courses

Minimum Hardware and Software Requirements:

- Pentium with Windows XP or PowerMac with OS 9
- 56K modem or network access
- Internet provider with SLIP or PPP
- 8X or greater CD-ROM
- 64MB RAM
- Hard drive with 40MB available space
- 15" monitor, 800x600, color or 16 bit
- Sound card w/speakers
- Microphone and recording software
- Keyboard & mouse
- Netscape Communicator ver. 4.61 or Microsoft Internet Explorer ver. 5.0 /plug-ins
- Participants should have a basic proficiency of the following computer skills:
 - Sending and receiving email
 - A working knowledge of the Internet
 - Proficiency in Microsoft Word
 - Proficiency in the Acrobat PDF Reader
 - Basic knowledge of Windows or Mac O.S.

Netiquette (online etiquette): students are expected to participate in all discussions and virtual classroom chats when directed to do so. Students are to be respectful and courteous to others in the discussions. Foul or abusive language will not be tolerated. When referring to information from books, websites or articles, please use APA standards to reference sources.

Technical Support: Students should call the Prairie View A&M University Helpdesk at 936-261-2525 for technical issues with accessing your online course. The helpdesk is available 24 hours a day/7 days a week. For other technical questions regarding your online course, call the Office of Distance Learning at 936-261-3290 or 936-261-3282

Communication Expectations and Standards:

All emails or discussion postings will receive a response from the instructor within 48 hours.

You can send email anytime that is convenient to you, but I check my email messages continuously during the day throughout the work-week (Monday through Friday). I will respond to email messages during the work-week by the close of business (5:00 pm) on the day following my receipt of them. Emails that I receive on Friday will be responded to by the close of business on the following Monday.

Submission of Assignments:

Assignments, Papers, Exercises, and Projects will distributed and submitted through your online course. Directions for accessing your online course will be provided. Additional assistance can be obtained from the Office of Distance Learning.

Discussion Requirement:

Because this is an online course, there will be no required face to face meetings on campus. However, we will participate in conversations about the readings, lectures, materials, and other aspects of the course in a true seminar fashion. We will accomplish this by use of the discussion board.

Students are required to log-on to the course website often to participate in discussion. It is strongly advised that you check the discussion area daily to keep abreast of discussions. When a topic is posted, everyone is required to participate. The exact use of discussion will be determined by the instructor.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their PC or a removable drive before posting to the discussion board. This is important for two reasons: 1) If for some reason your discussion responses are lost in your online course, you will have another copy; 2) Grammatical errors can be greatly minimized by the use of the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, it should be copied and pasted to the discussion board.

IMPORTANT DATES

Aug 27 - Aug 29 Monday through Wednesday	Late registration for the fall semester for all students who have not yet registered. To complete registration, students must pay by 5:00 p.m. on Wednesday, September 19
Aug 27 - Aug 31 Monday through Friday	Add/Drop for all students for the fall semester. Tuition payment for all students who add/drop for fall must pay by 5:00 p.m. on Wednesday, September 19
Aug 27 Monday	First Class Day
Sep 03 Monday	Labor Day Holiday (University closed)
Sep 12 Wednesday	Last day to withdraw from course(s) without academic record
Sep 13 - Nov 02 Thursday through Friday	Withdrawal from course(s) with academic record ("W")
Sep 19 Wednesday	Tuition payment deadline is 5:00 p.m. for all students who late registered and add/drop for fall semester
Sep 25 - Dec 04 Tuesday through Tuesday	Submit application for Tuition Rebate for fall graduation undergraduate candidates
Oct 23 Tuesday	Mid-semester grades due by 11:59 p.m.
Oct 31 Wednesday	Last day to apply for fall graduation (ceremony participation)
Nov 01 - Dec 04 Thursday through Tuesday	Apply for degree conferral only for fall graduation (no ceremony participation or name listed in program)
Nov 02 Friday	Last day for withdrawal from course(s) with academic record ("W")
Nov 19 - Jan 11, 2019 Monday through Friday	Pre-registration for all students for the spring semester
Nov 22 - Nov 24 Thursday through Saturday	Thanksgiving Holidays (University closed)
Dec 04 Tuesday	Last Class Day
Dec 04 Tuesday	Last day to withdraw from the University
Dec 05 - Dec 11 Wednesday through Tuesday	Final Examinations
Dec 13 Thursday	Final grades due for graduation candidates by Noon
Dec 15 Saturday	Fall Commencement
Dec 18 Tuesday	Final grades due for all other students by 11.59 p.m.