Course Syllabus

Course #: MET 2600 Course Name: Mechanical Power Transmission

Division: Engineering and Industrial Technologies

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Class Days: **Class Time:**
Location: Classroom: Laboratory:
Credit Hours: **Contact Hours:** **Lab Hours:** **Lecture Hours:**
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Instructor:_____ **Office Location:**
Phone:_____ **Email Address: _____**

Office Hours: TBD
Division Office/Location: Engineering Building **Division Fax:** 419-334-2300
Full-time Contact Person: Jayne Bowersox **Phone(s):** (419) 559-2410
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Course Description:
This course covers all aspects of power transmission as it relates to typical components such as belts, gears, couplings, shafts, etc. The fundamental physics of power transmission is also discussed.

Prerequisite(s): None

Corequisite(s): None

Entry Level Skills and Knowledge:
The purpose of this course is to cover the operation, method of specification, installation and maintenance, and troubleshooting of the various mechanical power transmission components. Components to be covered include belts, roller chains, bearings, couplings, gear and gearboxes, seals, clutches and brakes. Also covered is shaft alignment and power transmission fundamental physics.

Required Texts, Supplies and Equipment:
Power Transmission Handbook
by Power Transmission Distributors Association

Power Transmission Workbook

Grading:

Three Tests	30%	
Final Examination	30%	
Homework & Projects		40%

Learning Outcomes:

General Education

1. **Communicate effectively**
2. **Evaluate arguments in a logical fashion**—Competence in analysis and logical argument are explicit learning goals for most general education programs, although these skills go by a variety of names (e.g., critical thinking, analysis, logical thinking, etc.). **Students will be able to demonstrate competence in problem solving in communication, mathematics, and in team settings.**
3. **Employ the methods of inquiry characteristic of natural sciences, social sciences, mathematics, and the arts and humanities**; general education introduces students to methods of inquiry in several fields of study and thereby prepares students to integrate information from different disciplines.

1) Understand ratings, specifications, terminology and basic theory of operation

2) Understand factors that affect the successful installation

3) Effective troubleshooting and failure analysis

4) Basic maintenance practices, care, handling and storage

5) System affects of one component on another

Assessment of Student Learning:

Assessment Project and Measurement in course (if any):

Plan of Work:

Week 1	Introduction and Fundamentals
Week 2	Power Transmission Physics
Week 3	Belt Drives - Chain Drives

Week 4	Test #1, Clutches and Brakes
Week 5	Couplings & Alignment
Week 6	Gears & Gearboxes
Week 7	Bearings and Sealing Devices
Week 8	Test # 2, Conveyers
Week 9	Couplings
Week 10	Hydraulics
Week 11	Pneumatics
Week 12	Test # 3, Linear Motion
Week 13	Motor Drives and Controls
Week 14	Accessories, Review
Week 15	Final Test

Course Requirements:
Complete all assignments as required

Policies

Course Withdrawing: If for any reason you need to withdraw from this course, be certain that you do so according to College procedure. It is your responsibility to know and follow this procedure. If you simply stop coming to class, without officially withdrawing from the course, your grade is an automatic "F." Please follow official College procedure for withdrawing from this or any course.

College Academic Policies are located in the College Catalog. A copy of the current catalog may be picked up in any of the division offices or admissions. The list of college policies is also available online at https://www.terra.edu/register/Collegecat/policies.asp.

Support Services: The College offers a number of support services to assist in your success in this course and all courses. Among these services are the Writing & Math Center in B105, the Office of Learning Support Services, which coordinates the campus disability services and tutoring programs, the computer labs, and the computers in the atriums.

Any student who feels he/she may need an accommodation based on the documentation of a disability should contact the Office of Learning Support Services privately to discuss his/her specific issues. Please contact the OLSS at (419) 334-8400 X 208 or visit 100 Roy Klay Hall (Building A) to coordinate reasonable accommodations.

If you have a documented disability and are receiving academic accommodations through the Office of Learning Support Services, please schedule a meeting with your instructor in a timely manner so that we may discuss how these services will be arranged.

Tutoring services are available to students beginning the second week of every quarter. Students requesting tutoring services should obtain a tutor request form from the OLSS in 100 Roy Klay Hall (Building A) or online at the Terra website. Please note that instructor verification and acceptance of the Student Learner Agreement is necessary for all tutoring requests. All requests should be submitted to 100 Roy Klay Hall (Building A).