

DET 150 Course Outline as of Spring 2010**CATALOG INFORMATION**

Dept and Nbr: DET 150 Title: FLUID POWER BASICS 1

Full Title: Fluid Power Basics 1

Last Reviewed: 7/2/2001

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	0.50	Lecture Scheduled	8.00	1	Lecture Scheduled	8.00
Minimum	0.50	Lab Scheduled	0	1	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	8.00		Contact Total	8.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 16.00

Total Student Learning Hours: 24.00

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:

Basic theory of fluid power, terminology, components and function as related to industrial and mobile uses of hydraulics and pneumatics.

Prerequisites/Corequisites:**Recommended Preparation:****Limits on Enrollment:****Schedule of Classes Information:**

Description: Basic theory of fluid power, terminology, components and function as related to industrial and mobile uses of hydraulics and pneumatics. (Grade Only)

Prerequisites/Corequisites:

Recommended:

Limits on Enrollment:

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area	Effective:	Inactive:
CSU GE:	Transfer Area	Effective:	Inactive:
IGETC:	Transfer Area	Effective:	Inactive:
CSU Transfer:		Effective:	Inactive:
UC Transfer:		Effective:	Inactive:

CID:

Certificate/Major Applicable:

Not Certificate/Major Applicable

COURSE CONTENT

Outcomes and Objectives:

Students will be able to:

1. Describe the laws of fluid power.
2. Identify ISO fluid power symbols.
3. Recognize fluid power components used in systems.
4. Distinguish differences in open and closed fluid power systems.
5. Select the appropriate components for system design.
6. Determine specific hydraulic system lines by their markings and dimensions.
7. Measure and identify hydraulic and pneumatic system fittings and couplers.
8. Construct a hydraulic or pneumatic system on paper using ISO symbols.
9. Construct a hydraulic or pneumatic system on paper using component illustrations.

Topics and Scope:

Principles of Hydraulics - Basic laws and theory relating to fluid power

- Related graphic symbols

System Design - Required components

- Open/Closed systems

Hydraulic/Pneumatic System Components - Lines, fittings and couplings

- Pump and motor styles

- Reservoirs and valves

- Actuators

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Assignment:

Students will be assigned reading from text and group discussion while attending class.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments are more appropriate for this course.

Writing
0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Quizzes

Problem solving
30 - 90%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations
0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

None

Exams
0 - 0%

Other: Includes any assessment tools that do not logically fit into the above categories.

Attendance and Participation

Other Category
10 - 70%

Representative Textbooks and Materials:

Fluid Power Data Book, Womack Educational Publications, tenth edition (December 1998)