

**DET 151 Course Outline as of Spring 2010****CATALOG INFORMATION**

Dept and Nbr: DET 151 Title: FLUID POWER BASICS 2

Full Title: Fluid Power Basics 2

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 systems troubleshooting and diagnostics. Review of terminology and theory. Systems design criteria for hydraulic and pneumatic systems.

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

Description: Basic theory of fluid power systems troubleshooting and diagnostics. Review of terminology and theory. Systems design criteria for hydraulic and pneumatic systems (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:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:

<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
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<b>CSU Transfer:</b>	Effective:	Inactive:
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<b>UC Transfer:</b>	Effective:	Inactive:
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**CID:**

**Certificate/Major Applicable:**

Not Certificate/Major Applicable

## **COURSE CONTENT**

### **Outcomes and Objectives:**

Each student will be able to:

1. Define how hydraulic and pneumatic systems operate.
2. Identify ISO graphic symbols.
3. Distinguish components by their appearance and function.
4. Design a basic hydraulic or pneumatic system.
5. Draw a diagnostic chart.
6. Calculate basic hydraulic formulas to solve problems.
7. Determine the appropriate diagnostic tools to use for specific problems.

### **Topics and Scope:**

Review of hydraulic/pneumatic systems

Terminology

Graphic symbols

System design Criteria

Specified components

Custom designed systems

Hydraulic/Pneumatic System Troubleshooting

Circle-Square diagnostics

Fluid power formulas

Analyzing hydraulic/pneumatic systems

Specifying components

### **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)