El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	**Advanced Technology Industrial Manufacturing**
COURSE RUBRIC AND NUMBER	**HYDR 1445**
COURSE TITLE	**Hydraulics and Pneumatics**
COURSE CREDIT HOURS	**4 3 : 3**
	Credits Lec Lab

I. Catalog Description

Studies the fundamentals of hydraulics and pneumatics systems, conversion of unit, types of hydraulic and pneumatic, pumps, cylinders, valves, motors, and related systems including operations, maintenance, Safety and system analysis. **(3:3).**

II. Course Objectives

A. Unit I. Pneumatics

1. Define pneumatic fundamentals
2. Describe pneumatic safety
3. Explain pneumatic symbols
4. Explain pneumatic applications
5. Define pneumatic controls and characteristics
6. Design and analyze pneumatic circuits
7. Evaluate pneumatic systems
8. Describe the installation and maintenance of pneumatic systems

B. Unit II. Hydraulics

1. Define hydraulic fundamentals
2. Describe hydraulic safety
3. Explain hydraulic symbols
4. Explain hydraulic applications
5. Define hydraulic controls and characteristics
6. Design and analysis hydraulic circuits
7. Evaluate hydraulic systems
8. Diagnose hydraulic systems
9. Describe the Installation and maintenance of pneumatic systems

III. THECB Learning Outcomes (WECM)

1. Demonstrate competence in the operation of basic hydraulic and pneumatic systems.
2. Demonstrate the use of flow meters and pressure gauges.
3. Interpret schematics and troubleshoot systems.
4. Display a systematic approach to troubleshooting.
5. Design a schematic drawing of a working system.

IV. Evaluation

The knowledge and skills stated in the objectives must be demonstrated by the students in the form of test and lab assignments in order to complete the course.

90-100	A
80-89	B
70-79	C
60-69	D
0-59	F

V. Disability Statement (Americans with Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024*)*

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.