

Syllabus

ELT 106

Basic Electricity and Fluid Systems

Course Information

Organization	Jackson College
Course Number	MFG 135
Credits	3
Office	Room 540 LISD Tech Center
Instructor	Justin Schmidt
Office Hours	Tuesday, Wednesday: 4:30-5:00pm Other times by appointment
Email	justin.schmidt@lisd.us
Office Phone	517-417-8085
Office Fax	517-263-9433
Beginning date	TBA
End Date	TBA

Description

This course will cover the principles of basic electrical, hydraulic, and pneumatic circuits. Students will learn how to identify components of electrical and fluid circuits, how to analyze circuits, and how to troubleshoot industrial systems. Students may sit for Certified Production Technician exam in Production Quality at the end of the course.

Prerequisites

None

Textbooks

All Text or Digital Media will be provided

Learner Supplies

All Supplies will be provided

Objectives

- Students will explain what electricity is, and how it is produced
- Students will differentiate between DC and AC circuits
- Students will explain what an electrical schematic is, and how it is read
- Students will analyze series and parallel circuits, and explain the differences between them
- Students will calculate voltage, current, resistance, and power
- Students will explain how basic electrical machines work
- Students will explain the differences between hydraulic and pneumatic systems
- Students will identify the component parts of hydraulic and pneumatic systems
- Students will analyze diagrams of fluid circuits

Grading Information

Jackson Community College Credit.....3 Credits

Grading Scale	(90% - 100%) =A
	(80% - 90%) =B
	(70% - 80%) =C
	(60% - 70%) =D

Grading Formula

Exams.....100 points
Projects and applications.....200 points

Attendance.....30 points

Attitude and Participation.....30 points

Guidelines for Success

Attendance and work Expectations

Because most of the knowledge and information needed to achieve the competencies, to complete and succeed in this course will come from text, presentations and demonstrations, it is important that you attend all sessions. If you are unable to attend a session please let me know as soon as possible. Acceptable absences are subject to the discretion of the instructor and it is the student's responsibility to make up any work that is missed. Excessive absences can result in points being deducted, or the student being dropped from the course without notice. Because of the extensive content of this course it is very important that you use your time wisely, and work diligently on the projects at hand.

Respect Guidelines

- 1, Treat Instructor(s) and others with full respect:
 - Includes listening and speaking
- 2, Act professional:
 - Includes attitude and demeanor
- 3, Participate and cooperate:
 - Includes compliance and following instructions

Instructor demonstrations

There will be instructor demonstrations with every project, and as required in accordance with student needs.

Accessibility

Jackson College understands that cultivating a broadly diverse community is crucial to our educational mission and to our foundational commitment to leadership and service. Jackson College is fully committed to ensuring our courses are accessible to everyone including those with disabilities. We are currently working to increase accessibility and usability of our course materials in order to meet or exceed the requirements of Section 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1991 and Web Content Accessibility Guidelines (WCAG) 2.0. For more information about Jackson College's efforts to ensure accessibility please visit the [Jackson College accessibility web page](#).

If you have an accessibility need in any of our classes please e-mail the Center for Student Success at JCCSS@jccmi.edu or visit the [Center for Student Success web page](#).

At the Center for Student Success (CSS), we are committed to providing all students the opportunity to achieve academic success by providing a variety of support services free of charge to Jackson College students. This includes, but is not limited to, peer and faculty tutoring, mental health referral, temporary assistance with transportation, various workshops/seminars, and the TRIO program.

In addition, the CSS staff is committed to adapting the College's general services to meet the individual needs of otherwise qualified students with disabilities, for the purpose of providing equal access to all programs and

facilities.

College Regulations

This course will be conducted to college rule as published in the college catalog. This includes policies on cheating, plagiarism, and misconduct. It is the student's responsibility to be familiar with these policies. The behaviors listed here and within the college catalog are all subject to disciplinary action

Plagiarism- Presenting someone else's words, ideas, data, projects or other work as your own

Fabrication- Using invented information, or falsifying any information, data or documentation

Cheating- Misleading others to believe you have achieved competencies or other outcomes that you have not achieved. Examples include, but are not limited to:

1. Copying from someone else's work
2. Allowing someone to copy from you
3. Using materials or information to complete an assignment without permission from your instructor
4. Collaborating on an assignment, quiz, or test without permission from your instructor
5. Taking a test, quiz, or doing an assignment for someone else, or permitting someone else to do this for you

Academic Misconduct – Other academically dishonest acts such as tampering with grades, taking part in disrupting any part of an assignment, or buying products such as papers or projects

All regulations and policies can be found in the college catalog on the Jackson Community College web site at (www.jcc.mi.edu).