

## AC/DC Motor Controls (INTC 1457 1B1)

### CREDIT

4 Semester Credit Hours (3 hours lecture, 4 hours lab)

### MODE OF INSTRUCTION

Hybrid

### PREREQUISITE/CO-REQUISITE:

CETT 1403 & CETT 1405

### COURSE DESCRIPTION

A study of electric motors and motor control devices common to a modern industrial environment. A presentation of motor characteristics with emphasis on starting, speed control, and stopping systems.

### COURSE OBJECTIVES

Upon completion of this course, the student will be able to

1. Describe the types of electric motors.
2. Explain the operation and function of various motor control devices.

### INSTRUCTOR CONTACT INFORMATION

Instructor: Minus Hargrave

Email: [mjhargrave@lit.edu](mailto:mjhargrave@lit.edu)

Office Location: PATC 209

Office Hours: TR 10am-11am. Additional hours posted on office door.

### REQUIRED TEXTBOOK AND MATERIALS

1. *Electrical Motor Controls 5<sup>th</sup> Edition* by Gary J. Rockis & Glen A. Mazur
  - a. ISBN number is 9780826912268
2. *Electrical Motor Controls 5<sup>th</sup> Edition* Workbook
  - a. ISBN number is 9780826912275
3. Notebook
4. Pencils (NO WORK IN PEN WILL BE ACCEPTED)

### ATTENDANCE POLICY

Students must be in class in order to complete lab activities for that day.

1. Missing 20% (6) or more of classes will result in an automatic F for the course.
2. Missing more than 20% of a class period will count as an absence.

Approved: 08/15/2024



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**DROP POLICY**

If you wish to drop a course, you are responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an “F” in the course.

**COURSE CALENDAR**

<b>Assignment Name</b>	<b>Due Date and Time</b>	<b>Location</b>
<b>Practice Syllabus Quiz Practice Assignment Introduction Discussion Netiquette Discussion</b>	Sunday, January 26, 2025 11:59PM	Getting Started Folder
<b>Bench Lab 1- Intro Lab</b>	Thursday, January 30, 2025	In Class
<b>Chapter 2 Review</b>	Sunday, February 2, 2025 11:59PM	Unit 1 Folder
<b>Trainer Labs 1-3</b>	Thursday, February 6, 2025	In Class
<b>Chapter 1-4 Lab Packet</b>	Thursday, February 6, 2025	In Class
<b>Chapter 3 Review Chapter 4 Review</b>	Sunday, February 9, 2025 11:59PM	Unit 1 Folder
<b>Trainer Labs 4-6</b>	Thursday, February 13, 2025	In Class
<b>Quiz 1</b>	Friday, February 14, 2025 11:59PM	Unit 1 Folder
<b>Exam 1</b>	Sunday, February 16, 2025 11:59PM	Unit 1 Folder
<b>Bench Lab 2- CR Lab</b>	Thursday, February 20, 2025	In Class

<b>Chapter 5 Review</b>	Sunday, February 23, 2025 11:59PM	Unit 2 Folder
<b>Bench Lab 3- Run/Jog CR</b>	Thursday, February 27, 2025	In Class
<b>Bench Lab 4- Man/Auto CR</b>	Thursday, February 27, 2025	In Class
<b>Chapter 5-7 Lab Packet</b>	Thursday, February 27, 2025	In Class
<b>Chapter 6 Review Chapter 7 Review</b>	Sunday, March 2, 2025 11:59PM	Unit 2 Folder
<b>Lab Exam 1</b>	Thursday, March 20, 2025	In Class
<b>Quiz 2</b>	March 21, 2025 11:59PM	Unit 2 Folder
<b>Exam 2</b>	Sunday, March 23, 2025 11:59PM	Unit 2 Folder
<b>Trainer Labs 7-8</b>	Thursday, March 27, 2025	In Class
<b>Chapter 8 Review Chapter 12 Review</b>	Sunday, March 30, 2025 11:59PM	Unit 3 Folder
<b>Trainer Labs 10-11</b>	Thursday, April 3, 2025	In Class
<b>Quiz 3</b>	Friday, April 4, 2025 11:59PM	Unit 3 Folder

<b>Exam 3</b>	Sunday, April 6, 2025 11:59PM	Unit 3 Folder
<b>Bench Lab 5 - Run/Jog Motor Starter</b>	Thursday, April 17, 2025	In Class
<b>Trainer Lab 19</b>	Thursday, April 17, 2025	In Class
<b>Chapter 9 Review Chapter 10 Review</b>	Sunday, April 20, 2025 11:59PM	Unit 4 Folder
<b>Bench Lab 6- Man/Auto Motor Starter</b>	Thursday, April 24, 2025	In Class
<b>Trainer Lab 13</b>	Thursday, April 24, 2025	In Class
<b>Chapter 13 Review Chapter 14 Review</b>	Sunday, April 27, 2025 11:59PM	Unit 4 Folder
<b>Lab Exam 2</b>	Thursday, May 1, 2025	In Class
<b>Quiz 4</b>	Friday, May 2, 2025 11:59PM	Unit 4 Folder
<b>Exam 4</b>	Sunday, May 4, 2025 11:59PM	Unit 4 Folder
<b>Lab Final</b>	Thursday, May 8, 2025	In Class
<b>Final Exam</b>	Friday, May 9, 2025 5:00 PM	Final Exam Folder

<p><i>Due dates are subject to change. Refer to Blackboard for official due dates.</i></p>		
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## **COURSE EVALUATION**

Final grades will be calculated according to the following criteria:

EXAMS\*- 30%

Labs (Daily & Lab Exams)- 50%

Quizzes/Assignments- 20%

\*There will be 4 major EXAMS and a FINAL EXAM. If you choose to *not* take the FINAL, your Exam Average of your first 4 exams will be used as your FINAL EXAM grade.

## **GRADE SCALE**

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

## **TECHNICAL REQUIREMENTS**

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at <https://lit.edu/online-learning/online-learning-minimum-computer-requirements>. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

## **DISABILITIES STATEMENT**

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email [specialpopulations@lit.edu](mailto:specialpopulations@lit.edu). You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

## **STUDENT CODE OF CONDUCT STATEMENT**

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at

[www.lit.edu](http://www.lit.edu). Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

### **ARTIFICIAL INTELLIGENCE STATEMENT**

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI/ChatGPT in their courses

### **STARFISH**

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

### **ADDITIONAL COURSE POLICIES/INFORMATION**

1. ALL work should be completed in PENCIL! Work submitted in pen will receive a ZERO.
2. No food, drinks, or use of tobacco products in class.
3. No foul or harsh language will be tolerated
4. Turn off all Cell Phones during lectures, unless otherwise instructed by me
5. Clean up work station after you complete your lab assignments. Materials left at work station will result in 10 points deducted from that lab assignment.
6. Take care of tools and equipment used during class.
7. Headphones may be worn only upon Instructor approval.
8. Do not bring children to class.
9. No Cheating of any kind will be tolerated. Students caught cheating or helping someone to cheat can and will be removed from the class for the semester. Cheating can result from expulsion from LIT.
10. Students must have access to, and knowledge of basic computer functions (including

Blackboard)

11. Students should check Blackboard daily.
12. Internet Usage
  1. Classroom computers have access to the internet.
  2. Student usage of the internet will be monitored.
  3. Proper usage of the internet will be allowed for classroom research, classwork, tests, and assignments as directed.
  4. Any unauthorized usage of the Internet will not be tolerated.
  5. Improper usage of the Internet, such as profanity, nudity, gambling, etc. will result in disciplinary action.
13. **There will be NO make-up Exams.** If you miss an Exam for any reason, you automatically forfeit your possible exemption from the Final.
14. **There will be NO make-up Labs.**
15. There will be a 20 point penalty **for each day** deducted from late work (**daily assignments only**).