



Course Syllabus

FYL: Learning by Doing Robotics (1-Credit)

1. Professor:

Yiyan Li: SFH 2755B, yiyanni185@gmail.com, yli@fortlewis.edu

Office Hours: Office hours will be on Microsoft Teams (virtual) for Fall 2021.

The Office hours will be MWF 9 am - 11 am, 8/30/2021 – 10/18/2021.

Join on your computer or mobile app

[Click here to join the meeting](#)

Send me an email if you need to talk with me in person. I'll make myself available to you if I can.

Time: Monday 15:35 - 17:35 pm (8/30/2021 – 10/18/2021)

There will be a 10 min break at 16:30 pm.

Location: Sitter Family Hall 760

2. Course Overview

This First Year Launch course covers basic electrical circuit theories, bench top electronics equipment operations and robot car design. Topics regarding engineering career development, research and industry resources at Fort Lewis College, and internship opportunities will also be introduced.

3. Course Topics and Schedule. Please visit www.yilectronics.com, under the tag 'Teaching' to find the instructions, homework assignments, and other information.

Weeks	Dates	Lectures
Week 1	Aug 30	Introduction to the Course
Week 2	Sep 6	Voltages and Currents
Week 3	Sep 13	Digital Signals
Week 4	Sep 20	Lab Equipment Operation

Week 5	Sep 27	Robot Car Design
Week 6	Oct 4	Robot Car Design
Week 7	Oct 11	Robot Car Design
Week 8	Oct 18	Robot Car Design

4. Course Learning Outcomes (with associated ABET criteria):

After completing FYL: Smart Robot Car Design students will be able to:

- Understand the operation of the IR transmitters. (1, 2)
- Build a simple circuit on a breadboard (1, 2)
- Design an analog line follower robot car (1, 2)
- Design a PCB for the robot car's circuits. (1, 2)

5. Engineering Program Student Learning Outcomes (ABET criteria)

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

6. Prerequisite

None

7. Textbook

No Textbook is required for this class. Visit www.yilectronics.com for tutorials and instructions.

8. Grading, Homework assignments, Quizzes, and Exams

Homework assignments and quizzes 50%, Robot functionality 50%.

A: 93-100, A-: 90-92, B+: 87-89, B: 83-86, B-: 80-82, C+: 77-79, C: 73-76, C-: 70-72, D+: 67-69, D: 63-66, D-: 60-62, F: <60

Homework assignments are lab reports that you should upload to the website. (Instructions for how to do this will be available to you).

Quizzes will be done in class. I'll notify you 1 week prior to the day that has a quiz.

There are not exams for this course.

9. Policies

Regularly being tardy for lectures, leaving in the middle of lectures, or earlier from lectures is unacceptable without prior consent of the instructor.

Cheating or plagiarism will result in an automatic F grade in the course (so do your own homework and projects).

*****"Fort Lewis College is committed to providing all students a liberal arts education through a personalized learning environment. If you think you have or you do have a documented disability which will need reasonable academic accommodations, and/or if you are a Veteran who may need services, please contact the Disability Services Office, 280 Noble Hall, 970-247-7383, disabilityservices@fortlewis.edu for an appointment as soon as possible."

Land Acknowledgement:

Please consider adding a Land Acknowledge to your syllabus. See the President's Office Land Acknowledgement page (<https://www.fortlewis.edu/about-flc/leadership/presidents-office/landacknowledgment>) for the current FLC Land Acknowledgement.

Basic Needs Statement:

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their learning experiences is urged to contact Kate Suazo, *Professional Advocate and Case Manager*, for support (cmsuazo@fortlewis.edu; 970-822-8728).

FLC students may be eligible for SNAP benefits. Please contact Marissa Hunt, *Resource Center Manager* at Manna. 970-385-5095, ext. 3, or email: services@mannasoupkitchen.com.

In addition, the [FLC Grub Hub](#) is a student-led, food justice organization committed to serving students and their families by sharing free food for all. Please come visit the Grub Hub in their new location in the Student Union across from the post office to learn more.

Reach Out for Success Statement:

College students encounter setbacks from time to time. If you encounter difficulties and need assistance, it's important to reach out. Consider discussing the situation with an instructor, academic advisor, peer support office, or counselor. Learn about resources that assist with wellness and academic success at: <https://www.fortlewis.edu/life-at-flc/student-services/student-affairs/student-affairs-home>

If you or someone else is in immediate crisis, please call the local 24-hour crisis hotline (970) 247-5245, call the Colorado 24-hour crisis hotline (844) 493-8255, text "TALK" to 382555, or call the FLC Counseling Center during regular business hours (970) 247-7212.

Students as Parents Statement:

I am aware that it can be challenging to be a parent while enrolled in college courses and want to support parents to successfully pursue their education. If you are unable to attend class due to children's illnesses or unforeseen disruptions in childcare, please contact me.