



# Chandler Unified School District

## EGR730 Engineering – Automation and Robotics

### SY 2023-24



## Course Overview

### Course Description

This course introduces Automation and Robotics. Students will collaborate to build mechanisms with VEX parts and use them in Design Challenges, learn computer programming with RobotC, and accept challenging projects that connect VEX builds to RobotC.

### AP/IB/Dual Enrollment

No

### Prerequisite/Fee(s)

None

### Course Materials

Class materials will be provided. However, donations are always appreciated.

We consistently need:

- recyclables like toilet paper, wrapping paper and paper towel holders
- foam sheets
- felt sheets
- small cups
- pipe cleaners
- old Lego parts or other building system pieces
- any additional crafting supplies (Dollar Tree/Walmart)

### Adopted Resource(s)

The district directed curriculum for this class includes programming and the use of Vex parts. In this class, I will be teaching C++ programming language for coding. Python will be an option for some students who have a strong understanding of the language.

*\*An asterisk will indicate a resource containing sexually explicit materials per legislative definitions. CUSD has determined that all resources listed above are of exceptional educational value.*

## Site and Faculty Information

### School name and address:

Arizona College Prep Middle School, 1150 W Erie St, Chandler, AZ 85224

### Building principal:

Manjula Reddy  
reddy.manjula@cusd80.com

### Teacher:

AnnMarie Filiere BA  
filiere.ann@cusd80.com

**Office hours:** Monday and Wednesday 7:15 - 7:45

## Course Access

This course is taught in-person at Arizona College Prep Middle School. Students will have access to the curriculum and instruction in the classroom. Google Classroom is the primary location for students to access material when absent from classes taught in person.

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## Help

### Academic Support

- Contact the teacher to schedule an appointment during office hours
- [Ed Tech](#) support for students, parents/guardians, and community link ([cusd80.com/Page/45109](https://cusd80.com/Page/45109))

### Mental Health Support

- CUSD mental health support [cusd80.com/Domain/10528](https://cusd80.com/Domain/10528) or 480-573-8808 (talk or text)
- Suicide & Crisis Lifeline: 9-8-8 hotline
- 24-hour Crisis Line Talk: 602-222-9444, Text: 741-741

## Student Conduct, Success, and Responsibilities

### Student Handbook

Students must follow the policies and procedures established in the Student Handbook. Copies of the handbook can be found at [cusd80.com/handbooks](https://cusd80.com/handbooks). Printed copies will be provided upon request.

### Student Responsibilities

Class expectations are to come with a positive attitude, be respectful to everyone and give class your best effort.

You will be working with very expensive and potentially dangerous tools and materials. It is very important that you always use them appropriately, safely and with care. If something accidentally breaks, please inform Mrs. Filiere immediately. Students who damage or destroy equipment, parts, or tools because of inappropriate behavior will be required to pay a fee to replace materials in addition to having behavior consequences.

### Late work

Most work is completed in class since students will be working in teams. Students will be utilizing classroom materials and computers for their problem-based learning. There is rarely any homework. All projects have deadlines and if students need extra time to complete an assignment because of different work paces or various levels of difficulty, I will work with them on a new timeline. My goal is to make everyone proud of the work they create. There will not be a penalty for late work as long as the student communicates with me.

## Assessments and Assignments

Students will complete assessments during each unit of study to assess their understanding. Students will complete the CUSD Common Final at the end of the first and second semesters. The Common Final will count for 20% of the student's final semester grade in grades 9-12 and 10% in grades 7-8 (some exceptions may apply at the Junior High level). Common finals will be in ELA, Math, Science, Social Science, and World Language.

Final exams will be given during the CUSD Jr High/High School Early Dismissal days in December and May, as identified on the [District Calendar](#).

If students are requested to participate in a survey, the survey questions will be provided to parents/guardians seven days before student contact.

## Grading

### Grade Percentage

A	B	C	D	F
90% - 100%	80% - 89%	70% - 79%	60% - 69%	<60%

### Quarter grades

Students have every opportunity to earn an "A" in this class if they are respectful, hardworking, follow directions and work positively with peers. Each project has a rubric with a set of criteria and constraints. Students will provide input, assessing how well their project solution matches the criteria provided.

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Students will also be given the opportunity for personal growth reflections as well as offering feedback on teammates during collaborative projects.

During problem-based learning time, students will be completing self-reflections based on the criteria below:

- I follow our class norms.
- I am kind and respectful to everyone.
- I am a diligent and dedicated team member demonstrated by my efforts to ensure project success.
- I demonstrate a high level of focus, perseverance, and on-task behavior.
- I always have a positive attitude, even if things are not going so well during challenges.
- I collaborate positively by listening to and respecting varying opinions, effectively communicating, and engaging in compromise.
- I maintain self-control and do not interfere with a student's right to learn.
- I take responsibility for my words and actions.
- I have academic integrity.
- I work safely with tools and take care of all materials. If something accidentally breaks, I notify Mrs. Filiere immediately.
- I help contribute to a positive classroom environment including during clean-up.
- I understand that Mrs. Filiere is here to help support my personal, social and academic growth; I can reach out to her at any time.

### **Semester grades**

Semester grades are calculated using 40/40/20: Each quarter accounts for 40% of the semester grade and the final exam accounts for the remaining 20%.

## **Units of study**

### **Units for EGR730 Engineering – Automation and Robotics**

Engineering Practices/Design Process  
Vex V5 Parts  
Gear Ratios/Speed Versus Torque  
Mechanisms  
Engineers' Contributions to Society  
Programming in C++  
Automated Engineering Applications

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**Building Principal:** Manjula Reddy, reddy.manjula@cusd80.com  
**Teacher:** AnnMarie Filiere, filiere.ann@cusd80.com

## Parent/Guardian

### Acknowledgment

Parents/Guardians should indicate if they “Acknowledge” or have a “Potential Conflict” with their student’s participation in the following units by checking the appropriate box for each unit of study listed. Students cannot opt out of a standards-based unit. Marking “Potential Conflict” will prompt the teacher to make contact regarding assignment alternatives.

Unit of study	Acknowledge	Potential Conflict
Engineering Practices/Design Process		
Vex V5 Parts	<input type="checkbox"/>	<input type="checkbox"/>
Gear Ratios/Speed Versus Torque	<input type="checkbox"/>	<input type="checkbox"/>
Mechanisms	<input type="checkbox"/>	<input type="checkbox"/>
Engineers' Contributions to Society	<input type="checkbox"/>	<input type="checkbox"/>
Programming in C++	<input type="checkbox"/>	<input type="checkbox"/>
Automated Engineering Applications	<input type="checkbox"/>	<input type="checkbox"/>

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**By signing and returning this form**, the parent/guardian acknowledges they have reviewed the resources and units of the study included in the syllabus.

- As the parent/guardian, I understand that I may contact the teacher if I have questions about the resources, content, or units of study.
- As the parent/guardian, I understand I can check my student’s grades in Infinite Campus anytime during the school year.

Student name (printed) \_\_\_\_\_

Student signature \_\_\_\_\_

Parent/Guardian name (printed) \_\_\_\_\_

Parent Signature \_\_\_\_\_

Date \_\_\_\_\_

**Please return this page to your student’s teacher.**