MISSION TRAILS
REGIONAL OCCUPATION PROGRAM

1. **COURSE TITLE:** Robotics 1

2. **CBEDS TITLE:**

3. **CBEDS NUMBER:**

4. **JOB TITLES:**

5. **COURSE DESCRIPTION**: Students will work in engineering teams to design, build and test increasingly complex robots. The course will illustrate the engineering design process, the importance of integrating sensors, effectors and control, and briefly discuss robot learning and multi-robot systems. In the lab, robots will be used to solve weekly challenges. The course culminates in a final project where student teams design, build and program a robot for a final competition.

6. **HOURS:**
7. **PREREQUISITE:**

Industry Sector Pathway: Engineering and Architecture / Engineering Design

Participatory	Concentration 10th, 11th or 12th Block Schedule only (pre-requisite courses)	Capstone 11th or 12th Block Schedule only (students must pass pre-req.)
Introduction to Engineering and Design	**Robotics 1**	**Robotics 2**

8. **REVISION DATE:**

9. **COURSE OUTLINE:**

   CONTENT AREA SKILLS:

   i. EXPECTED STUDENT OUTCOMES

COURSE OUTLINE

CONTENT AREA SKILLS	Pathway Standards	CTE Anchor Standard	EXPECTED STUDENT OUTCOMES	HOURS CL = Classroom CC = Comm. Class. CP = Co-op Ed.		
				CL	CC	CP
Instruction will include:			Student will be able to:			
Customization -						

10. COURSE OUTLINE:

b) **CAREER PERFORMANCE STANDARDS**

i) **EXPECTED STUDENT OUTCOMES**

ii) **HOURS OF INSTRUCTION**

COURSE OUTLINE

CAREER PERFORMANCE STANDARDS	EXPECTED STUDENT OUTCOMES	HOURS
Instruction will include:	**Student will be able to:**	
1. **Personal Skills**	1. **Understand how personal skill development, including positive attitude, honesty, self-confidence, time management, & other positive traits affect employability.** **.**	Integrated in content area skills
CAREER PERFORMANCE STANDARDS	**EXPECTED STUDENT OUTCOMES**	**HOURS**
Instruction will include:	**Student will be able to:**	
2. **Interpersonal Skills** **.**	2. **Understand principles of effective interpersonal skills, including group dynamics, conflict resolution, and negotiation.** **.**	Integrated in contnt area skills
3. **Thinking and Problem-Solving Skills**	3. **Understand the importance of critical thinking and problem-solving skills in the workplace.**	
CAREER PERFORMANCE STANDARDS	**EXPECTED STUDENT OUTCOMES**	**HOURS**
Instruction will include:	**Student will be able to:**	

4. **Thinking and Problem-Solving Skills**	4. **Understand the importance of critical thinking and problem-solving skills in the workplace.**	Integrated in content area skills
5. **Occupational Safety**	5. **Understand occupational safety issues, including avoidance of physical hazards**	Integrated in content area skills
CAREER PERFORMANCE STANDARDS	**EXPECTED STUDENT OUTCOMES**	**HOURS**
Instruction will include:	**Student will be able to:**	
6. **Employment Literacy** **.**	6. **Understand career paths and strategies for obtaining employment.**	Integrated in content area skills
7. **Technology Literacy** **.**	7. **Understand and adapt to changing technology.**	Integrated in content area skills

PATHWAY STANDARDS

California Career Technical Education Model Curriculum Standards

CAREER READY STANDARDS

1. Apply appropriate technical skills and academic knowledge.
2. Communicate clearly, effectively, and with reason.
3. Develop an education and career plan aligned to personal goals.
4. Apply technology to enhance productivity.

5. Utilize critical thinking to make sense of problems and persevere in solving them.
6. Practice personal health and understand financial well-being.
7. Act as a responsible citizen in the workplace and the community.
8. Model integrity, ethical leadership, and effective management.
9. Work productively in teams while integrating cultural/global competence.
10. Demonstrate creativity and innovation.
11. Employ valid and reliable research strategies.
12. Understand the environmental, social, and economic impacts of decisions.

CTE ANCHOR STANDARD
CCSS Standards are addressed throughout the course content.

Anchor Standard 1:
Anchor Standard 2:
Anchor Standard 3:
Anchor Standard 4:
Anchor Standard 5:
Anchor Standard 6:
Anchor Standard 7:
Anchor Standard 8:
Anchor Standard 9:
Anchor Standard 10:
Anchor Standard 11:

11. **ADDITIONAL RECOMMENDED /OPTIONAL ITEMS**

    a. **ARTICULATION:**

    b. **VOCATIONAL CREDIT:**

    c. **ACADEMIC CREDIT:**

    d. **INSTRUCTIONAL STRATEGIES:**

    e. **INSTRUCTIONAL MATERIALS:**

    f. **CERTIFICATES:**   Certificate of Completion, indicating level of skills