

## Construction Technology 1 Course Syllabus

<b>Course Title:</b>	<b>Construction Technology 1</b>
<b>Teacher:</b>	<b>Mr. Bui</b>
<b>Contact Information:</b>	<b>Email: <a href="mailto:sbui@mvrop.org">sbui@mvrop.org</a> Phone: (510)657-1865 ex15602</b>
<b>Class Location:</b>	<b>MVROP Main Building Room 602</b>
<b>Class Schedule</b>	<b>Mon, Tue, Thu, Fri:</b> <ul style="list-style-type: none"><li>● Block 1: 8:30 – 10:30</li><li>● Block 2: 10:40 - 12:00</li><li>● Block 4: 1:30 – 3:30</li></ul>
<b>CTE Course Industry Sector and Career Pathway:</b>	<b>Building and Construction Trades</b> <ul style="list-style-type: none"><li>● Carpentry</li><li>● Electrical</li><li>● Plumbing</li><li>● Drywall</li></ul>
<b>Course Credit:</b>	<b>10 credits/semester</b>
<b>Course Hours</b>	<b>2 semesters/360 hours</b>
<b>Grades</b>	<b>10-12</b>

### Mission Valley ROP School Learning Outcomes (SLOs)

Upon successful completion of this course, students will be able to demonstrate the following skills necessary for entry-level employment:

#### ***Workplace Basic Skills and Behaviors***

1. Apply skills learned in class
2. Analyze information and make decisions
3. Communicate verbally and in writing
4. Work independently and as a team member in a diverse workplace
5. Work reliably, responsibly, and ethically

#### ***Career Technical Skills***

1. Demonstrate occupational competencies
2. Use appropriate technology
3. Understand and practice occupational safety standards
4. Demonstrate an awareness of how a business or industry functions

### ***Job Employment Skills***

1. Develop a plan to achieve career goals
2. Use effective job search strategies
3. Demonstrate an awareness of the importance of lifelong learning

### **COURSE DESCRIPTION:**

This course is designed to help high school students develop skills and knowledge to prepare them for a career in the building and construction trades. Students will learn and practice different areas of the construction field: carpentry, electrical, plumbing, drywall. The class is designed for learning through lectures and hands-on lab. Students will learn building codes and how to build using various materials. Students will learn techniques for wiring and plumbing a residential and commercial building. Throughout the school year, guest speakers from the trades will come in and assist in teaching to help students get an idea of what the real world is doing. Numerous different Unions (DC 16: glazers, painters, flooring, and drywall. IBEW 595: Electrical. TCTNC: Carpenters) will stop by and talk about their different unions and the application process for becoming an apprentice. If students are interested, these advisors will assist students in becoming an apprentice.

### **Class Goals**

- Students will experience and gain entry level apprenticeship knowledge to the construction trades.
- Students will learn the proper safety of all machines and hand tools in the classroom.
- Students will develop skills to think critically about different projects and how to complete an assignment given to them.
- Students will gain the necessary skills to enter an apprenticeship in their preferred construction trade.

### **Student Learning Outcomes**

- Students will differentiate between different types of measurements used in the construction field.
- Students will recognize different safety hazards associated with different hand and machine tools.
- Students will be able to define and describe different aspects of a construction project.
- Students will be able to construct and create from reading blueprints.
- Students will be able to apply what they have learned in class to real life scenarios.

## Classroom Rules and Procedures:

### I. Classroom RULES are posted throughout the classroom.

#### A. Language:

- Students will show respect and courtesy towards all other students at all times. Hateful comments concerning race, gender, sexuality, political views, appearance, or any other types of negative language will not be tolerated.
- "I'm just kidding, It's just a joke" will not be accepted.

#### B. Safety:

- **PPE must be worn at all times in the workshop.** There are possibilities of wood chips and other materials that may accidentally go airborne and proper precaution must be taken.
- Always be aware of your surroundings before using any tools.
- If a tool is being used, make sure you are not disturbing the person using the tool and are out of harm's way.
- Proper footwear must be worn at all times. (No open toed or soft soled shoes)
- Long pants must be worn at all times. (Shorts, skirts and dresses are not allowed)

#### C. Directions:

- Always follow directions when given. This means do not argue when a teacher (myself or any other teacher) asks you to do something. (E.g. putting tools away, go to your seat, stop talking, etc.)

#### D. Physical contact

- Keep hands and feet to yourself.
- No rough housing, pushing, hitting, kicking or throwing things.

#### E. Attendance

- Come to class on time and **ready** to work.
  - Being on time to class but spending time to get ready (changing clothes, eating food, etc.) will be considered late.
- This is a hands-on class, missing class time means you will fall behind and will struggle to keep up.

## II. **Consequences**

- A. Everything in life has consequences. Consequences are not a punishment, it is a penalty that results from the options you choose. Consequences are what happens when you choose not to obey the rules. This is what will happen if you choose not to abide by the class rules and policies:
- 1<sup>st</sup> time: warning (I will usually look at you and let you know that I have marked you for your first offense)
  - 2<sup>nd</sup> time: 20 min tool room clean up and reorganization duties and 15 points off of daily work ethic grade.
  - 3<sup>rd</sup> time: class period tool room clean up and reorganization duties and 50 points off daily work ethic grade.
  - 4<sup>th</sup> time: Semester grade will be dropped by one full grade.
- B. **Violations**
- Consequences will be enforced during the quarterly grading period and will last until the end of the quarter and will be reset after the grading period.
- C. **Rewards**
- I always recognize students who choose the responsible thing to do. This class is designed to teach you the professionalism of the industry and if you are acting like a professional you will be rewarded for it. For example: extra credit points, additional time allowed on projects and possible omission of one bad project grade.

## **Classroom Procedures:**

### **Entering the classroom:**

- After you walk into the door, get your time card and mark the time and date of check in.
- Check the agenda to see what tools you will need for the day
- Go to your tool box and get the tools needed for the class.
- Get to work.

### **Late to class:**

- Being late for class means you have not gotten your time card when the bell has rung.
- Being late for class means that you are ready to work when the class starts. Arriving on time but not ready to work is considered late.

### **Work:**

- If you are in class you are expected to be doing work. There are always projects to do and you should know what the next assignment is. "I just finished my project" is not a good excuse. You should get to the next project.
- Always be next to your project while in class. "I was getting a tool" is not accepted since you should have already gotten all the tools needed at the beginning of class.

**Entering/leaving class:**

- When entering class, do so quietly.
- If another class is leaving, please wait in the yard until they are gone, then enter the room.
  - o Do not enter class while another class is in session.
- When leaving a class, please do so quietly without pushing or shoving. I will always give you enough time to catch the school bus.

**Completed projects:**

- All completed projects should have your names on it and placed in the completed shed.
- Once graded, grades will be posted on my office door.

**Respect:**

- Professionalism and respect is very important in this class. I will expect respect for myself and every individual that steps foot in this classroom.
- Treat others with respect. Name calling, profanity, teasing, or bullying will not be tolerated.
- Please use common courtesy.
  - o Please
  - o Thank you
  - o You're welcome
  - o Excuse/pardon me

**End of class procedure**

- When there is 15 mins left in class an alarm will ring and you will be expected to begin cleaning up.
- Take your tools back to the tool room and put your tool box away.
- Clean your workstation and all the debris that is around your area. (Put your workstation back against the wall and sweep your area)
- Look around the workshop for anything out of place and put it where it needs to be. (Stray tools that need to be put in the tool room, blue prints that need to be filed, etc.)
- When the work lab is cleaned, go back to the classroom, take a seat and wait to be dismissed.

**TEXTBOOKS, READINGS, AND OTHER MATERIALS:**

Textbooks are not required for the class, however, are available for reference in the classroom. OSHA-10 completion is required of all students.

**PREREQUISITES:**

Students must be able to handle general mathematics, both whole numbers and fractions. They must like to work outdoors and have the ability to work with their hands and tools in construction to build, fix and construct things. This will help in establishing the student as a skilled person that employers seek. Students must be able to use and carry items that weigh up to 45 lbs.

## **COURSE POLICIES:**

### **Attendance and tardiness**

Mission Valley ROP's mission is to prepare students for employment, and career preparation via post-secondary educational opportunities. Just as in business and industry, where employees are expected to show up on time every day, Mission Valley ROP students are expected to be on time for class every day. If your home school has a minimum day or an optional student event that may conflict with your Mission Valley ROP class, you are still expected to attend your Mission Valley ROP class.

Students will be required to use a timecard to assess their time in the classroom. Students will need to clock in and out of class daily. **Failure to do so will result in reduction marks on students' grades.**

Make up assignments will be given for **excused** absences only, which include medical, legal, bereavement circumstances or school testing. Failure to complete make-up assignments will adversely affect your grade.

Students must arrive on time to class. Talking on a cell phone or having personal conversations outside the class is unproductive and will be considered tardy. Tardiness reduces instructional time and is disruptive to the classroom. Tardies may prevent the student from receiving a course certificate. Excessive tardies equates to absences in the class. (5 tardies = 1 absence)

### **End of year Certificates of completion will be issued only to students that:**

- **Have no more than 10 absences.**
- **Have completed all assigned projects for a passing grade**
- **Receive at minimum a B grade in the class.**

**Failure to meet these requirements will result in not receiving a Certificate of Completion at the end of the year.**

### **Class participation:**

Class participation is dependent on class attendance and includes paying attention in class, talking in discussions and taking part in class lab/activities.

### **Classwork:**

Classwork is assigned on a daily basis and is done in class. Most assignments will consist of bookwork, takeoffs and lab construction projects. Grades will be assessed on completion, quality and craftsmanship of work created.

**Accommodations for students with disabilities or special needs will be made.**

## ASSESSMENT AND GRADING:

- Safety Tests: Will be given on every machine and hand tool that will be used. Grades will be multiple choice and short answers. Grading will be done on a pass/fail basis with no wrong answer allowed. Retakes are required.
- Quizzes: Students will be given quizzes upon completion of unit activity or project to assess understanding of material in the unit.
- Projects: Students will be graded upon completion of a given project on accuracy, timeliness and craftsmanship.
- Grade will be broken down as such:

Attendance - Prepared for class - Soft skills for employability	20%	This is a hands-on class. If the student is not present, punctual and ready for the class, projects cannot be completed and lectures cannot be learned. Students will be graded accordingly. The first tardy will be a warning, 5 points will be taken off for the second, 10 for the third, 25 for the fourth and a call home will be the final warning before a drop in grade. 5 tardies will equate to 1 absence, and 10 absences will disqualify students from receiving their Certificate of completion. Soft skills include: Verbal, non-verbal and written communication, listening and acting professionally.
Work Ethic	20%	Students must stay on task and continue to learn. These are all qualities that most employers are looking for. It is the duty of the student to learn and gain the work ethic necessary to be a productive person in this field. Students will receive a daily 100 points at the beginning of class and will drop depending on the severity of the actions. This includes: Not being on task, not working on the project assigned, not having the necessary tools to work and fraternizing.
Projects	40%	Grades are based on the timely completion and craftsmanship of projects.
Safety & clean up	10%	Students will be graded on safety (wearing proper eye gear, environmental awareness, using tools correctly) and if they have kept their stations and the shop clean. Although this may seem like a small percentage of the grade, if students are practicing procedures that are unsafe to themselves and/or others it will result in a drop in grade of failure of the class.
Exams & Quizzes	10%	Students will be graded on their knowledge of safety and materials learned in class.

## COURSE SCHEDULE:

Week 1: Introduction	
Week 2 – Week 3: <b>Measuring</b>	<ul style="list-style-type: none"> <li>• Tape Measures, rulers, architect rulers, speed squares and framing squares will be introduced</li> <li>• Worksheets on lengths, areas and volumes will be provided</li> <li>• Quiz at the end of unit</li> </ul>
Week 4 – Week 5: <b>Machine Safety and Operation</b>	<ul style="list-style-type: none"> <li>• All machine and hand tools will be introduced</li> <li>• Quiz upon completion of each tool</li> </ul>
Week 6 – Week 7: <b>Construction Building Materials</b>	<ul style="list-style-type: none"> <li>• Different materials will be introduced</li> <li>• Quiz at the end of unit</li> </ul>
Week 8 – Week 10: <b>Building Codes and Standards</b>	<ul style="list-style-type: none"> <li>• State building codes in different trades will be discussed</li> <li>• Quiz at the end of unit</li> </ul>
Week 11 – Week 13: <b>Introduction to Blueprints</b>	<ul style="list-style-type: none"> <li>• Residential/commercial plans will be discussed</li> <li>• Identification of schematics, layouts and symbols</li> <li>• Cut-lists and take-offs</li> <li>• Quiz at the end of unit</li> </ul>
Week 14 – Week 17: <b>Framing</b>	<ul style="list-style-type: none"> <li>• Framing a structure will be introduced including identification and installation of components</li> <li>• Grades will be based on projects built</li> </ul>
Week 18 – Week 21: <b>Roof Finishing</b>	<ul style="list-style-type: none"> <li>• Application of roofing material will be done</li> <li>• Components of roof finishing will be introduced including identification and installation</li> <li>• Grades will be based on projects built</li> </ul>
Week 22 – Week 24: <b>Exterior Components of Buildings (Windows, Doors, Wall &amp; Trim)</b>	<ul style="list-style-type: none"> <li>• Components of exterior installation will be introduced including identification and installation</li> <li>• Grades will be based on projects built</li> </ul>
Week 25 – Week 27: <b>Drywall</b>	<ul style="list-style-type: none"> <li>• Application of drywall and techniques of finishing interior walls</li> <li>• Grades will be based on projects built</li> </ul>
Week 28 – Week 31: <b>Electrical Wiring</b>	<ul style="list-style-type: none"> <li>• Components of electrical wiring and fixtures will be introduced, applied and constructed</li> <li>• Grades will be based on projects built</li> </ul>
Week 32 – Week 35: <b>Plumbing</b>	<ul style="list-style-type: none"> <li>• Components of plumbing will be applied and constructed</li> <li>• Grades will be based on projects built</li> </ul>



## **COURSE CONTRACT**

### **Student Contract**

**Name of School/Room Number:** Mission Valley ROP/ 602

**Course Name:** Construction Technology 1

**Instructor:** Mr. Bui

**Student:**

I have received a copy of the course syllabus. I agree to abide by all of the standards, requirements and classroom rules. I promise to complete my assignments on time. I will wear proper PPE while in class and understand that the class is a fully functioning construction site.

\_\_\_\_\_  
Student: Print Name

\_\_\_\_\_  
Student: Signature

\_\_\_\_\_  
Date

**Parent:**

I have read and discussed this syllabus with my student. My student and I are aware of the expectations of this course. I give my student permission to participate in all activities and discussion related to this course.

\_\_\_\_\_  
Parent: Print Name

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

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent Cell phone

\_\_\_\_\_  
Parent Home phone

\_\_\_\_\_  
Parent Email

My student has a 504 (circle one)   Y     N

My student has an IEP (circle one)   Y     N