Mission Valley ROP
Civil Engineering and Architecture
Syllabus **2023 - 2024**

Instructor: Maurice Brittain
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Room Number: **401**
Office Hours: By arrangement

Welcome to the class!

I am so happy that you have chosen my class for this year! I look forward to getting to know you and the others in class! I hope to be able to expose you to the many opportunities that lie within these two professions and also to answer any questions you might have that may help you with future decisions!

MVROP "SLO" SCHOOL LEARNING OUTCOMES

WORKPLACE BASIC SKILLS AND BEHAVIORS

- Apply skills learned in class
- Analyze information and make decisions
- Communicate verbally and in writing
- Work independently and as a team member in a diverse workplace
- Work reliably, responsibly, and ethically

CAREER TECHNICAL SKILLS

- Demonstrate occupational competencies
- Use appropriate technology
- Understand and practice occupational safety standards
- Demonstrate an awareness of how a business or industry functions

JOB EMPLOYMENT SKILLS

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

Overview of the Course

Students will have an opportunity to explore in greater depth, the variety of careers available in the fields of architecture and civil engineering. The architecture component will address the design process necessary for building design. This includes the incorporation of many parameters, such as: client wishes, building and zoning codes, cost consideration and energy efficiency, among others. The engineering component of the course will study many avenues of civil engineering including structural design, water management, soil analysis, site surveying, wastewater treatment and energy efficiency. Students will learn hand sketching, hand drafting and **Autodesk *Revit*** 3D design software to design and document solutions for major course projects. Students will communicate and present solutions to their peers and others. Model

building and exposure to construction methods are also included in the course. This course is designed for 11th or 12th grade students.

The class is considered a STEM course and utilizes coursework developed by **Project Lead the Way (PLTW)**, a nationally recognized leader in technology and engineering curricula.

Course Objectives

- Become familiar with the design process and learn creative approaches to problem solving
- Experience the design and development processes for residential and commercial projects
- Learn freehand sketch techniques to assist in creating and conveying design concepts
- Gain an understanding of the life safety concerns behind building codes
- Become familiar with industry standard documentation and drawings
- Experience solving a variety of engineering problems and have an opportunity to discover what areas might be of most interest to them
- Gain experience in public speaking through through several opportunities to present design solutions to a panel of peers and others
- Exercise practical application of mathematical skills by solving engineering and architectural problems, typical of those found in practice

Supplies Needed

- Two inch, three ring binder
- Black pens, pencils and eraser
- 4 GB Flash Drive (optional)

Grading Policy

Grading is based on your completion of all assignments, attendance, quizzes, tests and work ethic. Your final grade in the course will be based on the following percentages:

Grading
Will be determined by percentage of accumulated points, out of total available points.
Students Earned Points / Total Possible Points = Grade %
Numbers represent student grade in % with corresponding letter grade.

98 > A+	84 - 87 B	70 - 73 C-
94 - 97 A	80 - 83 B-	65 - 69 D
90 - 93 A-	78 - 79 C+	55 - 64 D-
88 - 89 B+	74 - 77 C	

“Work Ethic” Grade: Attendance, Participation and Citizenship:

As this is an interactive, project based class, I need your full attention and participation while in class. Your “Work Ethic” grade reflects your effort, your earnestness and your respect of the Classroom Rules. As an ROP instructor, I am committed to preparing you for success in the workplace. In the working world, a strong Work Ethic can positively affect your salary, raises, bonuses etc. Similarly, a poor Work Ethic can cause you to be passed up for such advancements or, ultimately, even loss of your job. I will be reviewing your Work Ethic as would a future employer.

Attendance:
To excuse an absence a parent or guardian must either email me directly or call MVROP. Calling your home school does not get the message relayed to us. I need to hear from the parent or guardian by 5:00 pm on the day of absence. You can reach me at my email: mbrittain@mvrop.org

> ***NOTE:*** *A call to your home school attendance office* ***does not*** *clear your absence for MVROP classes. I must be notified directly, via email, by the parent or guardian if a student is absent.*
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> ***NOTE:*** *It is the policy of Mission Valley ROP that if you are tardy or miss an MVROP class, multiple times, your grade will likely be adversely affected.*
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> ***NOTE:*** *This is a project based class and much of the work is done in class. Group projects in particular will be difficult to make up. Remember that a team member's absence causes a strain on the rest of the team. Make up assignments will be given for excused absences only.*

Late Work:
Late work will be accepted and graded as follows:
1 Day Late: - 25%
2 – 7 Days Late: - 50%
NOTE: Late Work will NOT be accepted after 1 week.

Extra Credit:
I very seldom offer opportunities for Extra Credit. Every student is eligible to earn an "A", if they complete all the assignments on time, have regular attendance and adhere to the classroom rules, modeling a good Work Ethic.

Classroom Expectations:

- **Be PROMPT**: in your seat and ready to work by 1:30
- **Be PREPARED**: Have your pencils, pens, planner with you every day
- **Be RESPECTFUL**: Simply stated, treat others how you would like others to treat you
- **Be ALERT**: I want to hear your ideas, your thoughts, your questions…everything!

Classroom Rules:

- **NO CELL PHONES or other personal electronic devices** allowed in Zoom sessions or in the classroom. Cell phones need to remain Off and Away, unless I have specifically given you instructions to use them for an assignment.
- **NO talking** when someone else is talking during class discussions.
- **NO food or drink** allowed in the classroom.

PLTW Civil Engineering and Architecture 2023-24

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Contract Agreement:

By signing this document, you are agreeing to the policies/regulations listed in the Course Syllabus/Outline. You also state that you fully understand the policies and consequences.

_____ _____

Student Signature Date

_____

Print Student Name

_____ _____

Parent Signature Date

_____

Print Parent Name