Construction Management I

Construction Management II

Building Maintenance 1

(2 Credits)

Course Description

This course provides students with the foundational knowledge and skills required for a career in construction management, as well as a strong base for post-secondary education in architecture or engineering. Students will learn about professional standards, construction materials, systems, design processes, and quality control. The course will emphasize the application of academic skills—specifically verbal and written communication, estimation, and blueprint interpretation—to real-world construction projects. Students will use drawing and blueprints to build projects in individual settings and in team settings.

Instructor Information

- **Instructor:** David Luce
- **Email:** David.Luce@saisd.org

Learning Objectives (Based on TEKS §130.46)

Upon successful completion of this course, students will be able to:

The student demonstrates professional standards/employability skills as required by business and industry.

- (A) Identify employment opportunities and career preparation requirements in construction management.
- (B) Understand group participation, leadership, and employer expectations.
- (C) Apply competencies related to resource technology and health and safety regulations.

The student applies academic skills to the requirements of construction management.

- (A) Demonstrate effective verbal and written communication skills with various stakeholders.
- (B) Complete work orders and related paperwork.
- (C) Estimate jobs and schedules and understand industry standards and legal

restrictions.
- (D) Read and interpret architectural symbols, blueprints, and manuals.

The student gains knowledge about building materials used in the construction industry.

- (A) Identify and describe various types of construction materials (lumber, concrete, steel, etc.) and methods.
- (B) Calculate quantities of lumber and other products using industry-standard methods.
- (C) Describe the proper handling, storage, and use of fasteners and adhesives.

The student describes how a systems model can be used to describe construction activities.

- (A) Apply the universal systems model to construction activities, identifying inputs, processes, outputs, and feedback.
- (B) Describe the subsystems used in construction, such as mechanical, electrical, and fluid systems.

The student selects and uses the proper construction technology to meet practical objectives.

- (A) Distinguish between architectural and civil construction systems.
- (B) Apply construction technology to solve problems.

The student designs an item for construction using appropriate design processes and techniques.

- (A) Describe design processes and develop a building or structure to meet specified needs.
- (B) Identify areas where quality, reliability, and safety can be incorporated into a design.

The student investigates emerging and innovative construction technologies.

- (A) Report on new construction technologies through research and experimentation.

The student describes quality and how it is measured in construction.

- (A) Describe different quality control applications.
- (B) Apply continuous quality improvement techniques to a construction project.

Grading Policy

There will be 9 minor grades per 9-week grading period, which will be 40% of the grade.
There will be 3 major grades per 9-week grading period, which will be 60% of the grade.

Required Materials

- Pencil, pen, notebook
- Basic personal protective equipment will be provided which includes (safety glasses, face shields, gloves, hearing protection and dust masks. Students are welcome to bring their own personal protective equipment if it is ANSI approved.
- Closed-toe shoes (required for all lab days)

Classroom & Lab Expectations

- Always follow all safety rules. Failure to do so will result in immediate removal from the lab.
- Arrive at class on time and be prepared.
- Respect all tools, equipment, and classmates.
- No cell phones and personal devices will be allowed during class. Make sure they are put away and silenced.

ELECTRONIC DEVICE PROCEDURES

The Student Code of Conduct, in accordance with **House Bill 1481**, prohibits the use of electronic communication devices, including cell phones, smartwatches, wireless/bluetooth earbuds and headphones, paging devices, tablets, or gaming devices while on campus during the school day.

PROCEDURES:

Any adult on campus who sees a student using a device on campus during the school day will:

1. Confiscate the device
2. Lock it in a designated location
3. Write a referral
4. Turn in the device to the Administrator's office

Using - defined as out and visible
School day - defined as the time from the first bell to the last bell of the day (including

passing periods and lunch).
On Campus - defined as the campus property

CONSEQUENCES:

First Offense:

1. Parent must come to sign the device out of the office
2. Parent signs stating they understand further consequences if the student has another infraction.
3. The student receives a verbal warning.

Second Offense:

1. The device is confiscated for three days.
2. Parent must come to sign the device out of the office.

Third Offense:

1. The device is confiscated for 10 days.
2. Parent must come to sign the device out of the office

Any additional offenses:

1. Device is confiscated for 90 days.
2. Parent must come to sign the device out of the office

Refusal to turn over the device to school staff:
If a student refuses to turn in their device, it will be considered defiance and a failure to comply with an administrative directive.

- Consequences will result in an out-of-school suspension.

This syllabus is a living document and may be subject to minor changes throughout the semester to best meet the needs of the students.