



CHELMSFORD HIGH SCHOOL

Introduction to Architectural Design and Civil Engineering Syllabus 2023-2024

COURSE DESCRIPTION

10 Credits (#69523), Grade 9 - 12

Architecture and Civil Engineering is the study of the design and construction of residential and commercial building projects. The course includes an introduction to many of the varied factors involved in building design and construction including building components and systems, structural design, stormwater management, site design, utilities and services, cost estimation, energy efficiency, and careers in the design and construction industry.

Prerequisite(s): None

REQUIRED TEXTS

None

COURSE GOALS and STUDENT LEARNING OUTCOMES:

By the end of the course, students will be able to...

- Read and understand technical drawings
- Plan and design Using the Engineering Design Process
- Use Appropriate tools to solve architecture and civil engineering problems

COURSE STANDARDS

[DESE STANDARDS LINK](#)

PERSONS WITH DISABILITIES

Chelmsford High School is committed to supporting the success and well-being of all students, regardless of varying abilities and levels of adaptive skills. The Special Education office provides services and resources to empower each student to attain their highest level of academic success and learning independence.

ACADEMIC INTEGRITY

At Chelmsford High School, students are expected to maintain high moral and ethical standards, as exemplified by the final sentence of our mission statement: *"A spirit of respect is fostered, as members take responsibility for their actions and acknowledge the rights and differences of others."* (CHS Mission Statement)

Students should respect themselves, other students, staff members and the school. The acts of cheating and plagiarism violate expectations that students will exhibit respectful, ethical behavior.

[The Academic Honor Code](#) exists to address the issues of cheating and plagiarism.

GRADING POLICIES

Please connect with individual teachers for specific information regarding grading. Students will be able to monitor academic progress biweekly through X2/ASPEN.

Students are strongly encouraged to take advantage of the academic support programs and services (such as PRIDE Block, after-school help, etc.) available to them to help ensure and support success. Information about these services can be provided by your teacher, guidance counselor, or administration.

COURSE SKILLS

The following skills are addressed in this course:

- Asking questions and defining problems
- Developing and using models
- Planning
- Analyzing and interpreting data
- Using math and computational thinking
- Designing a solutions
- Obtaining, evaluating, and communicating information and solutions

COURSE OUTLINE

Units:

Unit #1 History of Architecture

Unit #2 Architectural Drafting Equipment

Unit #3 CADD

Unit #4 Considerations in Architectural Design

Unit #5 Home Design

Unit #6 Home Construction

Unit #7 Nontraditional Structures

Unit #8 Architectural Models

This syllabus and course outline are subject to change as Chelmsford High School seeks to continually improve the learning experiences for all students.

“We foster PRIDE* in our pursuit of excellence.”

PRIDE refers to our five core values – Perseverance, Respect, Integrity, Dedication, and Empathy. These five pillars represent our points of emphasis in supporting the development of quality students and quality citizens.