



Architectural Design

Grand Haven High School



Course Number: I40

Grade Level: 10-12

Credits: 1

Prerequisite Courses : None

Course Description

Students learn the process of designing a residential building from initial sketches to design development using Revit, SketchUp, and AutoCAD. Sustainable design will be incorporated into design. Architectural model making introduced.

Course Objectives

This is a course in which fundamentals of architectural design are studied and explored. Sustainable design systems for residential dwellings examined. Materials, construction, and components discussed. Design will be the main emphasis for this level and the student should have a good background in basic mathematics. Drawing and/or design emphasis using Revit, SketchUp, and AutoCAD. Architectural projects include working and presentation drawings and scale model construction.

Student Expectations

Be an attentive listener and active learner. Ask questions when something doesn't make sense, chances are you are not the only one with questions. This is a project-based class and you may need to spend extra time outside of class to complete assignments and projects. Come in during open lab hours after school and/or by appointment. Students are responsible for technology and equipment used in class; abide by technology code of ethics.

Communication

casej@ghaps.org

616-850-6165

Google Classroom

Using Google Classroom, announcements, lessons, and assignments are posted and updated daily. Considerable emphasis is placed on student-centered activity, project, problem based learning. Many of the assignments and projects are completed in class.

Building Behavioral Expectations

TEAM GH ... One Team, One Family, One Grand Haven. Be Kind. Always.

It is our expectation that ALL GHHS students, staff and parents will ... always give their best **EFFORT** in everything that they do, work hard to be **INCLUSIVE** of each other, show **RESPONSIBILITY** in class, the hallways, cafeteria and at events, and **WORK TOGETHER** at all times!

Together, Excellence, Accountability, Mindfulness... GO BUCS

Grading Policy

Assignments - 100%

Scope and Sequence

Architecture: Residential Drafting and Design

- Architectural Drafting Fundamentals
- Architectural Planning
- Plan Development
- Construction Systems and Supplemental Drawings
- Presentation Methods

Residential Design using Autodesk Revit

- Getting Started with Autodesk Revit
- Lake Cabin Floor Plan
- Overview of Linework and Modify Tools
- Drawing 2D Architectural Objects
- Floor Plans
- Annotation
- Roof
- Floor Systems and Reflected Ceiling Plans
- Elevations
- Sections
- Interior Design
- Schedules
- Site Tools and Photo-Realistic Renderings

F10 House using Autodesk AutoCAD

Zero Energy Housing using SketchUp

Future Home Design using Autodesk Revit

Concept Design Models

Case Studies

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