
PETERS TOWNSHIP HIGH SCHOOL

COURSE SYLLABUS: ARCHITECTURAL PROCESSES

Course Overview and Essential Skills

This course will enable students to learn the fundamental skills and Concepts necessary for architectural planning, design and drawing. Students will prepare a full set of residential architectural drawings, including floor plans, elevations and pictorial drawings. A portfolio will be developed that may aid the student when pursuing careers in related fields. Computer aided design and drawing programs will also be offered to enhance the students drawing skills.

Course Textbook and Required Materials

- TEXTBOOK: Architecture residential drawing and design; Goodheart-Willcox, Kicklighter; 2000
- ArchiCAD 16
- Computer Lab

Course Outline of Material Covered:

Unit or Topic	Concepts/Skills/Resources	Timeframe
THE WORLD OF ARCHITECTURE	<ul style="list-style-type: none"> • identify the historical influences that helped shape today's home designs • recognize and describe the elements of contemporary dwellings • discuss current trends in architecture 	Three Weeks
BASIC HOUSE DESIGN	<ul style="list-style-type: none"> • recognize the four basic house designs and list the chief advantages of each • map the traffic circulation for maximum efficiency • compare the relative costs for heating and cooling for each design 	FOUR WEEKS
ROOM PLANNING / SLEEPING AREAS PLAN	<ul style="list-style-type: none"> • discuss factors that are important on the design of bedrooms • plan the size and location of closets for a typical residence • apply the furniture cutout method in planning a room arrangement • implement important design considerations for bathrooms 	TWO WEEKS
LIVING AREAS	<ul style="list-style-type: none"> • identify the rooms and areas that comprise the living area 	TWO WEEKS

	<ul style="list-style-type: none"> • apply the design principles to planning a living room • integrate the furniture in a living room plan • analyze a dining room using good design principles • design a functional entryway and foyer 	
SERVICE AREAS	<ul style="list-style-type: none"> • apply good design principles to planning the service area of a home • design a functional kitchen to meet a family's needs • select appliances for a modern kitchen • plan a modern, efficient, clothes care center • describe appropriate dimensions for garage space 	TWO WEEKS
PLOT PLANS	<ul style="list-style-type: none"> • identify the various features shown on a typical plot plan • visualize land elevations from contour lines • properly locate a building on site • draw a plot plan using correct symbols 	THREE WEEKS
FOOTINGS, FOUNDATIONS AND CONCRETE PLANS	<ul style="list-style-type: none"> • describe the procedure for staking out a house location • list the major considerations when designing a footing for a residential foundation • analyze a typical floor plan to determine the appropriate foundation • calculate the load to be supported by a beam 	TWO WEEKS
THE FOUNDATION PLAN	<ul style="list-style-type: none"> • identify the primary features included in a foundation plan • discuss the differences between a foundation plan and a basement plan • design and draw a foundation plan for a typical residential structure 	TWO WEEKS
STAIRS	<ul style="list-style-type: none"> • define common stair terminology • perform stairway calculations for a residential stairway • design a stairway for a residential structure 	THREE WEEKS

THE FLOOR PLAN	<ul style="list-style-type: none"> • list the information required on a typical floor plan • represent typical materials using standard architectural symbols • design and draw a residential floor plan in a clear and precise manner 	NINE WEEKS
PRESENTATION DRAWINGS	<ul style="list-style-type: none"> • list methods commonly used to increase the degree of realism in a presentation plan • render common materials using a variety of techniques • demonstrate the ability to ink a rendering • devise a typical presentation for floor plan 	TWO WEEKS
ARCHITECTURAL MODELS	<ul style="list-style-type: none"> • explain the various types of architectural models used to represent residential structures · • list the features commonly included in a presentation model · • summarize the steps for constructing a paper and wood model 	ONE WEEK
COMPUTER APPLICATIONS	<ul style="list-style-type: none"> • explore computers applications within architecture and construction • recognize the advantages of computer analyses for the contractor or designer • define terms related to computer applications in architecture 	ONE WEEK

**Depending on the needs of the class or changes in the school year, the course outline is subject to change.*