

ARCHITECTURE (ARCH)

ARCH A001N 63 Hours (27 lecture hours; 36 lab hours) Design/Build 1 for Architecture Noncredit

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

This learn-by-doing course involves the design and construction of a transportable structure. Students will work in teams with an instructor. Projects will vary and are likely to involve off-campus assembly.

ARCH A004N 18 Hours (14 lecture hours; 4 lab hours) Introduction to FrameCAD Steel Framing Noncredit

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

Introduction to FrameCAD Steel Framing is an overview of integrated steel panelization design and fabrication. Instruction includes entry level use of FrameCAD Structure and FrameCAD Detailer software as well as file export to FrameCAD Factory and machine. The class will produce and assemble a small sample project using the OCC FrameCAD F325iT.

ARCH A005N 72 Hours (18 lecture hours; 54 lab hours) Architectural Drawing and Design Visualization 1 Noncredit

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

This introductory course in architectural visualization techniques will focus on how to communicate a three-dimensional design using a two-dimensional medium. Subjects and techniques presented will include orthographic projection, paralines, plan views, elevations, sections, basic perspective drawing, rendering materials and tonal values, and an introduction to SketchUp and hand modeling.

ARCH A006N 30 Hours (20 lecture hours; 10 lab hours) Accessory Dwelling Unit Design Noncredit

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

Accessory Dwelling Unit (ADU) Design is a 5 week seminar course that introduces design concepts, codes, budgeting, and permit strategies unique to ADUs. ADUs are typically small second units added to existing single family home properties and allowable sizes and limitations vary by city and lot size. Students will plan out their own project and are encouraged to bring ideas and questions. A field visit to experience an ADU or similar sized structure will be organized as available. No prior experience needed.

ARCH A007N 30 Hours (20 lecture hours; 10 lab hours) Tiny House Design Noncredit

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

Tiny House Design is a 5 week seminar course that introduces design concepts, codes, budgeting, and building strategies unique to Tiny Houses. The course is packed with guest speakers, hands-on demonstrations, and information resources. Students will plan out their own project and are encouraged to bring lots of ideas and questions. A field trip to experience a tiny house build will also be scheduled.

ARCH A008N 30 Hours (20 lecture hours; 10 lab hours) Solar Panels for Small Projects Noncredit

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

Solar Panels for Small Projects is a 5 week course that introduces solar energy basics for small, off-grid photo voltaic installations. The course will cover solar energy fundamentals, electricity and safety basics, PV modules, system components, and system sizing. Students will plan out their own project or a small sample project. A small kit system will be available for hands-on demonstrations. No prior experience needed. Same as CNST A060N.

ARCH A021N 48 Hours (36 lecture hours; 12 lab hours) FrameCAD Studio 1 Noncredit

Advisory: ARCH A004N.

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

FrameCAD Studio 1 is a project-based course that develops design skills to produce a steel panel project using FrameCAD software. Basic steel frame design concepts will be covered as well as use of FrameCAD Structure and FrameCAD Detailer. Students will also receive basic machine safety and steel panel assembly experience.

ARCH A022N 48 Hours (36 lecture hours; 12 lab hours) FrameCAD Studio 2 Noncredit

Advisory: ARCH A021N.

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

FrameCAD Studio 2 is a project-based intermediate course that develops design skills to produce a steel panel project using FrameCAD software. Students will be encouraged to design a project of choice and will work collaboratively to design and prepare each project for production. This is a continuation of FrameCAD Studio 1 and FrameCAD Structure and FrameCAD Detailer software will be used to design the projects and export to FrameCAD Factory software for production.

ARCH A030N 180 Hours (54 lecture hours; 126 lab hours) Architectural Design and Theory 3 Noncredit

Advisory: ARCH A215 or equivalent skill level.

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

This advanced architectural design course is a continuation of ARCH A215, dealing with theories, principles, methods and means used in the creation of architectural space by manipulation of form, space & light in an urban context. Focus is on the conceptual design process of establishing and challenging design criteria, communication and editing of design narrative, and portfolio development.

ARCH A041N 48 Hours (36 lecture hours; 12 lab hours) FrameCAD Workshop 1 Noncredit

Advisory: ARCH A004N.

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

FrameCAD Workshop 1 is a project-based course that develops beginning level production skills needed to produce a steel panel framing system using FrameCAD software and a FrameCAD F325iT machine. Students will be introduced to FrameCAD machine operation and safety and will be able to visit a steel frame project or production facility. Students will assist in running production jobs and gain experience in panel assembly and workflow.

ARCH A042N 48 Hours (36 lecture hours; 12 lab hours)

FrameCAD Workshop 2 Noncredit

Advisory: ARCH A004N and ARCH A041N.

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

FrameCAD Workshop 2 is a project-based continuation of Workshop 1 that develops intermediate level production skills needed to produce steel panel framing systems using FrameCAD software and a FrameCAD F325iT machine. Students will review FrameCAD machine operation and safety and be involved in running production jobs and learning about panel assembly and fabrication workflow on the machine.

ARCH A043N 48 Hours (36 lecture hours; 12 lab hours)

FrameCAD Workshop 3 Noncredit

Advisory: ARCH A004N, ARCH A041N and ARCH A042N.

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

FrameCAD Workshop 3 is a project-based continuation of FrameCAD Workshop 2 that develops advanced level production skills needed to produce steel panel framing systems using FrameCAD software and a FrameCAD F325iT machine. Students will review FrameCAD machine operation and safety and be involved in coordinating production jobs, panel assembly, and fabrication workflow on the machine.

ARCH A085N 144 Hours (36 lecture hours; 108 lab hours)

Environmental Design Systems Noncredit

Advisory: ARCH A180 or comparable course completion or work experience.

Grading Mode: P/NP/SP Non-Credit, Letter Non-Credit

This intermediate design course focuses on the environmental, cultural, and physical forces that affect architecture. Students will research and utilize design approaches and building components/systems that respond to human needs and the natural and built environments. Study topics will include site design and cultural context, environmental/climate responsive approaches to design, maintaining structural design integrity, incorporating life safety and access, and ecologically minded approaches to design.