

# INDUSTRIAL DESIGN

## Certificates of Completion

- Solidworks Essentials - Certificate of Completion (<https://lbcc-public.courseleaf.com/noncredit/programs-of-study/industrial-design/solidworks-essentials-certificate-completion/>)

### ARCHT 601 0 units

#### ARE Exam Prep I

#### 27 hours lecture

Grading: non graded.

This course introduces students to key concepts on the Practice Management division exam, such as the business of architecture and the intricacies of managing an architectural practice. Topics common to this exam include employee allocation per project, asset allocation and business development, various contracts and fee structures, responsibilities, and regulations.

### ARCHT 602 0 units

#### ARE Exam Prep II

#### 27 hours lecture

Grading: non graded.

This course introduces students to key concepts on the Project Management division exam, such as the processes and procedures for managing architectural projects. This includes understanding the role of contracts and how they fit into project management regarding the organization and managing personnel and consultants. This division also examines strategies for improving the delivery of services through quality control, scheduling, and project teams.

### ARCHT 603 0 units

#### ARE Exam Prep III

#### 27 hours lecture

Grading: non graded.

This course introduces students to key concepts on the Programming and Analysis division exam, such as the opportunities, constraints, and requirements for projects. This division examines the multitude of aspects in developing a project, including establishing the criteria (qualitative and quantitative) affecting projects and subsequent analysis of project type, site, and associated context and economics.

### ARCHT 604 0 units

#### ARE Exam Prep IV

#### 27 hours lecture

Grading: non graded.

This course introduces students to key concepts on the Project Planning and Design division exam, such as the preliminary design of buildings and sites through conceptual design, design associated with sustainability and the environment, and with codes and regulations such as universal design.

### ARCHT 605 0 units

#### ARE Exam Prep V

#### 27 hours lecture

Grading: non graded.

This course introduces students to key concepts on the Project Development and Documentation division exams, such as building system integration, materials and assemblies, and their selection in a project. Additionally, this division evaluates the integration of systems such as structural, mechanical, electrical, plumbing, and civil—as well as specialty systems—into design and documentation.

### ARCHT 606 0 units

#### ARE Exam Prep VI

#### 27 hours lecture

Grading: non graded.

This course introduces students to key concepts on the Construction and Evaluation division exam, such as the process of construction administration including contract administration, execution, and services such as submittal reviews, construction observation, and payment requests, project close-out, and post-occupancy activities.

### ARCHT 607 0 units

#### ARE Exam Prep VII

#### 27 hours lecture

Grading: non graded.

This course introduces students to key concepts on the California Supplemental Examination exam, such as the architectural implications of California's large physical size, large and diverse population, varied landscape and climate, high seismicity, and other regulations and entitlements.

### ARCHT 610 0 units

#### Design 101

#### 9 hours lecture, 18 hours laboratory

Grading: non graded.

This course introduces Design to students interested in careers in Architecture, Construction Management, and Interior Design. Students will engage in key design strategies, critical thinking, and problem assessing by completing a short design project. Students will gain knowledge about each profession and will understand what to expect in the educational setting.

### ARCHT 611 0 units

#### Modeling 101

#### 9 hours lecture, 18 hours laboratory

Grading: non graded.

This course introduces physical and digital modeling to students interested in careers in Architecture, Construction Management, and Interior Design. Students will learn how to build architectural models out of a range of materials as well as the role computers play in design. Students will gain knowledge about each profession and will understand what to expect in the educational setting.

### ARCHT 632 0 units

#### SketchUp I

#### 18 hours lecture, 36 hours laboratory

Grading: non graded.

This entry-level SketchUp course is aimed at individuals with a drafting background employed in engineering, and other related fields who wish to upgrade their skills in the area of Computer Aided Modeling (CAM). CAM training will utilize a recent version SketchUp in the Windows environment. The purpose of the class is to prepare students to use SketchUp to model and present architectural ideas in a timely manner, use V-Ray for SketchUp to create renderings with proper lighting and photo realism.

**ARCHT 633 0 units****SketchUp II****18 hours lecture, 36 hours laboratory**

Prerequisite: ARCHT 632.

Grading: non graded.

This intermediate SketchUp course is aimed at individuals with a drafting background employed in engineering, and other related fields who wish to upgrade their skills in the area of Computer Aided Modeling (CAM). CAM training will utilize a recent version of SketchUp in the Windows environment. The purpose of the class is to prepare students to use SketchUp to perform advanced modeling and learn to use SketchUp layouts to create presentations including the renders, floor plans, sections and elevations in an organized manner.

**ARCHT 634 0 units****AutoCAD Basics****18 hours lecture, 36 hours laboratory**

Grading: non graded.

This course is an architectural documentation class for Computer Aided Drafting (CAD). This introductory CAD training will utilize a recent version AutoCAD in the Windows environment. This course introduces CAD fundamentals: user interface, basic draw and edit commands, and other architectural industry standards.

**ARCHT 635 0 units****Rhino Basics****18 hours lecture, 36 hours laboratory**

Grading: non graded.

This entry-level Rhinoceros course is aimed at individuals with a drafting background employed in engineering, and other related fields who wish to upgrade their skills in the area of Computer Aided Modeling (CAM). CAM training will utilize a recent version Rhinoceros in the Windows environment. This course introduces Rhinoceros fundamentals: user interface, basic draw and edit commands, basic modeling commands, geometry development, geometry modification, and visualization strategies. Exercises cover drawings for industrial and architectural applications.

**ARCHT 637 0 units****Advanced AutoCAD****18 hours lecture, 36 hours laboratory**

Prerequisite: ARCHT 34 or ARCHT 634.

Grading: non graded.

This course introduces advanced techniques and teaches students to be proficient in the use of AutoCAD. Students learn how to recognize the best tool for the task, the best way to use that tool, and how to create new tools to accomplish tasks more efficiently. Students construct a variety of 2D and 3D drawings and 3D models and learn how to incorporate their models into a variety of printable layouts.

**ARCHT 640 0 units****REVIT I****54 hours lecture, 54 hours laboratory**

Grading: non graded.

This is a beginning class in a series of three, aimed at individuals with a drafting background employed in architecture, interior design and other related fields, who wish to upgrade their skills in the area of parametric Building Information Modeling, BIM. Students will be instructed in the essentials of REVIT Architecture or an equivalent BIM software. Instruction will emphasize the fundamentals of developing a BIM architectural modeling project and extracting formatted working drawings and a rendered presentation from the 3D model.

**ARCHT 641 0 units****REVIT II****54 hours lecture, 54 hours laboratory**

Prerequisite: ARCHT 230 or ARCHT 640.

Grading: non graded.

This is an intermediate class second in a series of three aimed at individuals with a drafting background employed in architecture, interior design, and other related fields who wish to upgrade their skills in the area of parametric Building Information Modeling, BIM. Students will be instructed in the essentials of REVIT Architecture or an equivalent BIM software. Instruction will emphasize collaboration tools, advanced design development tools, and advanced construction document tools through developing a high-rise commercial structure project.

**ARCHT 642 0 units****REVIT III****54 hours lecture, 54 hours laboratory**

Prerequisite: ARCHT 231 or ARCHT 641.

Grading: non graded.

This is an advanced class, the third in a series of three aimed at individuals with a drafting background employed in architecture, interior design, and other related fields who wish to upgrade their skills in the area of parametric Building Information Modeling, BIM. Students will be instructed in the essentials of REVIT Architecture or an equivalent BIM software. Instruction will enable students who have worked with BIM to expand their knowledge in the areas of Dynamo, a parametric plugin, virtual reality, and cross-platform integration.

**ARCHT 661 0 units****Fundamental Design Studio****54 hours lecture, 54 hours laboratory**

Recommended Preparation: ARCHT 35 or ARCHT 635.

Grading: non graded.

This course is an introductory architectural class utilizing a range of software to document design solutions both graphically and through model building techniques. The class prepares students for careers in the field of architecture and related fields such as interior and environmental design. Students apply elements of design and characteristics of style to create a small structure and develop a corresponding graphic presentation consisting of architectural drawings and precedent studies.