

Sophomore Year, Principles of Architecture (one hour) -

This class focuses on residential drafting and design and the tools and techniques used. Students will be introduced to different types of drawings such as isometrics, perspectives and orthogonal, and how to apply them to residential design. Students learn numerous software packages such as SKETCHUP, AutoCAD, and Photoshop.

Junior Year, Architectural Design (two hour block) -

Students acquire the advanced knowledge of residential design and design history. Students will learn new design methods and learn how to apply them to construction documents. Students will learn how to create a presentation drawing using assorted rendering techniques. They will expand their software knowledge with the introduction of REVIT. Students will also construct scaled models out of assorted materials such as basswood, chipboard, and cardboard. Second semester students are introduced to interior design.

Senior Year, Advanced Architectural Design (two hour block) -

This course is designed to provide technical instruction in architectural design. Students will be introduced to design theory and color, and do several higher-level design projects. Instruction may be delivered through laboratory training, independent study, or career preparation arrangements. In addition, safety, work ethics, and career opportunities will be studied. Students gain knowledge and skills specific to those needed to prepare for a post-secondary degree or entry into an architecture or construction-related field.

ENRICHMENT OPPORTUNITIES

The Academy wants students to see and experience the world of construction. Field trip opportunities are abundant and appropriate to the chosen strand. In addition to job site visits, students have the opportunity to go on college visits with peers in other strands.

Construction Careers Academy has a very active business partnership base. Job shadowing is arranged where students can visit a company and shadow a professional in their strand. The Academy has successfully placed students in paid internships during the summer and school year. Job assistance is also available to CCA alumni.

(Source: BLS – Architecture)



The mission of CCA is to provide an advanced and rigorous curriculum with a focus on construction technology, construction management, architectural design, applied engineering and real-world experience that will prepare students for studies in higher education and/or a career in a construction-related industry.

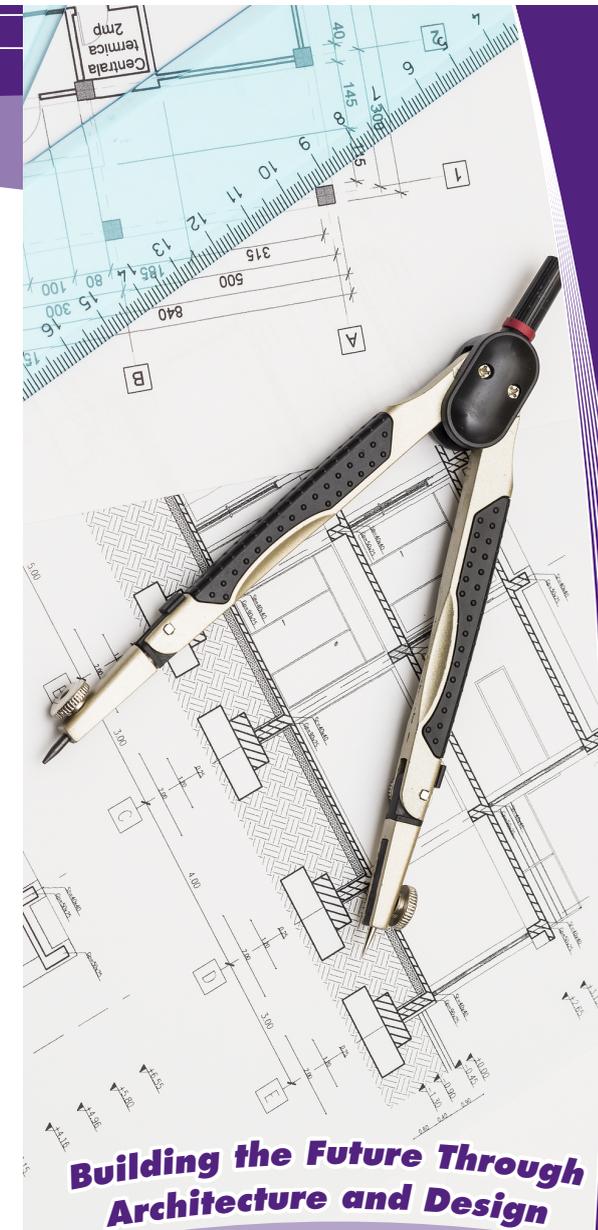


CONSTRUCTION CAREERS
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**Building the Future Through
Architecture and Design**



**ARCHITECTURE
& DESIGN**

ARCHITECTURE & DESIGN

IS THE ARCHITECTURE AND DESIGN PROGRAM THE RIGHT FIT?

Students interested in the Academy's Architecture and Design program have a strong desire to plan and design buildings and structures. The program focuses on architecture and design concepts used in the construction industry. The Academy's Architecture and Design program is unique in that the curriculum is highly vested in project-based learning. Students in the program will gain valuable skills needed to design buildings and structures from concept to completion. Students will use industry recognized computer software, design practices, and architectural concepts. Students will have the opportunity to engage in real-world applications and collaborate with some of the industry's top-rated architectural firms and work with architects who have been successful in the industry. Upon completion of the Architecture and Design program, students will be prepared to enter the university of their choice. Students will be ready and prepared for success in the post high school architecture and design market.

EMPLOYMENT FORECAST FOR ARCHITECTS

According to the Bureau of Labor Statistics (BLS), architects can anticipate a four percent job growth rate between 2016 and 2026. Annually, architects hold about 128,800 jobs.

Salary Range (\$46,600 to \$129,810) The median income is \$76,930 (BLS).

Architect Jobs: The field of architecture includes a broad spectrum of opportunities. Architects, generally speaking, fall under one of four types: residential, commercial and public, industrial, and landscape architects. Students who graduate from the Academy will most likely pursue a career as either a residential architect, commercial and public architect, and/or an industrial architect. Students may also pursue a career in graphic, industrial, and/or interior design.

AN ARCHITECT'S JOB

Architects develop final construction plans after discussing and agreeing on the initial proposal with clients. The architect's plans show the building's appearance and details of its construction. These plans include drawings of the structural system; air-conditioning, heating, and ventilating

systems; electrical systems; communications systems; and plumbing. Sometimes, landscape plans are included as well. In developing designs, architects must follow state and local building codes, zoning laws, fire regulations, and other ordinances, such as those requiring easy access to buildings for people who are disabled.

Architects use computer-aided design and drafting (CADD) and building information modeling (BIM) for creating designs and construction drawings. However, hand-drawing skills are still required, especially during the conceptual stages of a project and when an architect is at a construction site. (BLS)

RELATED OCCUPATIONS

Drafters use software to convert the designs of engineers and architects into technical drawings. Most workers specialize in architectural, civil, electrical, or mechanical drafting and use technical drawings to help design everything from microchips to skyscrapers. They earn an annual salary of \$53,480.

Landscape architects design parks and the outdoor spaces of campuses, recreational facilities, businesses, private homes, and other open areas. They earn an annual salary of \$63,480.

Urban and regional planners develop land use plans and programs that help create communities, accommodate population growth, and revitalize physical facilities in towns, cities, counties, and metropolitan areas. They earn an annual salary of \$70,020.

TIPS FOR SUCCESS IN THE ARCHITECTURE AND DESIGN PROGRAM

Students who enter the Academy's Architecture and Design program should begin preparing for the rigor of the program. Here are some tips that will help:

- 1) Develop good study habits.
- 2) Develop a system of organization.
- 3) Good time management is of the essence.
- 4) Start building a portfolio of architectural design projects.
- 5) Look for opportunities to improve communication and presentation skills.

COURSE SEQUENCE & DESCRIPTIONS FOR ARCHITECTURE AND DESIGN STRAND

The Academy's advanced and rigorous curriculum is guaranteed to challenge and prepare students for a successful career in the field of architecture and design or related field. Students will be prepared to face the challenges of a collegiate level architecture and design program of their choice. All architecture and design students will adhere to the following **Course Sequence:**

Freshman Year, Principles of Construction – All freshmen at CCA are required to take this course their first year in the Academy. Safety, hand tools, power tools, and reading technical drawings are introduced. Students will begin to develop an understanding of the educational requirements and career opportunities in their strand. Students will leave this course prepared for their strand choice with a certification in the 10 Hour OSHA Construction and in NCCER Core.

