



CAREER LYNX | Constructing Careers in Architecture

Students will understand the job description, skills, and education of various Architecture and Planning related jobs.

Students will use the newspaper to make inferences about the role of various professionals in a current construction project.

Students will learn how to construct a résumé and will learn ways to prepare their resume for a future in the field of Architecture.

CAREER LYNX: CONSTRUCTING CAREER AWARENESS IN ARCHITECTURE

Architecture is the process of planning, designing, and construction. The term “architecture” also applies to the product of those stages, in other words the physical buildings or structures. Because “architecture” is a very broad word that describes buildings themselves, architects are given much credit for the buildings they design. However architecture relies upon many professionals, listed below, who each play an equally important role as they work together to create meaningful buildings that serve the needs of stakeholders.

Architect

- 🐾 Job Description: Plan and design buildings and structures, meet with clients, estimate material costs, manage contracts, and visit construction sites
- 🐾 Skills: Creativity, visualization, communication, organization, analytical, technical
- 🐾 Average Annual Salary: \$73,090
- 🐾 Degree Required: Bachelors in Architecture and Planning

Landscape Architect

- 🐾 Job Description: Plan and design parks, campuses, and other open spaces, meet with clients, prepare site plans, create models, and select materials
- 🐾 Skills: Creativity, visualization, problem-solving, organization, analytical, technical
- 🐾 Average Annual Salary: \$64,180
- 🐾 Degree Required: Bachelors in Landscape Architecture

Urban/Regional Planner

- 🐾 Job description: Create plans for land use that build community, account for population growth, and revitalize or improve current facilities
- 🐾 Skills: Management, writing, decision-making, communication, analytical
- 🐾 Average Annual Salary: \$65,230
- 🐾 Degree Required: Masters in Urban Planning

Construction Manager

- 🐾 Job description: Plan and coordinate the construction process, ensure that construction stays within the budget, supervise working crews, collaborate with architects and engineers
- 🐾 Skills: Leadership, business, time management, customer service, communication, technical, analytical, writing
- 🐾 Average Annual Salary: \$82,790
- 🐾 Degree Required: Bachelors Degree in Construction Management, Architecture, or Engineering

Civil Engineer

- 🐾 Job description: Uses mathematical formulas and computer design programs such as CAD to maintain construction projects, test building materials or soil, analyze construction costs, and assess environmental impact of construction
- 🐾 Skills: Math, problem solving, decision-making, leadership, organization, writing
- 🐾 Average Annual Salary: \$79,340
- 🐾 Degree Required: Bachelors in Civil Engineering



The construction of a new building, park, or structure requires many different professionals to work together. These projects must operate on a tight time schedule. Not only must a building be completed on time, but each professional that works on a project is also managing the timeline of many other projects. It is important that they work together to ensure that each stage is completed on time. The following are the stages of planning, designing, and building that go into the construction of a residential building.

PRE-DESIGN

The Architect will:

- ✓ Meet with client to identify the objective. What will be built? For whom? What impact will it have on individuals and the community?
- ✓ Identify an Engineer and a Construction Manager.

The Construction Manager will:

- ✓ Set a budget that meets the clients' needs.
- ✓ Plan a building schedule based on the time required to complete each phase.

The Engineer will:

- ✓ Assess the building site to determine what must be done to clear the land for construction.

SCHEMATIC DESIGN

The Architect will:

- ✓ Choose materials that are within budget and that meet the aesthetic (looks) and structural (strength) needs of the building.
- ✓ Conceptualize the design through initial sketches.
- ✓ Adhere to the local zoning code that regulates size and type of construction by area to ensure that new construction meets the city or county's vision.
- ✓ Locate the site of the building to visualize the design and make adjustments.
- ✓ Determine the size of the interior of the building.

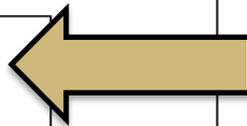
DESIGN DEVELOPMENT

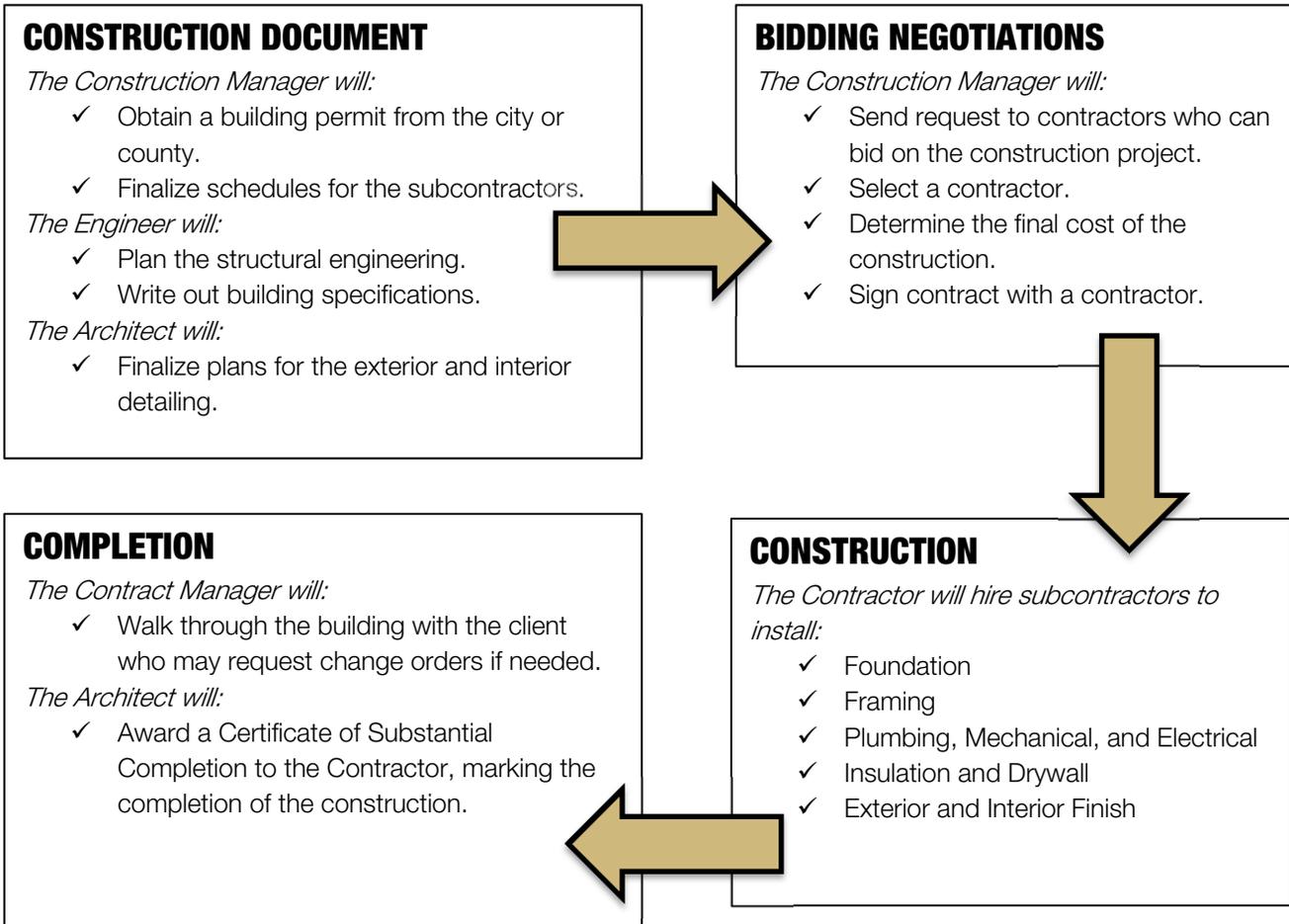
The Architect will:

- ✓ Refine the design and create a blueprint of the exterior of the building.
- ✓ Map out and blueprint the interior spaces.
- ✓ Make final choices about building materials.

The Construction Manager will:

- ✓ Estimate costs of materials and labor.
- ✓ Plan the lighting and HVAC (Heating, Ventilation, and Air Conditioning) needs.





NEWSPAPER LYNX

Locate and read a story in your local newspaper that features the construction of a building. Cite the textual evidence and refer to the stages above to determine what stage the construction is in. What work has the architect, construction manager, engineer, contractor, or subcontractor already completed? What work remains to be completed? Based on the story, do you anticipate there will be any problems with the construction? Why or why not?



Contracted Construction

The following list contains the basic steps that are completed for each building construction. Sub-contractors are professionals with a highly specialized skill who are hired to complete the various tasks within a construction project listed below:

- 🐾 Foundation: The site is graded and excavated and then the foundation is poured.
- 🐾 Framing: The interior and exterior walls and stairs are framed. Then the roof, shingles, and exterior doors and windows are installed. This stage is contingent upon good weather; less than ideal weather conditions can delay this stage and the overall schedule.
- 🐾 Plumbing, Mechanical, and Electrical: Before the drywall is placed, the plumbing for sinks and bathrooms, the electrical set up for each room, and the HVAC system must be placed. These systems must pass inspection to ensure that the work is done right because fixing it after the drywall is installed can be costly.
- 🐾 Insulation and Drywall: The walls are insulated and drywall or sheetrock is placed over them. Insulation helps to insulate or protect a building from outside temperatures. It is also used to soundproof a room.
- 🐾 Exterior and Interior Finish: The final details of a building are completed at this point. These details include painting and installing doors, ceilings, baseboards, tile, mirrors, lights, and bathroom appliances. While these are being completed, the exterior landscaping is performed.



NEWSPAPER LYNX

You are a Contractor who was just hired to complete the construction on a building. You must assemble a team of subcontractors to complete the construction steps listed above. Peruse the classified ads of your local paper to make a list of as many different subcontractors as you can. List the name of the company and the service provided. A good contractor offers competitive prices to their clients; finding more than one company will give you more flexibility in your budget.

Company Name:

Service:



A degree in Architecture and Planning has no limits. Check out this spotlight on Jun Xia whose design is being used for the soon-to-be second tallest building in the world: [The Shanghai Tower](#).

Name: Jun Xia | **Career:** Architect

Education: Masters of Architecture and Masters of Urban Design from CU Denver, 1989

Claim to fame: Helped design the Shanghai Tower which will be the second largest building in the world in 2015

The CU Denver Difference: “From my studies at the College of Architecture and Planning, I learned that the school has a passion for helping international students. When I first called my graduate advisor, I had never spoken English on the phone before, and had to write down everything I was going to say. When you first come here as a ‘foreign’ student, you really have to transform yourself. And you can. Through language classes and study programs, I was able to adapt, learn, and graduate within a year.”



Building a Résumé

When you apply for a job, you will be asked to submit a résumé. A résumé (pronounced REZ-u-may) is a document that provides information about your interests, previous jobs or responsibilities, skills or strengths, achievements or awards. Successful people have a résumé that they update every year, adding new information and achievements. Successful students practice writing résumés at a young age to begin thinking about their skills and interests, as well as the goals they want to achieve.

Below is a template of a résumé for you to complete. Some questions may be easy to answer, while others may require some thought. Do not be afraid to ask a teacher, family member, counselor, or friend for their suggestions. Sometimes you may not recognize your strengths as quickly as those around you. Finally, remember that a résumé is a living document so you should continue to revise and change it at least once a year.



Name (First, Middle Initial, Last)

Address (Street Number and Name)

Address (City, State and Zip Code)

Phone Number

Desired Job

What job or career interests you right now? You may list more than one.

Interests

What are your interests outside of school? List up to three, which may include: sports, art, music, reading/writing, technology, leadership, business.

Responsibilities

What are some responsibilities you have had at home, school, or through other clubs or teams? Examples may include volunteering, babysitting, helping teachers.

Skills

What are your best academic skills? Choose two from the following: math, science, social studies, reading, writing, other (specify), or all equally strong.

Achievements/ Awards

What awards or achievements have you earned in school or out of school? You may also use this space to list goals or accomplishments that you have reached.

Past Jobs

If you have held a paid job, regular volunteer position, or internship, list it here. Include the name of the position, the company or person you worked for, the year in which you worked. If your job is ongoing, you may leave the end date as "Present" (e.g. May 2012 – Present).

Name of Position _____

Company or Person Worked for: _____

Date of Employment: _____

Name of Current School _____

Address: _____

Current Grade: _____

Grade Point Average: _____

Current School and Grade

Name of School, Address of School, Grade Level, and Grade Point Average (if known).

Past School(s)

Name of School, Address of School, Grades attended.

Name of Previous School _____

Address: _____

Grades Attended at this School: _____

References

List the name and title of two adults who may be contacted to answer questions about your character or performance. Examples may include a teacher, mentor, or coach.



Resume Builder: Architecture and Planning

After writing your resume, it is important to consider what you can do to enhance your résumé by providing you more experience in a field or boosting your overall skillset or strengths. The following list includes “résumé builder” suggestions, or ideas of things that you can do now to begin to develop a résumé that would be competitive for an Architecture or Planning College or job.

1. Read the newspaper. Every day, stories are written about new development proposals or projects such as the construction of a new school, park, or neighborhood development. Reading these stories provides an understanding of the process as well as familiarizing you with updates in your own community.
2. Sketch. Begin to sketch or draw different buildings or structures in your community. Doing so will help you develop your visual perception as well as your ability to process and reproduce patterns, shapes, and proportions. Keep these in one sketch book and examine how your skills improve with practice.
3. Research Colleges or Universities with an Architecture and Planning program. Search the college website to find out what the admissions requirements are for the Architecture school. Contact a representative from the Architecture program to ask what you can do to become a competitive applicant. *CU Denver is situated in the heart of Downtown Denver and offers a B.S. Degree in Architecture. You can obtain more information here: <http://bit.ly/1itJgsi>*
4. Learn about your city’s architectural history. Perform an internet search or visit your local library to learn about the history of the buildings in your town or city. Learn about what architectural styles or values were prominent in earlier times and who or what influenced them.
5. Shadow a local architect. Find an architecture studio near you and call or email to ask if you can tour the office. Explain that you are a student interested in the field and ask if they would let you shadow an architect or planner for a day. Job shadowing is an excellent way to see what a professional’s daily work life is like and have a real-life experience.



MILO'S EXTRA CREDIT

Building for the Future

Learn why Mayor Michael Hancock and the CU Denver community is so eager to unveil The Academic 1 Building.

<http://bit.ly/1itJmjE>

The Full Scoop

Dive deeper into the job description and skillset of an architect and explore other similar professions.

<http://bit.ly/1ggtwWS>

Design with Frank

Hop into the Architecture Design Studio with Frank Lloyd Wright and simulate the architect's job as you work with your own clients.

<http://bit.ly/1lv41t>

