
WHAT CAN I DO WITH A MAJOR IN ... CONSTRUCTION ENGINEERING OR CONSTRUCTION MANAGEMENT

OCCUPATIONAL OVERVIEW

Civil engineering can be thought of as a blend of Civil Engineering and Construction Management. The [University of New Mexico School of Engineering \(2009\)](#) explains that construction engineers “plan, design and develop communities, roads, bridges, buildings, and transit systems while solving problems associated with water resources, energy, and pollution.” The UNM School of Engineering goes on to explain that construction engineers plan and design construction projects similar to civil engineers while also managing labor and field operations like a Construction Manager.

The [Bureau of Labor Statistics \(2012\)](#) explains that construction managers “plan, coordinate, budget, and supervise construction projects from early development to completion.” BLS goes on to explain that construction managers may be called general contractors or project managers.

EMPLOYMENT REQUIREMENTS

A bachelor's degree in construction engineering is the minimum formal education required to work as a construction engineer. Construction Engineers can sit for the Professional Engineering (PE) Licensure exam to be able to approve final designs for public projects.

BLS explains that Construction Managers have more flexibility on degree pathways. Some construction managers may obtain their position with a high school diploma or associate's degree along with many years of work experience. However, BLS highlights that employers prefer candidates with both work experience and a bachelor's degree in a construction-related field such as construction science/management, architecture, or engineering. Construction Managers cannot sit for the PE exam, however, BLS notes that certification has become increasingly important. See [Construction Management Association of America](#) or the [American Institute of Constructors](#) for more details on certification.

BLS highlights that, for both fields, employers value practical construction experience, making it important for construction engineering and construction management students to participate in internships and Co-ops while completing their degree. BLS also notes that a graduate degree (M.S., M.E., and/or Ph.D.) is required to hold positions in management, research, or academia. Consult [O*Net](#) for more information on the specific KSAs (Knowledge, Skill, Ability) that are required for this career.

THE UNIVERSITY OF NEW MEXICO

The UNM Department of Civil Engineering offers a Bachelor of Science in Construction Engineering (B.S.Cn.E), Bachelor of Science in Construction Management (B.S.C.M.), Master of Construction Management (M.C.M), and a Ph.D. in Engineering with a concentration in Civil Engineering. Check the [department website](#) for more information on degree programs and research areas. The College of Engineering also offers various other degree tracks such as the Master of Engineering and the 2 + 3 B.S. & Master of Business Administration program. More information on these programs can be found in the [University Catalog](#) by selecting “Colleges” on the right and selecting “School of Engineering”.

INDUSTRIES AND TARGET EMPLOYERS

A variety of employers specifically recruit UNM students and alumni. Consult UNM's [Lobo Career Connection](#) for a complete list of employers and current job postings. Speak with a Career Development Facilitator at the [UNM Office of Career Services](#) for help with identifying employers or additional resources for your occupation of choice.

Business/Industry

Construction, residential, commercial, industrial, civil, environmental, contractors, consulting, project management, architecture firms, sales

Government

Federal, national and local government agencies, Department of Transportation, Environmental Protection Agency, [national laboratories](#)

Education

University/college instruction or administration, researcher

SUGGESTED STRATEGIES

- Gain related construction engineering or management professional experience through involvement in [internships](#), student employment, [Co-ops](#), research, and/or volunteer opportunities.
- Shadow professionals in the field to gain a better understanding of the occupation and to build relationships with professional mentors.
- Build your network and get involved on campus through student organizations and campus events. The [School of Engineering website](#) outlines student organizations that are affiliated with the School of Engineering as well as the Civil Engineering department. You can find more organizations and events at the [Student Activities Center website](#).
- Attend [career-related campus events](#) such as career fairs, company information sessions, or career workshops.
- Students who are interested in graduate school should maintain a high undergraduate GPA, develop relationships with faculty, and participate in undergraduate research. UNM's Research Opportunity Database at <http://research-match.unm.edu/>. Some research opportunities include
 - [Ronald E. McNair Scholars Program](#)
 - [Research Opportunity Program \(ROP\)](#)
 - [Minority Access to Research Careers Program \(MARC\)](#)
 - [Initiative for Maximizing Student Development \(IMSD\)](#)
 - [Undergraduate Pipeline Network](#)
 - [UNM Engineering Research Centers](#)
 - [Research at the University of New Mexico](#)
- Speak with [mentors](#) and faculty about career opportunities.
- Job leads can be found on your department's website, list-serv, newsletters, and social media sites.
- Familiarize yourself with the [federal job](#) application process.

STATE & NATIONAL WAGES

[Adapted from CareerOneStop \(2013\)](#)

CONSTRUCTION MANAGER

Location	2012				
	10%	25%	Median	75%	90%
United States	\$49,700	\$63,800	\$82,800	\$109,600	\$144,500
New Mexico	\$49,300	\$61,100	\$74,500	\$92,200	\$112,400

INFORMATIONAL WEBSITES:

American Society of Civil Engineers	www.asce.org/
American Society for Engineering Education	www.asee.org
Construction Management Association of America	http://cmaanet.org/
National Society of Professional Engineers	www.nspe.org
New Mexico Section of the American Society of Civil Engineers	http://sections.asce.org/newmexico/
ASCE – Construction Institute	http://www.asce.org/CI/



<http://onetonline.org>



www.bls.gov

REFERENCES

- Bureau of Labor Statistics, U.S. Department of Labor (2012, April 10). *Occupational Outlook Handbook, Construction Managers*. Retrieved from <http://www.bls.gov/ooH/Management/Construction-managers.htm>
- State of Minnesota, U. S. Department of Labor, Employment and Training Administration (2013). *CareerOneStop, Occupation Profile, Construction Manager*. Retrieved from www.careerinfonet.org
- University of New Mexico, School of Engineering (2009). *Civil Engineering, Construction Engineering, and Construction Management Undergraduate Degrees*. Retrieved from <http://soe.unm.edu/prospective/ce-degree.html>