

in Civil Engineering

CAREER

PATHS

in Civil Engineering

Seek out the career path that best fits your goals and will be most satisfying to you.

Government

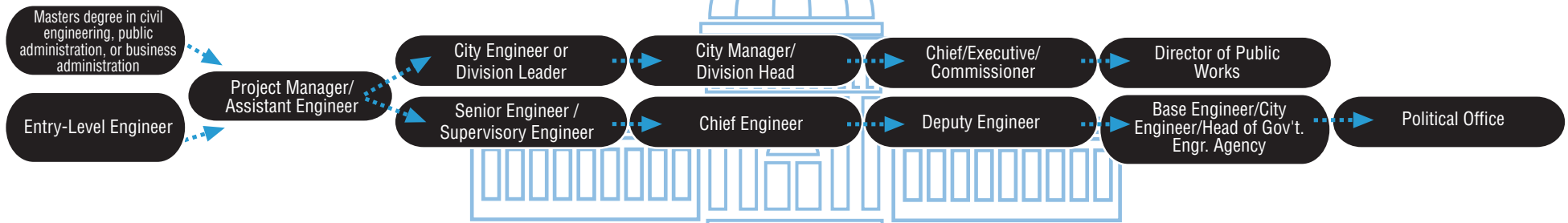


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This career path shows many of the options available for civil engineers who have chosen a career in government. Some leave the technical engineering path as they progress and move into government management. At this level, additional leadership training and education in public administration or business management is recommended.

Whether planning to stay on the technical track or not, government engineers should seek additional training in their area of technical expertise to advance within their organizations.

Government engineers are often involved in developing policy and standards for the profession and general public.

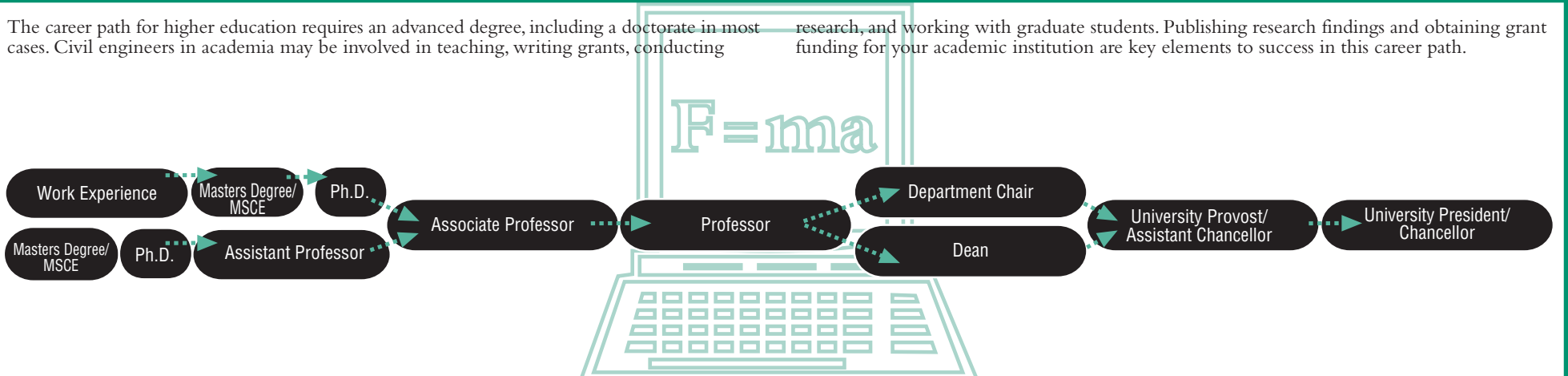


Education



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The career path for higher education requires an advanced degree, including a doctorate in most cases. Civil engineers in academia may be involved in teaching, writing grants, conducting research, and working with graduate students. Publishing research findings and obtaining grant funding for your academic institution are key elements to success in this career path.



Consulting



3

Consulting firms offer a wide array of career possibilities.

In a small firm, an engineer may rise rapidly to management and be responsible for technical expertise, project engineering, project management, and project development. In addition, these engineers may manage the business side of the firm including corporate strategy, business development, marketing, operations, and human resources.

In a large firm, three basic tracks emerge once you are licensed as a professional engineer: technical, management, and business development. The first path is to become a technical expert. This path allows you to work on various design projects throughout the firm. The expert is encouraged to mentor other engineers as they work together on the design and construction phase of projects. While this path typically does not lead to corporate management, it is a core competence the firm's reputation is built upon.

The second path is management. Those who choose management stay on the business side, taking on responsibility for small projects and then moving to larger ones. The management track typically includes minimal design work since the employee is focused on overall project management (budgets, staff, resources, etc.) as opposed to design.

The third track, business development, involves pursuing new projects and work for the company. This includes developing business relationships, writing proposals, and eventually determining where the industry is heading and how your company is going to fit in.



Industry



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Civil Engineers in industry work for various organizations including Fortune 1000 firms (manufacturing, pharmaceutical, industrial, technology providers, etc.), retail companies (grocery stores, shopping malls), real estate managers (hotels, entertainment venues, etc), health services

providers (hospitals), colleges and universities, power and energy utilities, and other privately owned companies. These civil engineers use their skills to manage facilities, deliver successful projects, and provide goods and services to the general public.



Construction



5

This figure illustrates career options for civil engineers who have chosen to work in construction management. In addition to the standard requirements, courses in marketing, business development, site safety, risk management, quality control, quality assurance, scheduling, estimating, and

contracting are highly recommended. Field experience is the key to being successful in construction management.



Basic Requirements

- High School Math and Science Courses
- Bachelors of Science in Civil Engineering / Bachelors of Civil Engineering Degree
- Take and pass the Fundamentals of Engineering (FE) Exam as soon as you are eligible
- Work Experience (number of years to qualify for the Principles and Practice of Engineering Exam, PE Exam, varies by state)
- Licensure as a Professional Engineer (PE) is a requirement for any of these paths (requirements vary by state)
- *The Civil Engineering Body of Knowledge for the 21st Century* is a guideline to prepare an aspiring civil engineer for licensure and practice of civil engineering at the professional level.



Transition

Every career has twists and turns that cannot be charted, and you can transition from one career path to another. Here are some suggestions on how to find a path that works well for you:

- Develop a long-term vision.
- Have a short-term plan.
- Review your career plan annually.
- Enhance your ability to communicate.
- Listen to what others have done.
- Find a mentor.
- Improve your skills through continuing education.
- Don't be afraid to change.
- Be willing to take a risk.
- Challenge yourself.
- Have fun.

Each of the career paths has inherently different benefits. Seek out the career path that best fits your goals and will be most satisfying to you.

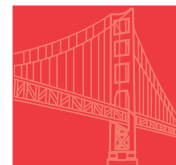
Enjoy the journey. You will be much happier in the long run.



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Career Paths

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Do you ever wonder what path you would follow to become a corporate chief executive officer ... or a public works director? How about a professor of civil engineering? A project engineer for a large consulting firm? Or a senior project manager for a construction management firm? This brochure explores many of the careers paths open to you as a civil engineer.

While there are no magic formulas to achieve your career goals, the career paths presented here were developed by civil engineers in these fields and represent their knowledge of a logical career progression.

This brochure illustrates only five of the dozens of paths possible in the broad and expanding field of civil engineering. Your individual interests, skills, and training will dictate the path you should follow. Over time, you may modify your career path based on personal interests, values, goals, experiences, and new opportunities that present themselves.

This document provides a tool to help you create a strategy for your own personal career development. Planning for advancement can make the difference between a mediocre job and obtaining your position of choice.

ASCE's Committee on Career Development would like to make this a living document that provides a compendium of career paths. Perhaps your own career path provides an example for others to follow. We encourage you to provide comments and career paths to ASCE's Professional Practice staff at 800-548-ASCE (2723).

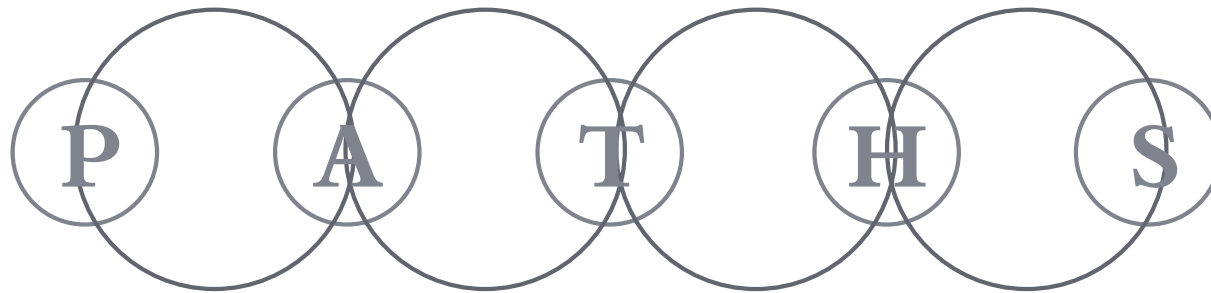
for Civil Engineers



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in Civil Engineering

Committee on Career Development



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