

ENGINEERS GUIDE TO PRE-LICENSURE EXPERIENCE

For more information go to: www.asce.org/licensure



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As an Engineer Intern and or Engineer in Training or recent graduate, you have already reached a major milestone in your career.



To progress in your career and to be a complete professional engineer

1. Take charge of your training
2. Achieve the body of knowledge needed
3. Obtain the right experience



What areas of development should you focus your experience on?



Business & governmental



Communication skills



Project management



Professional ethics



Assessment of risk



Impacts of engineering activities

“ASCE BELIEVES THAT PROGRESSIVE EXPERIENCE SHOULD **INCLUDE A VARIETY OF PROFESSIONAL PRACTICE TOPICS** IN ORDER FOR YOU TO **BE A SUCCESSFUL CIVIL ENGINEER** IN THIS COMPETITIVE GLOBAL MARKET.”

— Policy Statement 547 — Engineering Experience for Professional Licensure.



Achieving Professional Licensure is a testimony of your technical competence, a path toward career development, and a recognition of your commitment to the technical and ethical practice of engineering.



Licensing boards require the demonstration of about four years of progressive engineering experience.



Progressive increase in technical experience



Licensing boards currently require the demonstration of progressive engineering experience for a set number of years (generally four years) prior to obtaining licensure. While the capabilities outlined above are not required by licensing boards, they are important for your career development as discussed in ASCE’s Civil Engineering Body of Knowledge.

DEVELOPING CAPABILITIES FOR THE PROFESSIONAL PRACTICE OF ENGINEERING¹

Capabilities	Why is it important?	How can I achieve this capability?
Design	Fundamental to converting ideas into reality, enabling successful completion of projects	Participate in conceptual designs and the preparation of plans and specifications for a variety of project types.
Sustainability	Assures future generations will have access to sufficient resources	Assist in the evaluation of resource use and environmental impact of projects.
Contemporary & Historic Issues	Engineering solutions impact the economy, environment, public policy, and society.	Participate in feasibility studies, environmental studies, preliminary engineering reports and other project planning activities.
Risk & Uncertainty	Essential to making sound engineering decisions	Participate in the development of project data requirements; recognize uncertainties of the data; consider the probability and impact of failure.
Project Management	Essential to understand and manage schedules, budgets, quality, and human resources to meet project requirements	Assist in the development and monitoring of project schedules and budgets; develop understanding of personnel needs and assignments; manage components of projects; estimate costs, durations of tasks and productivity rates.
Technical Specialization	In-depth knowledge in the technical area of specialization is critical to evaluate potential solutions and impacts.	Perform progressively more complex and technically challenging tasks; compare and critique options
Communication	Effective communication with technical and nontechnical audiences is essential.	Write clear and concise correspondence and reports; prepare and make effective presentations; listen effectively to input; speak clearly and in a non-confrontational manner; question effectively to acquire deeper understanding.
Public Policy	Laws and regulations influence engineering decisions.	Research, review, and understand pertinent laws, regulations, and procedures.
Business & Public Administration	Projects must be delivered in a manner that recognizes organizational and legal constraints.	Participate in the development of scopes of work. Understand terms and conditions of contracts; insurance and bonding requirements; concepts of chargeable time, overhead, and professional liability; organizational policies and procedures.
Globalization	World events influence the environment in which engineers function.	Develop an awareness of global issues through a variety of technical and non-technical publications; learn about developments in other countries; develop an understanding of other cultures; develop an awareness of global climate change.
Leadership	Serving as a role model, influencing others to work toward common goals and improving an organization enhances project outcomes.	Take ownership of assigned tasks; take advantage of career opportunities; speak up in a tactful manner; ask questions; participate in professional organizations; make public presentations; volunteer; accept constructive criticism and act to make improvements; motivate others to a common vision.
Teamwork	Synergy ensures that work of individuals becomes greater than the sum of its parts.	Understand your role and do your part; communicate and coordinate with others; collaborate and cooperate; contribute to collective efforts; assist the leadership; be on time; stay on schedule; fulfill your commitments; respect opinions of others; know when to compromise.
Attitudes	Respect for the profession, coworkers, leadership and the public creates a positive work environment and increases your effectiveness.	Respect opinions of others; know when to compromise; dress appropriately; listen attentively; express yourself in a positive and tactful manner; conduct yourself with integrity, thoughtfulness, thoroughness, optimism, curiosity, and tolerance.
Lifelong Learning	Remaining current in the midst of rapid change is crucial for 21st century projects.	Assess your needs and weaknesses; respond by seeking focused professional development opportunities; monitor technological change; be inquisitive; seek mentors.
Professional & Ethical Responsibility	The safety, health, and welfare of the general public are dependent upon engineering judgments, decisions, and practices.	Adhere to the ASCE professional code of ethics and the requirements of the jurisdiction in which you practice; report unethical practices; follow standards of practice.

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