**JUNIOR ENGINEER JOBS**

**Junior Engineer Job Description:**

A junior engineer works under the direct supervision of a more experienced engineer in a wide variety of fields ranging from construction to infrastructure and manufacturing. Junior engineers provide support to their supervisors throughout the design and development phase, make calculations and prepare plans for projects, and oversee and provide reports on progress and issues that arise during the project lifecycle. While the junior engineer’s responsibilities are much more limited than those of a full engineer, this role provides an excellent opportunity for recent graduates or new professionals to gain valuable experience and hone their skills.

**Junior Engineer Duties and Responsibilities:**

Because they work in so many different fields, the specific duties of a junior engineer can vary. However, based on job postings that we examined, junior engineers share several core responsibilities:

**Develop Plans and Calculations**

Junior engineers develop plans and make calculations for a variety of elements within an engineering project. Under the direct supervision of a senior engineer, they may draw blueprints and structural diagrams then submit them to their supervisor for correction and approval. They may also receive assignments from supervising engineers on specific project components and make necessary calculations and estimates.

**Manage Project Workflow**

Many junior engineers also provide direct day-to-day support and oversight of project elements. They may visit sites to take measurements, answer contractor questions on behalf of the supervising engineer, and serve as liaisons between engineering and construction personnel. Many junior engineers also develop project schedules and deliverable timelines under the supervision of more experienced engineers.

**Provide Engineering Support**

Many of the junior engineer’s duties involve providing direct or indirect support to engineers or engineering teams. This duty can be relatively wide-ranging, encompassing tasks like gathering data for permit applications, submitting documentation to officials, and ensuring that change orders are logged and submitted to personnel throughout the construction process. Because these tasks are generally assigned by the supervising engineer, the day-to-day duties have a great deal of variance and depend on project needs.

**Prepare Project Reports**

While working on a project, the junior engineer prepares progress reports and presents them to engineers and other personnel. They may compare project schedules and budgets to expectations and report on any potential delays or issues that arise during construction. A junior engineer may also need to assist with gathering project specifications and submitting reports to funding sources or governing bodies in the case of an infrastructure or public works project.

**Coordinate Team Members**

Many junior engineers work on teams that include contractors, technicians, and other junior engineers, so team coordination and collaboration is another major duty. Junior engineers work closely with these team members on specific project elements, ensuring that all team members understand their specific duties and expectations and reporting to supervising engineers to keep them informed about issues within the team.

**Junior Engineer Skills and Qualifications**

Junior engineers provide direct and indirect support for engineering projects across industries, frequently managing several tasks at once. Most workers in this role have at least a bachelor’s degree, along with the following skills:

**Math and physics skills** – junior engineers should be able to successfully perform mathematical and physics calculations under the supervision of an experienced engineer

Project planning – many junior engineers provide support during the project planning and development stages, so effective skills in project planning and drafting are essential

Project management – because they frequently oversee the day-to-day activities of a construction and engineering process, some experience with project management is very helpful for a junior engineer

Problem-solving skills – junior engineers need to devise technical and creative solutions to a variety of issues that may arise during the course of construction to prevent delays and keep projects moving

Team coordination – because they work on teams with technicians and other engineers who may be responsible for individual project elements, junior engineers should have some experience with team coordination

**Tools of the Trade**

Junior engineers need to be able to use standard office equipment and technologies in addition to the following:

**Drafting software** (AutoCAD, SketchUp)

Project management software (Asana, Smartsheet)

**Junior Engineer Education and Training**

Generally, junior engineers have at least a bachelor’s degree in engineering, if not an advanced degree. These degrees should come from a program accredited by the Accreditation Board for Engineering and Technology (ABET). Because this tends to be an entry-level engineering role, most junior engineers do not need much experience and can begin working after completing their degree. This role provides many opportunities for on-the-job training as junior engineers gain more experience and move on to more supervisory roles.

**Junior Engineer Salary and Outlook**

The Bureau of Labor Statistics (BLS) does not provide salary estimates specifically for junior engineers, but several other sites have gathered data related to pay rates for this position. According to Glassdoor, junior engineers earn an average annual salary of $65,623 per year. This is relatively close to Indeed’s estimate of $67,888 per year. PayScale’s estimate is much lower at $58,360 per year.

Because junior engineers work in so many industries, employment outlook is difficult to estimate for this role. Most engineering careers are expected to grow at an average or faster than average pace through 2026.