

2024 CAREER GUIDE

for Engineering Professionals





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FOR ENGINEERING PROFESSIONALS

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2024 Outlook

Heading into 2023, many were bracing for an almost certain recession. However, despite these concerns, the labor market simply maintained a slow, but steady pace of growth. This resilience has led to a more cautiously optimistic outlook: hope for a possible “soft landing” of reduced inflation without a recession and massive unemployment.

As of the publication of this guide, job growth is consistent, unemployment remains low, labor force participation rates are holding steady (or slightly increasing), and the rate of workers quitting is returning to pre-pandemic levels. We’re still keeping an eye on the possibility of a recession—after all, the full impact of Federal Reserve interest rate changes can take 6 to 12 months to ripple through the economy.

However, one thing remains certain: competition in today’s job market is fierce as ever, so showcasing your value and staying tuned in to market trends is paramount.

Our 2024 Guide for Engineering Professionals is designed to help you:

- ▶ Gain insights into Engineering roles, ensuring you’re well-informed and prepared.
- ▶ Boost your confidence in career discussions, knowing the unique value you bring to the negotiating table.
- ▶ Equip you with the knowledge and tools to make informed career decisions and develop strategies for long-term growth.



Trends to Watch

Temporary employment continues to trend down, declining by 242,000 since March 2022. In the past, dips in temp employment have been leading indicators of recessions. That being said, temp employment is still higher than (or on par with) pre-pandemic levels.

In 2023, the Federal Reserve raised interest rates to address inflation. This means that while there could be an initial rise in wages in 2024, the momentum of this wage growth will likely taper off as the year progresses.

The labor force participation rate hasn't fully bounced back to its pre-pandemic levels, possibly because many individuals aged 55 and older chose early retirement during the pandemic. However, it's interesting to note that the participation rates for those aged 25 to 54 have seen a significant uptick.

2024 Top 5 In-Demand Jobs in Engineering

Mechanical Engineer

Day-to-Day: Design, analyze, and develop mechanical systems and products. Conduct research, test prototypes, and oversee the manufacturing process.

Skill Highlight: Strong understanding of mechanics, thermodynamics, and CAD software proficiency.

Career Trajectory: Can progress to roles like Lead Mechanical Engineer or Mechanical Engineering Manager.

Average Salary Range: \$65,000 - \$95,000

Manufacturing Engineer

Day-to-Day: Design and improve manufacturing processes. Oversee the installation, operation, maintenance of production machinery. Implement quality control measures.

Skill Highlight: Process optimization, lean manufacturing, and CAD/CAM software proficiency.

Career Trajectory: Can move up to roles such as Lead Manufacturing Engineer or Manufacturing Operations Manager.

Average Salary Range: \$60,000 - \$85,000

Electrical Engineer

Day-to-Day: Design, develop, and oversee the production of electrical equipment. Work on power generation, transmission, and distribution systems.

Skill Highlight: Proficiency in electronic testing, circuit design, and CAD software.

Career Trajectory: Can move to roles such as Lead Electrical Engineer or Electrical Engineering Director.

Average Salary Range: \$70,000 - \$100,000

Systems Engineer

Day-to-Day: Design and manage complex systems over their life cycles. Identify and mitigate risks, ensure that all parts of the system function as a whole.

Skill Highlight: Systems thinking, interdisciplinary knowledge, and analytical skills

Career Trajectory: Can progress to roles like Senior Systems Engineer or Systems Engineering Manager.

Average Salary Range: \$70,000 - \$105,000

Project Engineer

Day-to-Day: Oversee technical projects from conception to completion. Coordinate between various teams, manage resources, and ensure project goals are met.

Skill Highlight: Project management, cross-functional coordination, and technical acumen.

Career Trajectory: Can transition to Project Manager or Senior Project Engineer roles.

Average Salary Range: \$65,000 - \$90,000



▶ Engineering Careers

Thanks to the private sector's voracious appetite for solutions that simplify and improve our lives, as well as public sector investment in improved infrastructure and renewable energy, top engineering professionals are needed more than ever—and increasing salaries reflect the fierce competition for talent.

To help you understand the roles in high demand and the expectations for those roles, take a look at the following job descriptions and salary data for key positions in Engineering.



Mechanical Engineer

Mechanical Engineers design, develop, and maintain all aspects of mechanical systems and products. Their primary responsibility lies in creating innovative solutions to mechanical challenges. Mechanical Engineers are involved in the entire product life cycle, starting from the conceptualization phase where they conduct research and design prototypes, to the testing and implementation phases where they ensure the efficiency, reliability, and safety of the developed systems. They often collaborate with cross-functional teams to integrate mechanical components seamlessly into larger projects.

Mechanical Engineers are frequently engaged in troubleshooting and maintenance, ensuring that mechanical systems operate optimally throughout their life cycle. Strong analytical and problem-solving skills are integral to their work, as they navigate complex technical challenges and constantly seek improvements in mechanical designs and processes to meet evolving industry standards.

Education Requirements

- Requires a bachelor's degree in engineering
- 0-3 years of experience in the field

Essential Skills

- Comprehensive understanding of mechanics and thermodynamics
- Strong analytical and problem-solving skills
- Attention to detail
- Proficiency in computer-aided design (CAD) software

Roles & Responsibilities

- Design and develop all aspects of mechanical systems and products
- Conduct research, test prototypes and oversee the manufacturing process
- Assess the performance, reliability, and safety of mechanical designs through analyses

Day-to-Day Duties

- Create detailed designs, drawings and specifications for mechanical systems and products
- Perform analyses to assess performance, reliability, and safety of mechanical designs, ensuring designs comply with industry standards, codes and regulations
- Collaborate with cross-functional teams to coordinate and execute projects efficiently
- Conduct tests to evaluate prototypes and validate design concepts
- Troubleshoot issues with existing mechanical systems and propose effective solutions to enhance performance or address malfunctions
- Maintain accurate documentation of design processes, testing procedures, and project updates

Electrical Engineer

Electrical Engineers design, develop, and maintain all aspects of electrical systems and components. They often work on projects involving the generation, transmission, and utilization of electrical power, as well as the design and optimization of electronic circuits and devices. Electrical Engineers are instrumental in the entire life cycle of electrical systems, from the initial conceptualization and design phases to the testing and implementation phases, ensuring that systems operate safely and efficiently.

Beyond design and development, Electrical Engineers are responsible for troubleshooting and maintaining electrical systems, ensuring they meet safety and regulatory standards. Their work often involves utilizing computer-aided design (CAD) software, simulation tools, and testing equipment to validate and optimize electrical designs.

Education Requirements

- Requires a bachelor's degree in engineering
- 0-2 years of relevant experience

Essential Skills

- Comprehensive understanding of electrical principles
- Strong analytical and problem-solving skills
- Attention to detail
- Proficiency in computer-aided design (CAD) software

Roles & Responsibilities

- Design, develop, and oversee the production of electrical systems and components
- Work on power generation, transmission, and distribution systems
- Conduct tests on electrical systems and components to identify and address issues

Day-to-Day Duties

- Create and modify electrical systems and components using computer-aided design (CAD) software
- Conduct tests to ensure specifications are met and identify and resolve issues through troubleshooting
- Maintain detailed documentation of designs, test procedures, and project updates
- Collaborate with cross-functional teams to coordinate and execute projects efficiently
- Ensure electrical designs adhere to relevant safety, quality, and industry standards



Project Engineer

Project Engineers are responsible for overseeing the planning, coordination, and execution of various engineering tasks. Their duties often involve developing project plans, setting timelines, and establishing budgets. Project Engineers act as liaisons between different project stakeholders, ensuring that all parties are well-informed and aligned with project goals. They collaborate closely with design and technical teams, offering technical expertise and guidance, while also managing project documentation and maintaining compliance with industry standards and regulations.

Project Engineers need strong leadership and communication skills as they often lead and motivate cross-functional teams, facilitating effective collaboration and problem-solving. Adaptability is crucial in this role, as Project Engineers must navigate unforeseen challenges, adjust project plans as needed, and ensure that projects are completed within the defined scope, timeline, and budget.

Education Requirements

- Requires a bachelor's degree in engineering or related area

Essential Skills

- Strong project management skills
- Excellent communication skills
- Cross-functional coordination
- Technical expertise

Roles & Responsibilities

- Oversee the planning, coordination and execution of project
- Develop project plans, set timelines and establish budgets
- Collaborate with team members, clients, and stakeholders to ensure everyone is aligned with project goals

Day-to-Day Duties

- Develop detailed project plans, outlining tasks, timelines and resource requirements
- Coordinate between various teams to ensure all parties are well-informed throughout the project life cycle and aligned with project goals
- Maintain accurate project documentation, including progress reports, meeting minutes and technical documentation
- Allocate and manage resources efficiently, including personnel, budget, and materials
- Implement and maintain quality control processes to ensure project deliverables meet established standards and client requirements

Manufacturing Engineer

Manufacturing Engineers design, develop, and implement efficient manufacturing systems in order to optimize and improve production processes. They assess and enhance existing manufacturing processes, often employing principles of lean manufacturing and Six Sigma to minimize waste and increase productivity. Collaborating closely with cross-functional teams, Manufacturing Engineers strive to streamline operations and ensure that products meet stringent quality standards.

In addition to process optimization, Manufacturing Engineers are instrumental in the selection and integration of new technologies and machinery. Their role requires a blend of technical expertise, problem-solving skills, and effective communication to drive continuous improvement and maintain a high level of efficiency in the manufacturing processes.

Education Requirements

- Typically requires a bachelor's degree in engineering
- 3-5 years of experience in the field

Essential Skills

- Comprehensive understanding of lean manufacturing
- Strong analytical and problem-solving skills
- Attention to detail
- Proficiency in computer-aided design (CAD) and computer-aided manufacturing (CAM) software

Roles & Responsibilities

- Design work processes, tools and/or machines of varying types
- Oversee the installation, operation, and maintenance of production machinery
- Write procedures for operating new or existing equipment
- Implement quality control measures to ensure specified standards and regulatory requirements are met

Day-to-Day Duties

- Design and optimize manufacturing processes to improve efficiency, reduce costs, and enhance overall productivity
- Implement and monitor quality control measures to ensure that products meet specified standards and comply with regulatory requirements
- Troubleshoot issues and resolve technical problems
- Maintain accurate documentation of manufacturing processes, procedures, and changes
- Collaborate with cross-functional teams and suppliers to ensure a seamless integration
- Evaluate and integrate new technologies, machinery, and manufacturing methods





Systems Engineer

Systems Engineers design, develop, and manage complex systems, ensuring they function seamlessly to meet the needs of various industries. Their primary responsibility lies in overseeing the entire system life cycle, from initial concept and design to implementation, testing, and ongoing optimization. They are adept at analyzing and defining system requirements, considering both technical and business objectives, to develop solutions that align with organizational goals.

Systems Engineers are also responsible for risk management, ensuring that potential challenges are identified and mitigated throughout the system development process. Communication skills are crucial as Systems Engineers interact with diverse stakeholders, translating technical details into understandable terms for both technical and non-technical team members.

Education Requirements

- Typically requires a bachelor's degree in engineering or related area
- 0-2 years of direct experience in the field

Essential Skills

- Comprehensive understanding of information security
- Strong analytical and problem-solving skills
- Attention to detail
- Knowledge of systems engineering software tools

Roles & Responsibilities

- Design, build, maintain and monitor installed systems and infrastructure
- Conduct testing and verification processes to ensure proper functioning and identify and address any issues or discrepancies
- Correct software errors in existing systems, improve performance through hardware upgrades and implement new systems

Day-to-Day Duties

- Design and manage complex systems over their life cycles
- Conduct testing and verification processes to ensure proper functioning
- Identify potential risks and proactively address issues to prevent negative project impact
- Maintain detailed documentation of system requirements, designs, test plans, and project updates
- Oversee the integration of system components ensuring that all parts function as a whole
- Collaborate with stakeholders to implement systems solutions within established timelines and budget

Top Certifications for Engineering Professionals

There are several engineering professional certifications worth pursuing, depending on your discipline, industry, and career goals. Certifications serve as endorsements of a professional's competence and specialization, providing opportunities to demonstrate their expertise in specific domains.

From civil and mechanical engineering to information technology and systems engineering, there is a diverse range of certifications tailored to meet the unique demands of each discipline. Below, we have highlighted a couple of widely recognized certifications, applicable to most engineering disciplines, that offer professionals the chance to enhance their skills and distinguish themselves as leaders in their engineering domains.

Professional Engineer (PE)

The PE license is a widely recognized credential for various engineering disciplines. It signifies that an engineer has met specific education, experience, and examination requirements, demonstrating a high level of competence and professionalism in their field. This certification is administered by individual state engineering boards, and each state has its own licensing process. The PE license is often a requirement for engineers who wish to work as consultants or take on leadership roles in engineering projects.

Project Management Professional (PMP)

While not specific to engineering, the PMP certification from the Project Management Institute (PMI) is valuable for engineers involved in project management roles, showcasing proficiency in project planning and execution. To attain the PMP certification, candidates typically need to meet specific eligibility criteria, including a combination of education and professional project management experience. Once eligible, candidates must pass the PMP exam, a comprehensive test that assesses their proficiency in project management principles, processes, and best practices.



Benefits of Working with a Recruiter

As an Engineering professional with the right mix of skills and experience, you're a hot commodity. The skills gap in the industry is fueling competition among employers, which means greater opportunities for candidates. Generous bonuses and greater professional development opportunities are more commonplace and working with a recruiter is more valuable than ever.

Employers are outsourcing hiring

Reviewing resumes and screening candidates is time-consuming, and the cost of making a bad hire can cost hundreds of thousands of dollars. That's why more employers are trusting third-party recruiters to take care of their hiring. The initial interviewing and screening allow hiring managers to focus on their other priorities. Hiring managers are then exposed to only the most qualified candidates.

This means many of the best positions aren't found on a job board or a company's careers page. These positions are often only revealed when working with a recruiter. Specifically, by working with a recruiter who specializes in Engineering positions. Unless you're working with a well-connected recruiter, you might miss out on your dream job.

Recruiters know what employers want

Yes, there are career opportunities made possible by the skills gap, but employers still spend time, attention, and resources to avoid costly hiring mistakes. While presenting yourself as the ideal candidate, you may unknowingly sabotage yourself.

A recruiter can work with you to determine in which areas you excel. Recruiters also know how to clean up any areas that need a little polishing. They can get you feedback from interviews that you may otherwise not be privy to. This way, you'll know what the employer thinks you did well or where you fell short. This insight can be invaluable as it can help you avoid making the same mistakes in the next interview or how to adjust before you accept an offer.



Using a recruiter is a better use of your time

Job searching alone is time-consuming, particularly if you're currently working. On your own, you may be able to apply and talk to three companies a week. Working with a recruiter, you could reach ten times as many employers in the same amount of time. Since that's their full-time job, recruiters work 40+ hours a week to get candidates hired. It will save you time and as a candidate, it costs nothing. That's a pretty good return on investment.

Negotiate a higher salary, as well as better benefits and perks

While we are all for initiatives that reward loyalty, it must be said that switching jobs typically means a big boost in pay. If you've been with your current employer for a while, you've probably been receiving cost of living adjustments and promotions amounting to three to ten percent per year. But when you switch jobs, you could be looking at up to a 15 percent increase or more. If you're not up to date on current salary ranges and bonuses, you could end up leaving money on the table. A recruiter, on the other hand, is keenly aware of the going rate for your skill set and experience and can help negotiate to make sure you're paid what you are worth.

With the demand for talent outpacing supply, especially for experienced Engineering talent, candidates have a real opportunity to benefit from higher salaries and other perks. Working with an experienced, connected recruiter can help you take advantage of this job market by connecting you to excellent opportunities and competitive pay in far less time than it would take to conduct a job search on your own.

LHH is plugged in to the world of Engineering and has offices all over the country, with recruiters specializing in your market. Visit [LHH.com](https://www.lhh.com) to get connected with a recruiter today!

At LHH, we exist to help people, teams and organizations find and prepare for what's next. Our end-to-end HR solutions future-proof organizations and careers all over the world. Through Career Transition & Mobility, Leadership Development and Recruitment Solutions, we enable transformation, and our job is never done because there's always another tomorrow to prepare for.

We make a difference to everyone we work with, and we do it with local expertise, backed by global infrastructure and industry-leading technology. LHH's over 8,000 colleagues and coaches span over 60 countries worldwide, working with more than 15,000 organizations, a majority of Fortune Global 500, and nearly 500,000 candidates each year. Together we address needs across the entire talent journey, helping organizations build their capabilities and individuals build brighter futures. There is a world of opportunity out there. Let's get to work.

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