

GET INTO ENERGY CAREER PATHWAYS

Mechanical Engineer: Putting STEM to Work[®]

Mechanical engineers in the energy industry design and operate fossil fuel, hydroelectric, conventional, nuclear, and cogeneration power plants. They also design the main and service networks for transportation and distribution of natural gas. They are involved in all aspects of the production and conversion of energy from one form to another. Mechanical engineers are also involved in exciting projects such as developing alternatives to thermal energy, power cycle devices, fuel cells, gas turbines, and innovative uses of coal, wind, and tidal flow.

What will you do?

ENTRY LEVEL

- Responsible for performing entry-level engineering analysis
- Design, plan, review, and inspection for small to medium projects or designated segments of larger, more complex projects
- Application of professional engineering concepts, principles, practices, and methods to perform a broad range of engineering activities in a variety of work environments
- Work under guidance of an experienced engineer
- Initial work is reviewed for technical soundness, appropriateness, and compliance with standard engineering practices

3+ YEARS

- Responsible for and/or lead others in performing engineering analysis
- Design, plan, review, and inspection for moderately complex/major projects
- Application of advanced engineering concepts, principles, practices, and methods to perform a broad range of engineering activities in a variety of work environments
- Resolve new and unusual problems and recommend solutions to unique circumstances and situations
- Regular contact with individuals in internal and external leadership positions to influence and motivate others to achieve project objectives

5-10+ YEARS

- Serve as team leader in performing engineering analysis
- Design, plan, review, and inspection for complex projects among varying disciplines
- Manage multiple projects at one time

What competencies do you need?

- *Critical thinking*
- *Problem solving*
- *Print reading*
- *Project planning*
- *Teamwork*
- *Knowledge and application of new technologies*
- *Knowledge of legislative and regulatory functions and industry standards*

- *Critical thinking*
- *Problem solving*
- *Project planning*
- *Troubleshooting*
- *Teamwork*
- *Communication skills*
- *New project design*
- *Development of short- and long-term plans*

- *Critical thinking*
- *Problem solving*
- *Project planning*
- *Teamwork*
- *Communication skills*
- *Supervisory skills*
- *Leadership skills*