FUELING EDUCATION

CAREER PROFILE

Operations Engineer

WHO ARE THEY?[1]

Operations engineers use their science and math background to ensure that a company's operations (such as manufacturing or shipping) are efficient and meet safety, environmental, and industry standards. Operations engineers must be skilled at analyzing data and designing/modifying systems accordingly. They pay close attention to detail, and they are experts in anticipating, identifying, and solving problems. They also understand that teamwork is important, and they must be able to communicate effectively. An operations engineer's time may be split between an office and a production plant.

WHAT DO THEY DO? [1,2,3]

Operations engineers work to ensure that their company's systems run smoothly and produce a product/service that meets all required specifications. They work with system operators to understand what is happening on the ground level—such as in the petroleum refinery, within the transportation system, etc. They analyze their company's operations and production, and they may modify or redesign systems when improvements are needed. When they implement system optimizations, they collaborate with others to monitor the results and finetune the changes. Through their analysis and design, best practices are developed and overall efficiency increases.

JOB OUTLOOK[1]

Employment opportunities for industrial engineers (i.e. the broader engineering category that includes operations engineers) are projected to grow faster than the national average through 2028. Students who are interested in chemistry, physics, engineering, or mathematics may find this career interesting. In addition, students considering this career should enjoy the idea of juggling various roles and working in more than one setting, as this career combines technical, supervisory, and administrative responsibilities and includes time both in an office and at a production facility.

SALARY RANGE[2]

$51,000- $113,000

HOW DO I BECOME ONE?[1,2]

An operations engineer must earn a bachelor's degree from a four-year university, and additional degree requirements will often vary by employer. While many operations engineers have a degree in engineering, some may obtain a different industry-related degree. After earning a bachelor's degree, students may choose to further their education with a master's degree or doctorate degree. Students and employees also have the opportunity to work toward specific certificates to learn more about specialized subject areas. While education past a bachelor's degree may not be required, it can be helpful.

EDUCATION/ TRAINING

- High school diploma
- Internships and/or apprenticeships
- Bachelor's degree in engineering or a related field
- Master's and/or doctorate degrees: Optional
- Specialized certificates

1. "Operations Engineer: Job Description and Education Requirements." Study.com. study.com/articles/Operations_Engineer_Job_Description_and_Education_Requirements.html.
2. "Operations Engineer." PayScale. https://www.payscale.com/research/US/Job=Operations_Engineer/Salary.
3. "Operations Engineer Job Description." Monster. https://hiring.monster.com/employer-resources/job-description-templates/operations-engineer-job-description/.