Mechanical Engineer

By: Jessica Wang
What Do Mechanical Engineers Do?

- Mechanical engineers are engineers that design, build, and improve mechanical devices.
- Overlook and coordinate mechanical systems and production.
- Analyze problems to figure out a solution to it.
- Conduct research on machine performance and system failures.
- Work with other engineers to implement new procedures and provide new information.
REQUIRED TRAINING
• Must complete high with full credits in the math and science field
• Earn a Bachelor’s Degree in Mechanical Engineering or Mechanical Engineering Technology at minimum
• May pursue a Graduate’s Degree (optional)
• To become a licensed Professional Engineer, you need a degree from the ABET (Accreditation Board for Engineering and Technology) program

• Must have some work experience under a licensed engineer
• Must also pass the Fundamentals of Engineering and Principles and Practice of Engineering tests, administered by the National Council of Examiners for Engineering and Surveying.

Source: Owl Guru, Mechanical Engineers

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Bachelor’s Degree</td>
<td>82.92%</td>
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<tr>
<td>Associate’s Degree</td>
<td>6.9%</td>
</tr>
<tr>
<td>College Certificate</td>
<td>7%</td>
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</tbody>
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Bachelor's Degrees Awarded by Engineering Discipline: 106,658*

*Total does not include computer science (outside engineering).
SKILLS AND CHARACTERISTICS
To be successful in this career, one must have...

<table>
<thead>
<tr>
<th>Skill</th>
<th>Description</th>
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<tbody>
<tr>
<td>Mathematic Skills</td>
<td>Used everyday to make calculations and solve problems</td>
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<tr>
<td>Teamworking Skills</td>
<td>Must be able to corporate with other engineers</td>
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<tr>
<td>Problem Solving Skills</td>
<td>Be able to think critically to come up with resolutions</td>
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<td>Communication Skills</td>
<td>Be able to voice one’s opinions and interact with others</td>
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<tr>
<td>Determination</td>
<td>Must preserve and don’t easily give up on challenges</td>
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<tr>
<td>Creativity</td>
<td>Be able to design or brainstorm news ideas or solutions</td>
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<tr>
<td>Leadership</td>
<td>Help others, organize things, take action and lead</td>
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TYPICAL WAGES
Wages

-the average salary of mechanical engineers is $92,880

-the hourly wage would be $45

-mechanical engineers with little to no experience make around $56,270 to $69,410 per year

-salary will increase over time as they gain experience

-the median annual wage was $88,430 in 2019

-the lowest 10 percent earned less than $57,130,

-the highest 10 percent earned more than $138,020
JOB OUTLOOK
Job Outlook

- The employment of mechanical engineers is expected to increase by 4%.

- Employment of mechanical engineers in 2019 was 316,300. The expected employment of mechanical engineers in 2029 is 328,700.
What are professional associations?

Professional associations are nonprofit associations that seek to advance and develop a particular profession.

Why should a person join one?

- more education
- networking opportunities
- more perspectives
- more assistance
Here are some professional associations for mechanical engineers:

• American Society of Mechanical Engineers (ASME)
• Institution of Mechanical Engineers
• International Academy for Production Engineering
• Society of Automotive Engineers
• Society of Manufacturing Engineers
• American Association of Engineering Societies
JOB LISTING
Job Listing for Mechanical Engineer

Company: ZI Engineering, PC
Location: Valley Stream, New York

Job Description/Responsibilities: Will be working on the Building Conditions Assessment Survey in a team of 4 professionals to conduct assessments and inspections of schools’ mechanical systems

Educational Requirements: Bachelor’s of Art/Bachelor’s of Sciences degree in Engineering

Preferred Experience/Skills: Minimum of 5 years in the engineering profession, team-oriented, active listener, strong organizational skills, ability to work in a fast-paced environment, strong communication skills, strong problem-solving skills
Sources