

Occupational Profile: Mechanical Engineers

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Mechanical Engineers work in a variety of industries developing, building and testing mechanical and thermal devices, including tools, engines and other machines. Mechanical Engineers typically work in an office environment but occasionally travel into the field to inspect or fix equipment. They need at least a bachelor's degree and a graduate degree may be required for management. Mechanical Engineers must be licensed if they sell their services publicly. (Occupational Outlook Handbook)

In Connecticut, there are 6,120 Mechanical Engineers, 4,800 (85%) of whom work in the Manufacturing industry. They have a median salary of \$83,550 which is slightly above the national median pay of \$82,100. (Bls.gov/oes)

Mechanical Engineering job are projected to increase by 5% between 2012 and 2022. This is lower than the 11% increase projected for all occupations. The job growth is likely to take place in industries such as oil and gas extraction or architectural, engineering, and related services as well as in emerging fields such

as alternative energies, remanufacturing, and nanotechnology. (Occupational Outlook Handbook)

For a firsthand look, I spoke with Wes Long, a Mechanical Design Engineer at Pratt & Whitney, about some of his day to day work and about the mechanical engineering field in general.

Do you work on one specific engine or is it something that changes on a day-to-day or week-to-week basis?

“There are some folks that are specialized in one engine. I’m not that. I specialize in one area of all engines, and right now that area is gearbox related. So I can work on military engines and I can work on a host of commercial engines. They’re constantly changing in terms of what work I get, because one week I’ll get a commercial engine in with a repair that needs to be assessed, the following week or a month later I could get a military engine that needs something else.”

You have a Bachelor’s in Engineering. Is that typical of most mechanical engineers or

do they tend to get a master’s degree also?

“Nowadays you don’t even get the chance to be an engineer unless you at least start off with a bachelor’s degree in engineering. I see it sort of, in the future, I don’t know how far in the future but 10, 20 years it’ll probably get to the point where it will be very difficult for an individual who doesn’t have a master’s degree to find a position. In my job alone I would estimate that a minimum of a third to a half of the people I work with either have a master’s degree or are working towards a master’s degree.”

Why did you choose mechanical engineering as a specialty versus going into one of the other engineering fields?

“One thing I heard, back when I was in school [from a NASA recruiter], was that if you make yourself into a mechanical, [they] can kind of make you into anything that you want to be...if you kind of hone yourself into aerospace or civil or chemical that’s really the only place [they] can kind of put you.” ■

Mechanical Engineers

| State | Employment | Employment per thousand jobs | Location quotient | Annual mean wage |
|--------------------|--------------|------------------------------|-------------------|------------------|
| Michigan | 32,640 | 8.16 | 4.18 | \$87,510 |
| Connecticut | 6,120 | 3.74 | 1.92 | \$83,920 |
| South Carolina | 6,360 | 3.48 | 1.78 | \$87,600 |
| Indiana | 9,840 | 3.45 | 1.77 | \$75,480 |
| Wisconsin | 7,420 | 2.74 | 1.41 | \$69,110 |