

Mechanical Engineering

**American Society of Mechanical
Engineer's Western Washington
Section**

<http://sections.asme.org/westernwa>

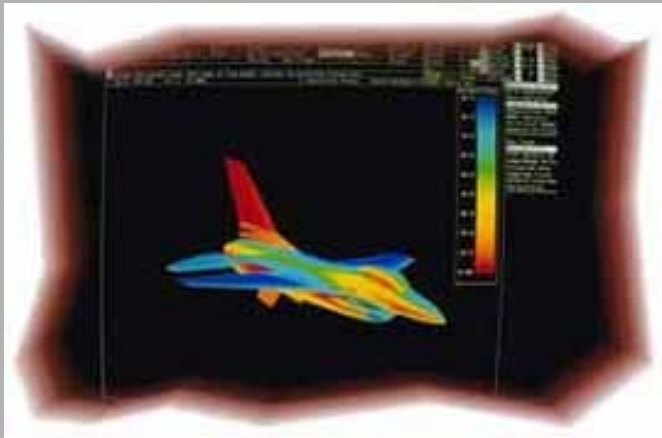
Main Items Addressed in this Presentation

- *What Mechanical engineers do*
- *Types of engineering*
- *Future trends in engineering*
- *Outlook for young people*
- *What students should study*

What Mechanical Engineers do

- Mechanical engineers in general are problem solvers
- Mechanical engineers design things that have real world applications
- Mechanical engineers have designed many products and structures that we use in our daily lives
- Mechanical engineers look for practical applications for things scientists and others discover
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Mechanical and Aerospace Engineering



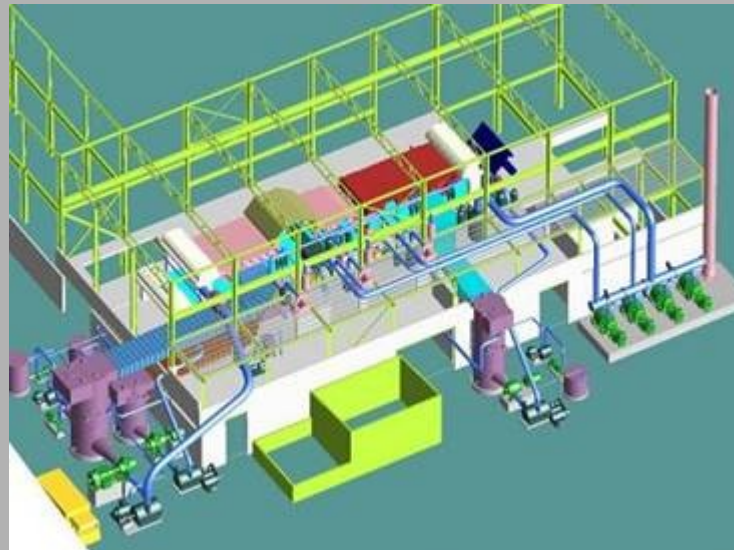
Mechanical and Automotive Engineering



Mechanical and Marine Engineering



Mechanical Engineering



Mechanical and Petroleum Engineering



Question for the Audience

- What types of Engineers might play a role in designing and producing a new automobile?
(look at the scale model car in the picture)



Future trends & technology's influence

- Computers and the internet will continue to impact all engineering fields, including Engineering Education
- Virtual Reality will continue to integrate into design applications
- Bio-medical & Nanotechnology fields will continue to merge
- Artificial Intelligence (AI) will combine with Robotics to create much smarter machines
- Civil Engineering will be critical to replace bridges, older structures & environmental improvements

Future trends & technology's influence

(continued)

- Alternative energy sources and new technologies will impact many engineering fields
- Many types of Engineers will help design more leisure time activities & electronic games
- Global impacts of increasing populations on housing, transportation, and food production
- Engineers & Scientists will continue to be drawn to outer space projects

Future Engineering in Space



Outlook for young people entering the field

- Excellent job prospects with unlimited variety of work, good pay & benefits
- Should enjoy math & science and have good study skills
- In addition to education, it requires practical experience
 - Intern or Co-Op work during college is recommended
- Some specialty engineering fields may require a Masters degree or Ph.D.
- Later - your educational degree, job experience, and field of interest will determine the type of engineering work you do

What high school students should study

- Lots of Math & Science, but also English, History and other high school general courses
- Do some reading about types of engineering, check out web sites, and Discovery & Modern Marvels type TV shows
- Try to go on local manufacturing tours
- Interview working engineers, including any members of your immediate family or their friends
- Look at engineering school's web sites and particular departments of fields that interest you most

What high school students should study (continued)

- Attend an engineering school's "Open House" event (like the U.W. holds every April)
- Make sure you apply to an ABET accredited engineering school, that has the engineering specialty you are most interested in
- When at college, continue to investigate the type of engineering work that interests you most