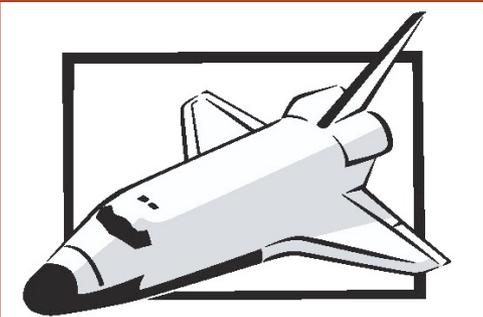


Week 3

***The
Engineering
Profession***



Learning More about Engineering

- Study Chapter 2 of *Studying Engineering*
- Search the web
- Talk to engineering professionals
- Attend career days
- Other?

Overview

- Rewards and Opportunities of an Engineering Career
- Engineering Disciplines
- Engineering Job Functions
- Employment Opportunities

Job Satisfaction

Number one cause of unhappiness among people in the U.S.

- Financial problems?  No
- Relationship problems?  No
- Health problems?  No
- Job dissatisfaction?  Yes!

What is it about engineering that is so satisfying?

Rewards and Opportunities of an Engineering Career

Varied opportunities **Financial security**

Understanding how things work

Social impact **Intellectual development**

Challenging work **Creative thinking**

Self esteem

Professional environment **Prestige**

and many more...

What rewards, benefits, and opportunities excite you?

Varied Opportunities

The day you walk down the aisle to receive your degree in engineering, you have closed no doors.

There is nothing you cannot become from that day forward!!!

People Educated as Engineers

Engineer	Profession
Jimmy Carter	President of the United States
Alfred Hitchcock	Film Director/Producer
Eleanor Baum	First Woman Dean of Engineering
Herbie Hancock	Jazz Musician
Frank Capra	American Film Director
Paul MacCready	Inventor/Winner of Kremer Prize
Ellen Ochoa	Space Shuttle Astronaut
Hyman G. Rickover	Father of the Nuclear Navy
Bill Nye	Host of TV Show “Bill Nye, The Science Guy”
Boris Yeltsin	President of Russia
Alexander Calder	Sculptor
Bill Koch	Yachtsman/Captain of America Cup Team

Engineer	Profession
W. Edwards Deming	Father of Modern Management Practice (TQM)
Grace Murray Hopper	U.S. Navy Rear Admiral/Computer Engineer
Ming Tsai	Restaurateur and Star on TV's Food Network
Hu Jintao	President of the People's Republic of China
Montel Williams	Syndicated Talk Show Host
John H. Sununu	Political Pundit/Governor of New Hampshire
Samuel Bodman	U.S. Secretary of Energy
Donald Thompson	CEO and President, McDonald's Corp.
Rowan Atkinson	British Actor/Comedian/Screenwriter
Rudolph Diesel	Inventor of the Diesel Engine
Michael Bloomberg	Billionaire/Mayor of New York City
Lonnie G. Johnson	Inventor (SuperSoaker®)
A. Scott Crossfield	X-15 Test Pilot
Don Louis A. Ferre	Governor of Puerto Rico

Engineer	Profession
Yasser Arafat	Palestinian Leader/Nobel Peace Prize Laureate
Tom Landry	Dallas Cowboys' Head Coach
Igor Sikorsky	Inventor of Single Rotor Helicopter
Mohamed Morsi	President of Egypt
Shiela Widnall	Secretary of the Air Force
David A. Wolf	Astronaut/Medical Doctor/Electrical Engineer
Robert A. Moog	Father of Synthetic Music
Chester Carlson	Inventor of Xerox Process
John A. McCone	Director of Central Intelligence Agency
Arthur C. Nielsen	Developer of Nielsen TV Ratings

And many more...

Financial Reward

Starting Salaries for 2018 Bachelor's Degree

Discipline	Average Salary
Engineering	\$66,521
Mathematics and Sciences	\$61,867
Computer Sciences	\$60,005
Business	\$56,720
Humanities & Social Sciences	\$56,669
Agriculture and Natural Resources	\$53,565
Communications	\$51,448
Average for All Disciplines	\$44,259

Prestige

Engineers are critical to:

International competitiveness

Standard of living

National security

Personal health

Public safety

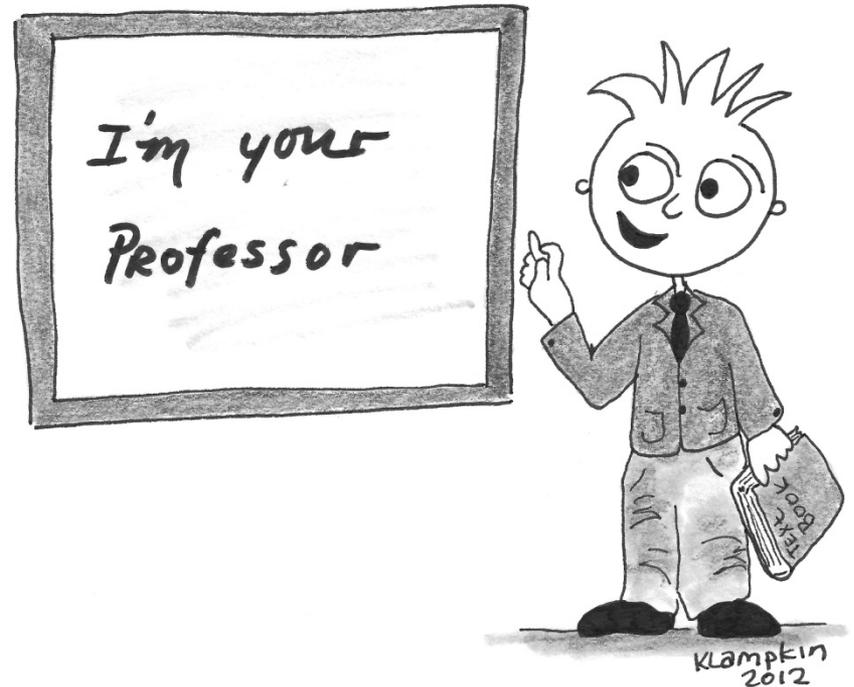


Engineering Disciplines

Discipline	B.S. Degrees Awarded in 2016
Mechanical engineering	29,751
Electrical and electronics engineering	16,0165
Civil engineering	14,457
Chemical engineering	9,898
Computer engineering	6,671
Bioengineering and biomedical engineering	6,607
Industrial engineering	5,063
Aerospace engineering	3,967
General engineering	3,431
All other engr. disciplines	13,224

Engineering Job Functions

- Analysis
- Design
- Test
- Development
- Sales
- Research
- Management
- Consulting
- Teaching
- Entrepreneurship



Employment Areas for Individuals with Engineering Degrees

Employment Area	Percentage
Business/Industry	64.5%
Federal Government	4.6%
State/Local Government	6.2%
Educational Institutions	18.5%
Self-Employed	6.2%
Total	100%

***Manufacturing* Industry Sectors Employing Largest Number of Engineers**

- Computer and electronic product
- Transportation equipment
- Machinery
- Fabricated metal product
- Chemical
- Electronic equipment, appliance, and component

***Non-manufacturing* Industry Sectors Employing Largest Number of Engineers**

- Professional, scientific, and technical services
- Information
- Construction
- Wholesale trade
- Administrative and support
- Management of companies and enterprises
- Utilities
- Mining