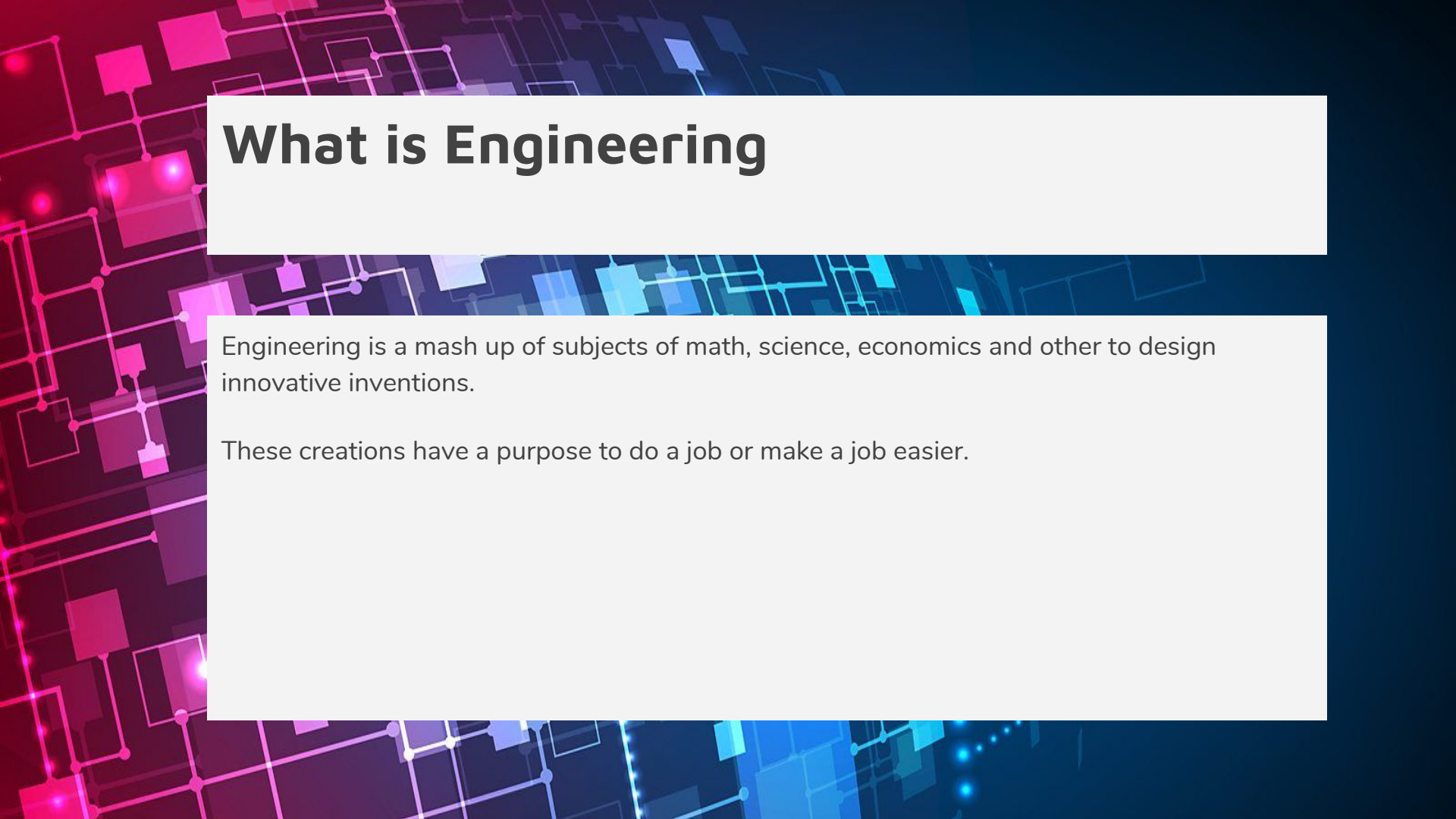


Engineering Disciplines

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What is Engineering

Engineering is a mash up of subjects of math, science, economics and other to design innovative inventions.

These creations have a purpose to do a job or make a job easier.

Types of Engineering Disciplines

- Aerospace
- Biomedical
- Chemical
- Civil
- Manufacturing
- Materials Science
- Electrical & Computer
- Industrial and Systems
- Mechanical
- Nuclear
- Environmental

Aerospace Engineering

- Pakistan Engineering Council
- American Institute of Aeronautics and Astronautics
- Created the SMAP Spacecraft
- Aerospace Engineers make missiles

- Serves in science, technology, space exploration, and Military
- Known as engineer, aerospace engineer
- Major offered at:
 - Stanford University
 - University of Southern California
 - University of California, Los Angeles
 - University of California, Irvine
- Demand for Aerospace Engineers expected to increase significantly over the next few years
- Median salary of \$107,830

Biomedical Engineering

- American Institute for Medical and Biological Engineering
- American Society for Biomechanics
- Created numerous types of bionics and prosthetics
- One of the scientists in The Deadliest Warrior is a biomedical scientist

- Serves in bioinstrumentation, biomaterials, and clinical engineering

- Known as manufacturing engineer, quality engineer, physician

- Major offered at:

- Pennsylvania State University

- University of Texas-Austin

- Illinois Institute of Technology

- University of Alabama

- Demand for biomedical engineers expected to increase over the next few years

- Median salary of \$86,220

Chemical Engineering

- American Chemical Society
- American Institute of Chemical Engineers
- Created the Lithium Ion Battery
- A chemical engineer that worked for Sony led the development of the Lithium Ion battery

- Serves in Manufacturing, Pharmaceuticals, Healthcare

- Known as Process Engineers

- Major offered at:

- Arizona State University

- California Institute of Technology

- California State Polytechnic University Pomona

- Brigham Young University

- Demand for Chemical Engineering expected to slightly increase over the next few years.

- Median salary of \$97,360

Civil Engineering

- American Society of Civil Engineers (ASCE)
- American Concrete Institute (ACI)
- Created the Golden Gate Bridge in San Francisco
- Civil engineers make bridges, buildings, and tunnels

- Serves in Coastal, Construction, Control, and Environmental Engineering

- Known as Structural Engineers

- Major offered at:

- Montana State University

- University of California, Berkeley (UCB)

- Stanford University

- University of South Florida

- Demand for civil engineers is projected to increase 8% between 2014 and 2024

- Median salary of \$82,220



Manufacturing Engineering

- Society of Manufacturing Engineers
- Created the Google Glass

- Serves in design related fields
- Known as Production Engineer, Industrial Engineer
- Major offered at:
 - Cal Poly
 - Illinois Institute of Technology
 - Oregon State University
 - Texas State University
- Demand for Manufacturing Engineers expected to rise slightly in the next few years
- Median salary of \$88,800

Materials Science Engineering

- The Materials Research Society (MRS)
- The Minerals, Metals, and Materials Society (TMS)
- Created the Nano Hashtag

- Serves in the creation of new materials
- Known as MSE
- Major offered at:
 - Air Force Institute of Technology
 - Florida State
 - Columbia University New York
 - Michigan State
- Demand for Material Science Engineers have been relatively high in the past years and are not expected to change soon
- Median salary of \$65,000

Electrical and Computer Engineering

- Association for Computing Machinery
- American Association for Artificial Intelligence
- Created artificial Intelligence
- Artificial intelligence is pretty cool and stuff

- Serves in
- Known as
- Major offered at:
 - Fox Valley Technical College
 - Isothermal Community College
 - Oregon Tech
 - University of Houston
- high demand for Electrical and Computer engineers
- Median salary of \$68,632

Industrial Systems Engineering

- Abbott Laboratories
- Allstate Insurance
- Industrial Systems Engineers find ways to eliminate waste in production.

- Serves in many insurance and production companies
- Known as Industrial Systems Engineering or ISE
- Major offered at:
 - Columbia University
 - Northwest University
 - Tufts University
 - John Hopkins University
- The demand for Industrial Engineers expected to increase significantly over the next few years.
- Median salary of \$110,000

Mechanical Engineering

- Abbott Laboratories
- Allstate Insurance
- Industrial Systems Engineers find ways to eliminate waste in production.

- Serves in nanotechnology, biotechnology, robotics
- Known as that one guy that went to MIT
- Major offered at:

- California Institute of Technology
- Massachusetts Institute of Technology
- Yale University
- University of California at Berkeley

The demand for Mechanical Engineers expected to increase over the next few years

- Median salary of \$83,590

Nuclear Engineering

- Constellation Energy Nuclear Group
- US Nuclear Cooperation
- Created the nuclear power plants and weapons
- Keilah went to be a nuclear engineer

- Serves in the military and in the construction of nuclear power plants.

- Known as Nuclear Engineering

- Major offered at:

- MIT

- University of Wisconsin

- University of Michigan

- Texas A&M University

The demand for Nuclear Engineers is going to decline 4% from 2014 to 2024

- Median salary of \$103,000

Environmental Engineering

- Abbott Laboratories
- Allstate Insurance
- Industrial Systems Engineers find ways to eliminate waste in production.

- Serves in health and safety fields
- Known as Industrial Systems Engineering or ISE
- Major offered at:
 - Columbia University
 - Northwest University
 - Tufts University
 - Jogn Hopkins University

The demand for Industrial Engineers expected to increase significantly over the next few years

- Median salary of \$110,000

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