

Sample essay on a synopsis on engineering careers

[Education](#), [Discipline](#)



Engineering is a profession which applies the knowledge of mathematics and natural sciences towards producing and manufacturing various engineering systems, structures and components. Engineers are trained in many accredited universities in the world and they meet some academic qualifications to be awarded engineering bachelor's degrees.

Engineering is indeed a multifarious profession as it has various disciplines and subdivisions grouped under it. Before gaining admission to study engineering, one needs to have discipline in mind. This is significantly important giving that the various disciplines handle different aspects of the profession.

Engineering disciplines are largely grouped into four divisions. These include the “ Big Four” disciplines, the “ Medium Four” disciplines, the “ smaller ten” disciplines and the specialty disciplines. The “ Big Four” disciplines, which account for 67 percent of the annually awarded engineering degrees, include Mechanical, Electrical, Civil and Computer Engineering. These all are very broad disciplines; however, Mechanical Engineering is the broadest as its tentacles branch into the other major disciplines.

The “ Medium Four” disciplines accounts for 20 percent of engineering degrees awarded each year in the US. The disciplines include Chemical, Industrial & Manufacturing Engineering, Aerospace and Biomedical Engineering. The remaining ten disciplines have less demand and contribute by 10 percent of engineering degrees that are awarded annually in the US. These include General Engineering Studies, Agricultural, Architectural, Petroleum, Nuclear, Materials, Environmental, Engineering Management, Engineering Physics & Engineering Science and Mining Engineering. The last

disciplines, the Specialty Disciplines, account only for 5 percent of engineering degrees awarded annually. They include Ocean Engineering and related disciplines.

Although these disciplines are distinct, it is usually easy to switch from one engineering discipline to another after the first year of academic study. In many cases, the student would need to meet some conditions to be able to do this.

Each engineering discipline has a society or professional body that support and regulates trends in the discipline. The society provides resources and supports to students and professional engineers in the various disciplines. Examples include IEEE (Institute of Electrical & Electronics Engineers) for Electrical Engineering, American Society of Mechanical Engineers (ASME) for Mechanical Engineering, and American Society of Civil Engineers (ASCE) for Civil Engineering and many more.

In conclusion, engineering is indeed a very broad profession. Its relevance in the society cannot be overstated. It is one of the greatest drivers of technological advancement in the world today. Engineering has application in many fields including medicine, agriculture and virtually every aspect of life. Engineers can find jobs in various organizations and fields of life.