

## Project Planning • Definitions of Engineering

- The practical application of science to commerce or industry.
- The discipline dealing with the art or science of applying scientific knowledge to practical problems; “he had trouble deciding which branch of engineering to study.”
- There are a number of types of engineering (chemical, civil, mechanical, electrical) which apply to different areas of design and construction. All engineering work is regulated by safety standards, and issues of patents and design protection may also arise.
- The profession of or work performed by an engineer. Engineering involves the knowledge of the mathematical and natural sciences (biological and physical) gained by study, experience, and practice that are applied with judgment and creativity to develop ways to utilize the materials and forces of nature for the benefit of mankind.
- The application of science to the design, creation, & function of machines, construction etc.
- A general term which refers to the systematic analysis and development of measurable physical data, using applied mathematical, scientific, and technical principles, to yield tangible end products which can be made, produced, and constructed.
- The process or organization responsible for the skillful design, construction, maintenance and enhancement of complex or sophisticated systems of hardware, software, processes, etc.
- Analysis or design work requiring extensive preparation and experience in the use of mathematics, chemistry, physics and the engineering sciences.
- A general term which refers to the systematic analysis and development of measurable physical data, using applied mathematical, scientific, and technical principles, to yield tangible end products which can be made, produced, and constructed. The various functional and technical elements which comprise the development of transportation projects are collectively referred to as engineering.
- 1: At its most general, Engineering is the entire field of activity of professional engineers, engineering technologists and technicians. 2: Engineering as a university degree, such as the B.Sc(Eng), and as a professional activity is concerned intellectual and conceptual work using engineering knowledge and engineering competencies to conceive, create designing and implementing, components, systems, engineering works, products and processes and to solve problems of economic or social value. The process is based on scientific knowledge, requires synthesis of knowledge, and takes into account wider issues. 3: Engineering is also used to describe a way of working to create or improve an end product that is useful, reliable and viable.
- Derived from the Latin ingenium, engineering means something like brilliant idea, flash of genius. The word was created in the 16th century and originally described a profession that we would probably call an artistic inventor.
- Engineering is the principled application of science, methods, tools, and experience to the production of designed objects.
- Includes chemical engineering and materials techniques, civil engineering, electrical and electronics engineering, surveying, industrial engineering, metallurgical engineering, mining engineering, mechanical engineering, agricultural and forestry engineering techniques, fishery engineering techniques.
- Science, work, or profession of planning, building, or managing engines, machines, roads, bridges, canals, railroads, etc. [Old French engin = skill, which stems from Latin ingenium = ability to invent, brilliance, genius]
- Analysis and/or design work requiring licensing through formal education, experience and the use of mathematics and the applied sciences.
- The art and science by which the mechanical properties of matter are made useful to man in structures and machines.

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- The art of doing something well with one dollar what any idiot can do with two (or was it the other way around?).
- The use of scientific knowledge and trial-and-error to design systems.
- Engineering comprises any kind of activity which aims at either solving a problem or completing a task related to the definition, design and specification of a product