Engineering economics, previously known as engineering economy, is a subset of economics concerned with the use and "...application of economic principles"[1] in the analysis of engineering decisions.[2] As a discipline, it is focused on the branch of economics known as microeconomics in that it studies the behavior of individuals and firms in making decisions regarding the allocation of limited resources. Thus, it focuses on the decision making process, its context and environment.[1] It is pragmatic by nature, integrating economic theory with engineering practice.[1] But, it is also a simplified application of microeconomic theory in that it assumes elements such as price determination, competition and demand/supply to be fixed inputs from other sources.[1] As a discipline though, it is closely related to others such as statistics, mathematics and cost accounting.[1] It draws upon the logical framework of economics but adds to that the analytical power of mathematics and statistics.[1]

Engineers seek solutions to problems, and along with the technical aspects, the economic viability of each potential solution is normally considered from a specific viewpoint that reflects its economic utility to a constituency. Fundamentally, engineering economics involves formulating, estimating, and evaluating the economic outcomes when alternatives to accomplish a defined purpose are available.[3]

In some U.S. undergraduate civil engineering curricula, engineering economics is a required course.[4] It is a topic on the Fundamentals of Engineering examination, and questions might also be asked on the Principles and Practice of Engineering examination; both are part of the Professional Engineering registration process.

Considering the time value of money is central to most engineering economic analyses. Cash flows are discounted using an interest rate, except in the most basic economic studies.

For each problem, there are usually many possible alternatives. One option that must be considered in each analysis, and is often the choice, is the do nothing alternative. The opportunity cost of making one choice over another must also be considered. There are also non-economic factors to be considered, like color, style, public image, etc.; such factors are termed attributes.[5]

Costs as well as revenues are considered, for each alternative, for an analysis period that is either a fixed number of years or the estimated life of the project. The salvage value is often forgotten, but is important, and is either the net cost or revenue for decommissioning the project.

Some other topics that may be addressed in engineering economics are inflation, uncertainty, replacements, depreciation, resource depletion, taxes, tax credits, accounting, cost estimations, or capital financing. All these topics are primary skills and knowledge areas in the field of cost engineering.

Since engineering is an important part of the manufacturing sector of the economy, engineering industrial economics is an important part of industrial or business economics. Major topics in engineering industrial economics are:

- The economics of the management, operation, and growth and profitability of engineering firms;
- Macro-level engineering economic trends and issues;
- Engineering product markets and demand influences; and
- The development, marketing, and financing of new engineering technologies and products.[6]
- Benefit–cost ratio