

Primary Scope of Educational Program in Department of Mechanical Systems Engineering

Curriculum Policy (since 2002):

A. Learning and Educational Achievement Targets for Mechanical Systems Engineers

(A1) Mathematics knowledges of the differential calculus, the integral calculus, the linear algebra, the probability, the statistics, the differential equation, and the Fourier analysis are required to understand technical knowledges of the mechanical systems engineering.

(A2) Fundamental subjects of the physics, the dynamics, and the electromagnetism are required to understand technical knowledges of the mechanical systems engineering.

(A3) Fundamental knowledges of the computational programming skill and the information processing technique are required to solve the problem in the mechanical engineering numerically with the computer.

(A4) Technical exercises of the mechanical drawing, the machining, the mechanical engineering experiment, the project-based-learning and the graduation study are required to develop the basic ability of the mechanical engineer through the experience and expertise of engineering.

(A5) Technical subjects of the strength of materials, the thermodynamics, the fluid dynamics, the machine dynamics, the automatic control, the machine element, the machining, and the machine materials are required to train the ability to solve the problem in the mechanical systems engineering.

(A6) The graduation study and the project-based-learning is required to practice the engineer ability to operate and solve the engineering issue voluntarily, and to present and discuss its results of research practices.

B. Learning and Educational Achievement Targets for an Engineering Person in the Human Society

(B1) Liberal arts for the society, the culture and the history of the human beings are required to establish the own self-identity as one human being and to maintain the human society.

(B2) An engineer ethic is required to recognize the mission and the responsibility of engineers to compose the contradicting harmony between the nature and the human society.

C. Learning and Educational Achievement Targets for Communicative Engineers

(C1) A communication technique of “reading”, “writing”, “hearing” and “speaking” is required to understand each other and to communicate mutually.

(C2) A communicative competence of "English" is continuously practiced to grow up to be an engineer who can play an active role globally.