

# Department of Industrial Engineering

URL: [ie.kaist.ac.kr](http://ie.kaist.ac.kr)

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## **Introduction**

Industrial engineering (IE) has been concerned with the analysis, design, and control of integrated systems of people, material, information, equipment, and energy. It draws upon specialized knowledge and skills in the mathematical, physical, and social sciences together with the principles and methods of engineering analysis and design to specify, predict, and evaluate the results to be obtained from such systems. Industrial engineering has greatly contributed to the advancement of modern industrialized society ever since the industrial revolution. In the early age of IE, the division of labor by Adam Smith, the principles of scientific management by F. Taylor, and the mass production line by H. Ford are major landmarks which provided the foundation of IE. During World War II, OR (Operations research) and statistical methods were introduced in the design and operation of sophisticated systems. More recently, the information technology has widened and deepened the area of IE, including computer-integrated manufacturing and e-Business. Nowadays, IE shifts focus to service industries such as IT services, telecommunication and mobile communication services, financial services, healthcare services, and logistics and transportation services, of which economical volume is rapidly increasing. Service system design, service design and development, service system planning and operation, and service quality are now important topics of IE.

As of December 2006, the department has 15 full-time faculty members, one emeritus professor, and three staff members who support faculty and students in many different facets. Our full-time faculty is augmented by visiting scholars who contribute to our intellectual pool by providing experience from different academic disciplines beyond our own sets of expertise. We will hire 2~3 new faculty members on 2007 and more than 10 until 2011 to achieve the faculty size of 25.

The department of Industrial Engineering in KAIST offers both graduate program and undergraduate program, as described below.