

# Robotics Program

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## Introduction

After the advent of the industrial robots in 1960s, the rapid development of robot industry enables us to produce the humanoid robot and various intelligent robots. The market on robot industry is also explosively increased, and some experts predict the market could grow to as much as \$150 billion by the year 2010 and \$500 billion by the year 2020, which is the size of semiconductor and auto market, respectively.

Several major companies in Japan concentrate on the research and development of personal robot and manufacturing robot. USA also lead the market related to the space robot, military robot, and artificial intelligence. Korea also supports the university, research center, and small companies to develop the technologies related to the robotics, and the government plans to achieve \$20 billion in exports and a 15% holding of global robot market by 2013.

Unlike other academic fields, Robotics not only needs a knowledge on a variety of fields like mechanical, electrical and material engineering, telecommunication, computer science, and industrial design technology, but also requires the high technology based on IT, BT, NT and CT. Therefore, our Robotics Program is cooperated with the faculties from various disciplines; mechanical engineering, electrical engineering, computer science, biosystems, and industrial design.

The objects of the Program are as follows:

### Education based on projects

As constructing a cooperative system with robot related companies, research centers, and the universities, the high-level human resources which are in great demand on the companies in intelligent robotics field is trained through the educational courses based on projects concentrating on industrialize which is considered the present technology level, and the demands of users.

### Training the global leaders in Robotics

The Robotics program produces the global leaders who have not only the robot field techniques, but also the foreign language ability, and leadership through the international joint research, exchange student program, and international joint degree courses.

### Accomplishment to be a center in networks of the domestic robot industry

To develop the locally specialized robotic fields like military robot, personal service robot, industrial robot, agricultural robot, and sea robot, the Robotics program will be the center in networks of the robot industry in Korea to nurture human resources and balance the development of each local region.