

Exercises in Robotics2

Syllabus Number

2F210

Special Subjects

Elective 1 credit

YAMANE, Ken

1. Course Description

The main topics are as follows:

- (1) Sensor and motor systems
- (2) Soccer robot
- (3) Rescue robot

2. Course Objectives

This class is the advanced course of exercises in robotics. In order to obtain the knowledge and skills of robotics, students will develop various robots.

3. Grading Policy

Students are evaluated based on the achievement of objectives and tasks.

4. Textbook and Reference

Textbook

Textbooks, robot kits, tools and computers are prepared.

5. Requirements(Assignments)

Students are required to pay 3,000 JPY for this lecture.

6. Note

7. Schedule

Introduction, checking your robot kit and setting up your software development environment

Fundamentals of robot making

Soccer robot: task and regulation

Soccer robot: looking for a ball

Soccer robot: dribbling a ball

Soccer robot: shooting a ball

Soccer robot: making a goal keeper robot

Soccer robot: game and evaluation

Rescue robot: task and regulation

Rescue robot: utilizing infrared sensors

Rescue robot: implementing line trace function

Rescue robot: looking for victims

Rescue robot: basic course I, II

Rescue robot: advanced course III, etc.

Summary