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Course Information

Schedule

Week	Date	Topic	Test
1.	Sept 13	Requirements. ROS introduction. Setup the development environment. Lab tour.	-
2.	Sept 20	Setup the development environment. Linux principles. ROS principles. Running examples. ROS package. Basics of ROS communication, implementation of publisher and subscriber.	Project topic announcements.
3.	Sept 27	Break	-
4.	Oct 4	Python principles. Practicing ROS communication, solving examples.	-
5.	Oct 11	Principles of robotics. Programming a da Vinci surgical robot in simulated environment I.	-
6.	Oct 18	Principles of robotics. Programming a da Vinci surgical robot in simulated environment II.	-
7.	Oct 25	Project labor I.	Test 1

Week	Date	Topic	Test
8.	Nov 1	Break	-
9.	Nov 8	ROS 2 Launch, Param, Bag	-
10.	Nov 15	Kinematics, inverse kinematics, programming a simulated robot arm in joint space and task space I.	-
11.	Nov 22	Break	-
12.	Nov 29	Kinematics, inverse kinematics, programming a simulated robot arm in joint space and task space II.	-
13.	Dec 6	Versioning, Git. Project labor II.	Test 2
14.	Dec 13	Project presentations.	Test retake
14+1.	?	-	Mid-term replacement

Warning

The schedule may change during the semester!

Course Requirements

Project

- Proved to be the student's own work

- Running results valid output
- Grading: completeness of the solution, proper ROS communication, proper structure of the program, quality of implementation, documentation

Grading

Personal attendance on the classes is mandatory (min 70%).

To pass the course, Tests and the Project must be passed (grade 2). Test retake is on the 14th week of the semester.

Grade

$$\backslash(Jegy = (Test1 + Test2 + 2 \backslash times Project) / 4\backslash)$$

Course Supervisor

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ÓBUDAI EGYETEM

BEJCZY ANTAL INTELLIGENS
ROBOTTECHNIKAI KÖZPONT



<https://irob.uni-obuda.hu>

irob-saf

(iRob Surgical Automation Framework)



<https://github.com/ABC-iRobotics/irob-saf>

PlatypOUs

<https://github.com/ABC-iRobotics/PlatypOUs-Mobile-Robot-Platform>