

Schedule – Summer Term 2021

Robotics and Navigation in Medicine

Date	Lecture	Tutorial	Project Deadline
01.04.	Introduction	–	–
08.04.	Robotics: Basic principles	ROS tutorial	–
11.04.	–	–	Registration form
15.04.	Robotics: Kinematics	Transformations	–
22.04.	Robotics: Paths and trajectories	Direct kinematics	–
25.04.	–	–	Project plan
29.04.	Navigation: Calibration	Inverse kinematics	–
02.05.	–	–	Direct kinematics
06.05.	Navigation: Localization	Incremental inverse kinematics and camera calibration	–
13.05.	Holiday break	Holiday break	–
20.05.	Navigation: Image guidance	Path planning and trajectory planning	–
27.05.	Backup*	Parallel kinematics and localization	–
03.06.	–	Backup*	–
06.06.	–	–	Kinematics and basic trajectory planning
13.06.	–	–	Camera / Hand-Eye calibration
13.06.	–	–	Model recording and registration
20.06.	–	–	Planning of feasible needle paths
05.-08.07.	–	–	Project presentation
15.08.	–	–	Project report

* Reserved time slot to be used in case one of the earlier lectures/tutorial sessions needs to be canceled.