Robotics and Navigation in Medicine: Schedule
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Schedule – Summer Term 2024
Robotics and Navigation in Medicine

Date	Lecture	Tutorial	Project Milestones
04.04.	Introduction	–	–
11.04.	Robotics: Basic principles	ROS tutorial	**Registration form**
18.04.	Robotics: Kinematics	Transformations	–
25.04.	Robotics: Paths and trajectories	Direct kinematics	**Project plan**
02.05.	Navigation: Calibration	Inverse kinematics	Direct kinematics
09.05.	Ascension Day	–	–
16.05.	Navigation: Localization	Path and trajectory planning, camera calibration	**Inverse kinematics***
23.05.	Holiday Break	–	–
30.05.	Navigation: Image guidance	Inverse kinematics and path planning	Camera calibration & Trajectory planning
06.06.	–	Parallel kinematics and localization	Robotic Scanning Node
13.06.	–	–	Hand-Eye calibration
20.06.	–	–	Model registration
27.06.	–	–	Planning of feasible needle paths
04.07.	–	–	Project finalization
08.07-12.07.	–	–	**Project presentation**
01.09.	–	–	**Project report**

Note: Sessions for working with the robot in the Laboratory start after the holiday break.
*Working inverse kinematic required to work with robot on site.
Milestones marked in **bold** are deadlines that are **mandatory** and directly affect bonus point grading. Other milestones should serve as a guideline for the project plan.