universität freiburg

FreiCAR: Practical Autonomous Driving
Winter semester 2026/27, Robot Learning Lab

Syllabus

Date	Topic	Assignments
21.10.	Course overview + Introduction to ROS 2	*Form teams of 3 students*
28.10.	Lecture “Control”	M1 released: “Control”
04.11.	Lecture “Mapping & Lane Graphs”	M2 released: “Mapping”
11.11.	Student presentations M1	M1 due M3 released: “Lane Graph”
18.11.	Student presentations M2	M2 due
25.11.	Student presentations M3	M3 due M4 released: “Planning & Navigation”
02.12.	---	
09.12.	Lecture “Perception & SLAM”	M5 released: “Vision-Based Lane Following”
16.12.	Student presentations M4	M4 due
24.12 - 06.01.	*Christmas break* **Robot hall closed**	
13.01.	Student presentations M5	M5 due M6 released “Map-Aware, Perception-Guided Navigation”
20.01.	Competition announcement	C1 released: “Collision Avoidance”
27.01.	Student presentations M6	M6 due
03.02.	---	
10.02.	Competition day	C1 due

Weekly class: building 080, room 00.021, Wednesday at 10:00 - 12:00

TA office hour: building 078, TBA

Grading: 80% milestones + 20% competition

Communication: The course content (lecture slides, assignments, …) will be provided via Slack.

Last updated: Sept. 21, 2026 (v1)