

Welcome to Mobile Robots AUTO4508

2024

Associate Lecturer Kieran Quirke-Brown, office EE3.11

Consultation time: Mon. + Fri. following lectures in the Robotics Lab

Unit web site:

<http://roblab.org/courses/mobrob/>

Lab & Project Contacts:

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Assessment:

- Midterm 50%
- Labs 25% groups of 1–2
- Project 25% groups of 4
- Total 100%

To successfully complete the course, you must get a combined lab mark $\geq 50\%$ and a project mark $\geq 25\%$

Semester Dates:

MOBILE ROBOTS												2024
week	cal-wk	week start	lectures A Wed. (2h)	reading	lectures B Fri. (2h)	reading	project	lab prep.	lab	lab contents	extra help	
1	9	26-Feb	Org., 1.a Introduction 1.b Technology	RA 1+2	1.c Embedded Basics 2.Driving Robots	RA 3+4		---		---	---	
2	10	4-Mar	3. RoBIOS (w/ demo)	RA 5+6 (ER 10)	4. Kinematics	RA 7		EyeSim		---	Eyesim, IDE + debugging	
3	11	11-Mar	5. Walk + 6.AUV/UAV	RA 8 (ER 11+12)	7. Localization	RA 9 (ER 14)		Splines	1	Lawn mower	Python and C++	
4	12	18-Mar	8. Navigation	RA 10	9. Maps	RA 9 (ER 15)		Distbug	2	Spline driving	linux + VM	
5	13	25-Mar	10. Vision	RA 11 (ER 16)	11. Automotive	RA 12 (ER 18–21)		A*	3	Distbug	git + github	
break	14	1-Apr					EASTER					
6	15	8-Apr	12. AI-NN, 13. GA	RA 13+14 (ER 17)	14. ROS	ROS		Linux+ROS	4	A*	Docker + Compose	
7	16	15-Apr	Exam prep		MidTerm		Pioneer	Quadtree	ROS	Linux+ROS	essential ROS packages	
8	17	22-Apr					Pioneer	Brushfire	5	Quadtree	ROS SLAM	
9	18	29-Apr					Pioneer	Mapping	6	Brushfire	opencv + image processing	
10	19	6-May					Pioneer	NN	7	Mapping		
11	20	13-May					Pioneer	--	8	NN		
12	21	20-May	Project presentation		Project presentation		Pioneer	--		--	--	