

240AR060 – Introduction to ROS

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BIBLIOGRAPHY

Tutorials: <https://sir.upc.edu/projects/rostutorials/index.html>

Books:

(basic) A gentle Introduction to ROS, Jason M. O'Kane, 2013.

Available at: <https://www.cse.sc.edu/~jokane/agitr/>

(complementary) Mastering ROS for robotic programming, Lentin Joseph, Packt Publishing 2015.

Book webpage: <https://mastering-ros.com/>

Book tutorials source code: https://github.com/qboticslabs/mastering_ros/

Web resources:

ROS wiki page: <http://wiki.ros.org/>

ROS tutorials: <http://wiki.ros.org/ROS/Tutorials/>

Gazebo tutorials: <http://gazebo.org/tutorials/>

Catkin tutorials: <http://jbohren.com/tutorials/>

Git tutorial: <https://try.github.io/> <https://guides.github.com/activities/hello-world/>

ROS cheatsheet: https://github.com/ros/cheatsheet/releases/download/0.0.1/ROScheatsheet_catkin.pdf/

Git cheatsheet: <https://www.atlassian.com/git/tutorials/atlassian-git-cheatsheet>

ASSESSMENT

Partial Exam: 20% (theoretical questions and short exercises)

Final Work: 80% (deliverable 20%, demonstration and oral presentation 60%)

Regulations

- The partial exam will take place on April 11th, 5 P.M.
- The Final Work must be done in teams of two/three.
- Final Work deliverable: git repository with commented code and Readme files.
- The oral presentation of the Final Work is scheduled on June 22, 2023.

TEMPORAL DISTRIBUTION

	Date	TUTORIAL SESSION	DEADLINES	CLASSROOM
1	24/02	1. Basic concepts 2. Development tools		H-5.4
2	03/03	3. Communications using topics	Exercise 0	H-5.4
3	10/03	4. The launch utility 6. Tools (6b)	Exercise 1	H-5.4
4	17/03	5. Communications using services	Exercise 2	H-5.4
5	24/03	6. Tools 6 (6a,6c,6d)	Exercise 3	H-5.4
6	31/03	7. Simulation 8. Sensors	Exercise 4	H-5.4
	07/04	Easter week		
	14/04	Partial exams		
7	21/04	Final work : Hands-on session - Perception	Exercise 5	ESAII Robotics Lab
8	28/04	9. Communication using actions		H-5.4
9	05/05	10. Robot control	Exercise 6	H-5.4
10	12/05	Final work : Hands-on session	Exercise 7	ESAII Robotics Lab
11	19/05	Final work : Hands-on session		ESAII Robotics Lab
12	26/05	Final work : Hands-on session ROS2		ESAII Robotics Lab
	22/06	Final Work oral presentations		ESAII Robotics Lab

PERSONAL ADVISE

Professor	Monday	Wednesday	Thursday
Rosell, Jan (jan.rosell@upc.edu)		9:00 ÷ 12:00	9:00 ÷ 12:00
Palomo-Avellaneda, Leopold (leopold.palomo@upc.edu)	15:30 ÷ 17:00	15:30 ÷ 17:00	