



(The contents and other related details in this form is used for publication purpose only. Training module will be given to participants upon registration)

Course Title: CONTROL AND SENSOR APPLICATION OF DIFFERENTIAL DRIVE ON WHEEL MOBILE ROBOT	Course Code : EEA 135
<u>Course Background/Summary :</u> <p>Mobile robots have the capability to move around in their environment and are not fixed to one physical location. In contrast, industrial robots usually consist of a jointed arm (multi-linked manipulator) and gripper assembly (or end effector) that is attached to a fixed surface. Mobile robots are the focus of a great deal of current research and almost every major university has one or more labs that focus on mobile robot research. Mobile robots are also found in industry, military and security environments. They also appear as consumer products, for entertainment or perform certain tasks like vacuum. Participants will have better understanding in design and development of wheel mobile robot and will be able to explore the potential and creativity in robotics application.</p>	
<u>Course Objectives:</u> <ul style="list-style-type: none">• Provide the basics required to develop line tracking mobile robots.• Understand and apply Mechanical CAD as a tool to develop a conceptual mobile robot.• Side view and hands on in the parts fabrication.• Understand and apply electrical circuit as main parts of the robot.• Practical knowledge of a broad range of sensor technologies and operational principles.	
<u>Target Audience:</u> <ul style="list-style-type: none">• Engineers and technicians that involved in Mechatronic applications.• Teaching staffs (including vocational and technical teachers) that teach and interested in Mechatronics and wheel mobile robot.	
Course Duration :	Min : 3 days, Max: 5 days

UniKL MSI can also customize existing short courses and develop new courses to meet your personal training needs and requirements. The course duration serves as a guideline for your reference.

Please forward enquiries to Centre for Advancement & Continuing Education (ACE), University Kuala Lumpur (Malaysian Spanish Institute), Kulim Hi-Tech Park, 09000 Kulim, Kedah or via fax to:04-4032539 or email to syazrah@unikl.edu.my or call 04-4035199 / 200 (ext:112 / 185)



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Course Contents :	
No	TOPICS
1	Introduction to Mobile Robot Technology
2	Mechanical Design In Wheel Mobile Robot
3	Electrical Design in Wheel Mobile Robot
4	Mechanical Components in Mobile Robot
5	Fundamental of Mechanical CAD in Mobile Robot
6	Application of Mechanical CAD in Designing Wheel Mobile Robot
7	Robot Parts Fabrication, Tools and Machining – Lathe, Milling, & Bench work
8	Wheel Mobile Robot Assembly (Chassis & Drive Train)
9	Type of sensor used in mobile robot
10	Line Tracking Programming
COURSE STRUCTURE:	
Practical :	40 %
Theory :	60 %

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