



UNIVERSITI KUALA LUMPUR
MALAYSIAN SPANISH INSTITUTE

(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: FABRICATION AND ASSEMBLY OF DIFFERENTIAL DRIVE ON WHEEL MOBILE ROBOT	Course Code : MMF 124
<u>Course Background/Summary :</u> 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 industrial, military and security environments. They also appear as consumer products, for entertainment or perform certain tasks like vacuum. Better understanding in the design and development of the wheel mobile robot will allow participants to explore the potential and creativity in robotics application.	
<u>Course Objectives:</u> At the end of this training, the participants will be able to: <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.• Insight on side view and hands on in the parts fabrication.• Understand and apply electrical circuit as main parts of the robot.• Provide attendees with a good practical knowledge of a broad range of sensor technologies and operational principles.	

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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Target Audience:	
<ul style="list-style-type: none">Engineers and technicians that involved in Mechatronic applications.Teaching staffs (including vocational and technical teachers) who teach and interested in Mechatronics and wheel mobile robot.	
Course Duration :	Min : 3 days, Max : 5 days
Course Contents :	
No	TOPICS
1	Introduction to Mobile Robot Technology
2	Mechanical Design of Wheel Mobile Robot
3	Mechanical Components in Mobile Robot
4	Fundamental of Mechanical CAD in Mobile Robot
5	Application of Mechanical CAD in Designing Wheel Mobile Robot
6	Robot Parts Fabrication, Tools and Machining
7	Wheel Mobile Robot Assembly (Chassis & Drive Train)
8	Refinements
9	Testing & Troubleshooting
COURSE STRUCTURE:	
Practical :	70 %
Theory :	30 %

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