



**Ultra Wideband:
Applications, Technology
and
Future Perspectives**

Training Programme
by
Faculty of Engineering
Multimedia University

Overview

This course provides an overview of the ultra wideband (UWB) applications and technology used in current commercial industry. The advantages of UWB as well as the current challenges faced by the technology will be discussed. It also delegates practical insight on market opportunities and new revenue streams that can be enabled through wideband technology.

Objectives

Upon completion of this course, the attendees are able to:

- Understand the concept of wideband wireless communication and its vital functions in the current existing technologies.
- Describe the overall architecture of UWB and its signal processing techniques.
- Identify the key technologies of UWB and its future potential.

Target Audience

Engineers who would like to venture into the field of wideband wireless communication.

Prerequisite

Familiarity with telecommunications and general engineering terminology is assumed.

Training Methodology

Classroom, lab demonstration (simulation).

Course Duration

1 day

Content/Outline

Fundamental of UWB

- Introduction to wideband technology
- History of UWB
- Benefits of UWB

Industrial Applications

- Radar detection
- Short-range data communications
- Real time localisation and tracking
- Other industrial applications

Technology Overview

- Hardware architecture
- IEEE standards & regulation
- Modulation techniques
- Channel models

Future Perspectives

- Current challenges
- Industrial & research approaches
- Potential technology integration

Course Instructor

Dr. Chung Gwo Chin

Dr. Chung Gwo Chin obtained the Bachelor of Electronics Engineering (Hons.) majoring in Telecommunications from Multimedia University, Cyberjaya, Malaysia in 2005. He then

received his Master of Engineering Science (MEngSc.) and Ph.D. from the same university in 2009 and 2018. From 2009 to 2021, he joined the Faculty of Engineering, Multimedia University in Malaysia as a lecturer. Currently, he has nine journal publications indexed in either WOS or SCOPUS, and ten international conference proceedings. His research area includes the field of wireless communications especially in digital signal processing and interference suppression for ultra wideband, and also recently into visible light communication and machine learning.

Administrative Details

Programme Logistics

Duration: 1 day

Dates, registration deadline and registration form:



Please refer to: <https://www.mmu.edu.my/foe/short-courses/>

Your Investment

	Condition	Price per Pax
Regular Fee	Students / MMU Alumni	RM250
	Public	RM400
	Public (Group >5 pax)	RM300
	IEM/IEEE Members	RM300
Early Bird Fee	Students / MMU Alumni	RM150
	Public	RM300
	Public (Group >5 pax)	N/A
	IEM/IEEE Members	RM200

Method of Payment

Type of Payment	Method	Details
Local Transaction / Payment within Malaysia	Online Payment with JomPay	<ul style="list-style-type: none"> To get started, login to any preferred internet banking Look for JomPay to begin the payment process Enter Ref 1 & Ref 2 <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">  <p>Biller Code : 22202 Ref-1 : <Participant IC/Passport> Ref-2 : Event Name*</p> </div> <p>JomPAY online at Internet and Mobile Banking with your Current, Savings or Credit Card account</p> <p>Example : <i>*Ref. 2: FOEWideband</i></p>
		<ul style="list-style-type: none"> To get started, go to MMU website (https://www.mmu.edu.my/) > Admission > Financial Info > Payment Channel > Non Student <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>E-Payment To begin the payment process, please click Student or Non Students</p> <p>  </p> <p>Student Non-Student</p> </div> <p>or scan the QR code below to begin the process:</p> <div style="text-align: center; margin: 10px 0;">  <p>SCAN ME</p> </div> <ul style="list-style-type: none"> Choose Category: Public Training Workshop Name Choose Your Participant Type: <ul style="list-style-type: none"> ✓ STUDEN (MMU, IEEE, IEM, Other Higher Learning Institution) ✓ PUBLIC ✓ GROUP (Group > 5 Pax) ✓ IEEE/M (IEEE/IEM Members)

Type of Payment	Method	Details
International Payment / Payment outside Malaysia	Online payment with Flywire 	<ul style="list-style-type: none"> To get started, go to mmulanding.flywire.com; or scan the QR code to begin the payment process: <div style="text-align: center;">  </div> <ul style="list-style-type: none"> Choose Conference for Non-students related Minimum payment RM 50

Refund and Cancellation

Any refunds will be processed in 60 days. Should there be any cancellation, it may be due to the organizer not getting the minimum participants or the participant failing to attend the workshop due to unavoidable reason.

Disclaimer

Faculty of Engineering, Multimedia University reserves the right to change the instructors, date and to vary/cancel the programme should unavoidable circumstances arise. All effort will be taken to inform participants of the changes. Upon submission of the registration form, you are deemed to have read and accepted the terms.

Enquiries

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