



Course	LTE&Wimax: Emerging Technologies for Next Generation Wireless Standards																																										
Overview	This course will provide an overview of the major contenders of next generation wireless cellular networks, focusing on LTE (/ LTE Advanced) and WiMAX.																																										
Objectives	<p>The objective of this course will be to provide an overview of the main technical attributes of LTE & WiMAX. Particular emphasis will be given on physical and MAC layer enablers of these technologies, such as OFDM, OFDMA, spreading, advance antenna systems, MIMO, adaptive modulation & coding, (H)ARQ, etc. The associated regulatory / commercial framework behind each technology's competitive positioning will be also reviewed. The delegate attending the course will be able to:</p> <ul style="list-style-type: none"> ■ Describe the drivers and explain the differences for next generation wireless networks ■ Explain the role of LTE and Wimax in the future of mobile broadband ■ Describe the function and architecture of each LTE node ■ Explain the functions of the main interfaces of Wimax ■ Show how these emerging technologies may inter-work with other networks ■ Understand the basic timing structure of the LTE radio interface ■ Describe the functions of each layer and protocol stack ■ Describe the procedures for network entry and location management ■ Show how data bearers are setup and QoS is managed in the LTE system ■ Show how IMS may be used to support services across the LTE network. ■ Sketch the WiMAX network architecture, protocols and interfaces ■ Define key features of the 802.16e-based air interface for WiMAX networks including QoS, security and authentication ■ Explain the services and applications supported by WiMAX ■ Sketch the functions and procedures used by a mobile to connect to a WiMAX network and initiate services ■ Identify the challenges ahead for WiMAX deployment related to spectrum, availability of products, etc. ■ Compare WiMAX and its underlying technology with the current 3G/4G cellular networks and Wi-Fi networks 																																										
Who should attend	<ul style="list-style-type: none"> ■ Communications engineers ■ Wireless systems researchers ■ Wireless Operator / Manufacturer representatives / employees 																																										
Prerequisites	Basic understanding of wireless communication systems																																										
Dates & Duration	<ul style="list-style-type: none"> ■ March 19,20, 2012 ■ 2 days ■ 16 teaching hours 	<table border="1"> <thead> <tr> <th colspan="4">Class Daily Time Schedule</th> </tr> <tr> <th>Hr</th> <th>Starts</th> <th>Ends</th> <th>Intervals</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>9:30</td> <td>10:15</td> <td></td> </tr> <tr> <td>2</td> <td>10:15</td> <td>11:00</td> <td>11:00-11:15</td> </tr> <tr> <td>3</td> <td>11:15</td> <td>12:00</td> <td></td> </tr> <tr> <td>4</td> <td>12:00</td> <td>12:45</td> <td>12:45-13:00</td> </tr> <tr> <td>5</td> <td>13:00</td> <td>13:45</td> <td></td> </tr> <tr> <td>6</td> <td>13:45</td> <td>14:30</td> <td>14:30-14:45</td> </tr> <tr> <td>7</td> <td>14:45</td> <td>15:30</td> <td></td> </tr> <tr> <td>8</td> <td>15:30</td> <td>16:15</td> <td></td> </tr> </tbody> </table>		Class Daily Time Schedule				Hr	Starts	Ends	Intervals	1	9:30	10:15		2	10:15	11:00	11:00-11:15	3	11:15	12:00		4	12:00	12:45	12:45-13:00	5	13:00	13:45		6	13:45	14:30	14:30-14:45	7	14:45	15:30		8	15:30	16:15	
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Instructors	Course Led by Dr. Constantinos B. Papadias, AIT Professor																																										
Training Methodology	<ul style="list-style-type: none"> ■ Lectures ■ Exercises ■ Lab Demos 																																										
Course outline	<ul style="list-style-type: none"> ■ Overview of Next Generation wireless networks ■ LTE / LTE Advanced ■ WiMAX (802.16e) ■ Enabling technologies ■ Competitive environment 																																										
Expression of	excedu@ait.gr please send your contact info, including program title in email subject line																																										

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Interest	
Registration Form	http://hermes.ait.gr/registrations/multiple.php?prog=329
Venue	AIT, Building B7, INTRACOM Campus, 19 km, Markopoulou Av, Peania 190 02 How to Reach AIT: http://www.ait.edu.gr/ait_web_site/how_to_reach_us.jsp
Tuition Fee	Single Participation: € 530,00 This course is also available for in-house training for 4-10 participants @ competitive pricing OAED funding may reach up to 100%, for more information please contact us. Discount Policy Cancellation Policy
Contact	Katerina Protonotariou, Executive Education Manager, AIT, krpo@ait.gr , 210 6682806, extn 5806

