

MODULE DESCRIPTOR

MODULE TITLE	Mobile Technologies		
MODULE CODE	EL3807 (L6)	CREDIT VALUE	20 UK CREDITS / <u>10 ECTS</u>
SCHOOL	SCHOOL OF SCIENCES		

MODULE AIMS

- 1.To discuss, examine, and evaluate different wireless and mobile technologies.
- 2.To explore the potential applications of wireless mobile technologies in both, enterprise and home environments
- 3.To enhance students' skills and knowledge related to the set-up, configuration and testing of specific wireless and mobile technologies.

MODULE CONTENT

Indicative syllabus content:

Wireless and mobile technologies have become an essential part of the modern world. Technologies such as 802.11, GPRS, 3G/3.5G/4G/5G, satellite communications, Bluetooth, etc. are being used in an increasing number of enterprise and home environments. This module introduces students to the theory, practise, and application of such technologies.

Mobile Technologies

- GSM / GPRS / 3G / 3.5G/4G/5G.
- Satellite Communications
- Wireless technologies
- IEEE 802.11 a/b/g/n/ac/ad,
- WiMAX,
- Bluetooth

Convergence

- Context-awareness support (integrating sensor technologies)

Basic and Advance security for wireless and mobile technologies (e.g. 802.1x Authentication Methods, WPA, 802.11i, VPNs etc.)
Internal and external networks

Site Surveys

Wireless and mobile technologies in the enterprise and home environments.

INTENDED LEARNING OUTCOMES

On successful completion of this module a student will be able to:

1. Critically evaluate the latest and emerging wireless and mobile technologies
2. Apply relevant skills and knowledge to assess the performance and limitations of specific wireless and mobile technologies.
3. Investigate, identify, and critically evaluate security solutions for wireless and mobile systems

TEACHING METHODS

This module will provide students with fundamental theoretical knowledge through lectures as well as tutorials/practical sessions. Lectures will introduce topics for further investigation by the students. Practical sessions will be used to complement the lectures and introduce students to the different wireless and mobile technologies. Whenever possible, guest lecturers (industry professional and/or researchers) will deliver seminars to the students in which they will share their personal and professional experience.

ASSESSMENT METHODS

This module is assessed through an Investigative Assignment/Report and a final exam.