<table>
<thead>
<tr>
<th>Module Title</th>
<th>Date of Approval</th>
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<tr>
<td>ADVANCES IN WIRELESS NETWORKS</td>
<td>November 2011</td>
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<tr>
<th>Module Code</th>
<th>Pre-requisite</th>
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<tr>
<td>6CC503</td>
<td>Switching and Wide Area Networks</td>
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<tr>
<th>Module Level</th>
<th>Credit value</th>
<th>Total Number of Learning Hours</th>
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<tr>
<td>6</td>
<td>20</td>
<td>200</td>
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**Key Words**
Networks Systems, Wireless Network Systems

**Module Delivery Mode**
Blended / Face to Face

**Module Description**
This module starts by providing students with an overview of current wireless technologies, and then looks at developments in wireless networks covering areas such as WiMax and type n networks. It then moves into the area of Ad-hoc networks, with Mobile Ad-Hoc networks and Opportunistic networks.

**Module Learning Outcomes**
On successful completion of the module, students will be able to:

1. Demonstrate thorough familiarity with the theory behind wireless networks and its application in current technologies.
2. Evaluate the wireless networking requirements for an organisation and design an appropriate solution.
3. Demonstrate an awareness of the current state of research and development in the field of Network management.

**Module Content**
- Review of current Wireless LAN technologies
- IEEE 802.11 Wireless LAN standards
- Wireless LAN security
- Mobile IP
- Bluetooth
- Ad-Hoc Wireless networks
- Mobile Ad-Hoc networks
- Opportunistic networks
Module Learning and Teaching

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<tr>
<th>Methods</th>
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<tr>
<td></td>
<td>lectures:</td>
<td>12 hours</td>
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<td></td>
<td>Tutorials:</td>
<td>24 hours</td>
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<td>Directed Learning:</td>
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<td>164 hours</td>
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<td>Total:</td>
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<td>200 hours</td>
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Scheduled learning and teaching activities: 18%
Guided independent study: 82%

Module Assessment
Mode: 100% Coursework

Formative assessment will be provided in that students will complete a series of design exercises that will lead to the final design.

Coursework 1: 50% weighting
An individual assignment: Students will be supplied with a wireless network design requirement and will be asked to produce a suitable solution. Students will also be required to write a 2000 word essay critically evaluating the applied wireless technologies.

Coursework 2: 50% weighting
The student will carry out a literature survey and produce a 2000 word critical report detailing the current approaches to the latest advances in the field of Wireless Networks.

Reading list
Key Texts:

Essential Texts:

Other recommended reading:
It is recommended that students subscribe to a number of RSS feeds such as:-
- Techtarget
- Tech Republic
- CWNP
- Search Mobile Computing

You are strongly encouraged and expected to make use of the University of Derby's electronic journals that you can find here, http://lib.derby.ac.uk/library/electronicresources.php, accessing the material with your
Athens ID. At this level you are expected to 'read around' the topic of study. As such the resources above should be seen as a starting point for your investigations and it will be expected that you discover new sources.