<table>
<thead>
<tr>
<th><strong>Module Code</strong></th>
<th>CS7018</th>
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<tbody>
<tr>
<td><strong>Module Title</strong></td>
<td>Biomedical Imaging</td>
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<tr>
<td><strong>Pre-requisites</strong></td>
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<td><strong>ECTS</strong></td>
<td>5</td>
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<tr>
<td><strong>Chief Examiner</strong></td>
<td>Neil O'Hare</td>
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<tr>
<td><strong>Teaching Staff</strong></td>
<td>Neil O'Hare</td>
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<tr>
<td><strong>Delivery</strong></td>
<td>Lecture and laboratory based</td>
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**Aims**
The Medical Imaging Module provides the student with an overview of current technology available in any major hospital diagnostic imaging department. The module focuses on the issues pertinent to viewing medical images optimally, in both softcopy and hardcopy format. The move towards totally digital imaging departments and Electronic Patient Records is also covered, focusing on the imaging technology, standards and IT healthcare issues that arise as a result of these moves. The role of health informatics personnel in this area is also developed.

**Learning Outcomes**
When students have successfully completed this module they should have a broad understanding of the following topics:

- Medical Imaging Technologies
- The use of ICT and Informatics in the Medical Imaging area.
- What makes a good image and how can diagnostic medical information be maximised through manipulation.
- The impact of digital technologies on the future direction of medical imaging.

**Syllabus**
Specific topics addressed in this module include:

- Intro to Analogue / Digital Signals and Signal Analysis Techniques
- Medical Image Characteristics
- Common Image Processing Techniques
- ICT utilisation in Physiological Measurement
- Introduction to Medical Imaging Technologies
- Medical Image Compression
- PACS and their role in EPR Systems
- 3D Imaging in the Medical Imaging Area
- Imaging in Radiotherapy

**Assessment**
Assessment is based on an individual report of between 1,500 and 2,000 words.

**Bibliography**

**Website**