

<b>Module Title</b> <b>Genomics and Proteomics</b>	Reference AS4020 SCQF SCQF Level 10 SCQF Points 15 ECTS Points 7.5 Created July 2002 Approved July 2002 Amended May 2011 Version No. 4
<b>Keywords</b> DNA and Peptide sequencing, Relevance in Biological and Biomedical Research	

## This Version is No Longer Current

The latest version of this module is available [here](#)

### Prerequisites for Module

AS3018 or equivalent.

### Corequisite Modules

None.

Proteomics will include 2-D gel electrophoresis, handling of proteins and peptide samples for proteomics and their relevance in targeted protein expression and function analysis in health and disease.

### Precluded Modules

None.

### Indicative Student Workload

#### Aims of Module

To enable students to appreciate the use and relevance of a number of analytical methods/techniques in the analysis of biomolecules in research.

<i>Contact Hours</i>	Full Time
Assessment	5
Lectures	4
Seminars	6

<i>Directed Study</i>	
Directed Study	60

#### Learning Outcomes for Module

<i>Private Study</i>	
Private Study	75

On completion of this module, students are expected to be able to:

1. Discuss the principles and applications of genomics and proteomics in biological and biomedical research.
2. Discuss genomics and proteomics applications in relation to health and disease.

### **Indicative Module Content**

Composition, structure and properties of DNA and proteins. Genomics will include principles and applications of DNA sequencing, DNA micro-arrays and their relevance in targeted gene expression and function analysis in health and disease.

### **Mode of Delivery**

This module is delivered by lectures and seminars.

### **Assessment Plan**

	Learning Outcomes Assessed
Component 1	1,2

Component 1 is assessed by an abstract and a formal group presentation on a biomedical case study.

### **Indicative Bibliography**

1. DALE, J.W. and VON SCHANTZ, M., 2007. *From Genes to Genomes, Concepts and Applications of DNA Technology*. 2nd ed. John Wiley.
2. PAGEL, M. and POMIANKOWSKI, A., 2008. *Evolutionary Genomics and Proteomics*. Sinauer Associates.
3. LESK, A.M., 2008. *Introduction to Bioinformatics*. 3rd ed. Oxford University Press.