

Programme Regulations 2009/10

Degree of Master Science in Bioinformatics and Computational Systems Biology

Code: 4809

Notes:

- (i) *These programme regulations should be read in conjunction with the University's Masters Progress Regulations and Examination Conventions.*
- (ii) *A core module is a module which a student must pass, and in which a fail mark may neither be carried nor compensated; such modules are designated by the board of studies as essential for progression to a further stage of the programme or for study in a further module.*
- (iii) *A compulsory module is a module which a student must take.*

1. Programme structure

- (a) The programme is available for study in both full-time and part-time modes.
- (b) The period of study for full-time mode shall be 1 year starting in September. The period of study for part-time mode shall normally be 2 years starting in September.
- (c) The programme comprises modules to a credit value of 180.
- (d) All candidates shall take the following compulsory modules:

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Credits Sem 3</i>	<i>Level</i>	<i>Type</i>
CSC8303	Bioinformatics Programming in Java	20	20			7	
CSC8312	Bioinformatics Theory and Practice	15	15			7	
CSC8390	Research Skills for Bioinformatics	5		5		7	
CSC8399	Research Project	75		5	70	7	
MAS8401	Numeric Skills (Statistics and Mathematics)	15	10	5		7	

- (e) All candidates shall take ONE of the following optional modules:

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Credits Sem 3</i>	<i>Level</i>	<i>Type</i>
BIO8009	Fundamentals of Cell and Molecular Biology	10	10			7	
CSC8304	Computing Environments for Bioinformatics	10	10			7	

(f) All candidates shall take ONE module from each of the following groups, giving a total of 40 credits.

Group 1

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Credits Sem 3</i>	<i>Level</i>	<i>Type</i>
CSC8305	Computational Analysis of Complex Biological Systems	10	10			7	
CSC8306	Systems Administration for Bioinformatics	10	10			7	

Group 2

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Credits Sem 3</i>	<i>Level</i>	<i>Type</i>
CSC8307	Comparative and Evolutionary Genomics	10		10		7	
MAS8402	Statistical Bioinformatics	10		10		7	

Group 3

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Credits Sem 3</i>	<i>Level</i>	<i>Type</i>
CSC8309	Gene Expression, Proteomics and Microarray Informatics	10		10		7	
CSC8311	Advanced Object-oriented Design Programming	10		10		7	

Group 4

<i>Code</i>	<i>Descriptive title</i>	<i>Total Credits</i>	<i>Credits Sem 1</i>	<i>Credits Sem 2</i>	<i>Credits Sem 3</i>	<i>Level</i>	<i>Type</i>
CSC8308	e-Science for Bioinformatics	10		10		7	
CSC8310	Protein Structure Informatics	10		10		7	

2. Assessment methods

Details of the assessment pattern for each module are explained in the module outline.

3. Other

This programme is designed to produce graduates who will be expected to be equally capable in theoretical and practical aspects of their subject and it is essential that only students of equally high

calibre in both aspects of the programme are eligible for merit and distinction awards. Therefore the regulations are as follows:

Course Requirements

A number of areas in which specific regulations have been defined for this programme, and approved by the Faculty's Teaching and Learning Committee, are documented below, and in these areas these provisions take precedence over other University regulations.

Progression within the MSc Bioinformatics and Computational Systems Biology degree

Two assessed components comprise the MSc Bioinformatics and Computational Systems Biology degree:

- Component 1: The first and second semester taught modules (100 credits).
- Component 2: Research Project (80 credits)

In order to be permitted to start Component 2, a candidate must

- obtain a weighted average mark for Component 1 of at least 50, prior to any compensation rule being applied,
- and have no module mark below 40,
- and have failed no more than 40 credits.

Award of the MSc Bioinformatics and Computational Systems Biology degree

To obtain the MSc Bioinformatics and Computational Systems Biology degree, candidates must satisfy the examiners in both assessed components as follows. For the purpose of clarification, in what follows the pass decision and weighted average mark reflects the achievement after any compensation rules have been applied to individual module assessments.

- A student will be recommended for the *award of MSc with Distinction* if at the first attempt they have achieved a pass mark in 180 credits with a weighted average mark across all 180 credits of at least 70 and have a Component 2 mark of at least 70.
- A student will be recommended for the *award of MSc with Merit* if at the first attempt they have achieved a pass mark in 180 credits with a weighted average mark across all 180 credits of at least 60 and have a Component 2 mark of at least 60.
- A student will be recommended for the *award of MSc* if they have achieved a pass mark in 180 credits with an average mark across all 180 credits of at least 50.