FACULTY OF SCIENCE

DEPARTMENT OF COMPUTER AND INFORMATION SCIENCES

ADVANCED COMPUTER SCIENCE

Master of Science in Advanced Computer Science
Master of Science in Advanced Software Engineering
Master of Science in Advanced Computer Science with Big Data
Master of Science in Advanced Computer Science with Artificial Intelligence
Master of Science in Advanced Computer Science with Data Science
Postgraduate Diploma in Advanced Computer Science
Postgraduate Diploma in Advanced Software Engineering
Postgraduate Diploma in Advanced Computer Science with Big Data
Postgraduate Diploma in Advanced Computer Science with Data Science
Postgraduate Diploma in Advanced Computer Science with Artificial Intelligence
Postgraduate Certificate in Advanced Computer Science
Postgraduate Certificate in Advanced Software Engineering
Postgraduate Certificate in Computer Science with Big Data
Postgraduate Certificate in Computer Science with Data Science
Postgraduate Certificate in Advanced Computer Science with Artificial Intelligence

These regulations are to be read in conjunction with General Academic Regulations - Postgraduate Taught Degree Programme Level.

Admission
1. The General Academic Regulations - Postgraduate Taught Degree Programme Level shall apply subject to the following requirements. Applicants shall possess:

    i.   a first or second class Honours degree from a United Kingdom university (in Computer Science or a closely related subject); or
    ii. a qualification deemed by the Head of Department acting on behalf of Senate to be equivalent to (i) above.

2. In all cases, applicants whose first language is not English, shall be required to demonstrate an appropriate level of competence in the English language.

Duration of Study
3. See General Academic Regulations - Postgraduate Taught Degree Programme Level.

Mode of Study
4. The programme is available by full-time study only.

Curriculum
5. All students shall undertake an approved curriculum as follows:

    i.   for the Postgraduate Certificate no fewer than 60 credits
    ii.   for the Postgraduate Diploma no fewer than 120 credits
    iii. for the degree of MSc no fewer than 180 credits including a project.

<u>**Compulsory Modules**</u>

Module Code	Module Title	Level	Credits

CS957	Research Methods	5	10
CS978	Legal, Ethical and Professional Issues for the Information Society	5	10
CS958	Project	5	60

Advanced Computer Science

Optional Modules

No fewer than 100 credits of which no more than 20 may be at level 4 chosen from the available modules listed in this Regulation, or any other module as approved by the programme director.

Advanced Software Engineering

A total of 100 credits from the following list:

Module Code	Module Title	Level	Credits
CS547	Advanced Topics in Software Engineering	5	20
CS548	Designing Usable Systems	5	20
CS549	Distributed Information Systems	5	20
CS551	Mobile Software Applications	5	20
CS982	Big Data Technologies	5	20
MS418	Project Management*	4	20
CS409	Software Architecture and Design*	4	20

*Either MS418 Project Management or CS409 Software Architecture and Design

Or any other module as approved by the programme director.

Advanced Computer Science with Big Data

A total of 100 credits from the following list:

Module Code	Module Title	Level	Credits
CS549	Distributed Information Systems	5	20
CS982	Big Data Technologies	5	20
CS985	Machine Learning for Data Analytics	5	20
Together with 40 credits chosen from the following optional modules:			

Module Code	Module Title	Level	Credits
CS547	Advanced Topics in Software Engineering	5	20
CS551	Mobile Software Applications	5	20
CS971	Evolutionary Computation for Finance	5	20
CS976	Information Retrieval	5	10
CS976	Business Analysis	5	10

Or any other module as approved by the programme director.

Advanced Computer Science with Data Science

A total of 100 credits from the following list:

Module Code	Module Title	Level	Credits
CS549	Distributed Information Systems	5	20
CS826	Deep Learning Theory and Practice	5	20
CS985	Machine Learning for Data Analytics	5	20
Together with 40 credits chosen from the following:			
CS547	Advanced Topics in Software Engineering	5	20
CS551	Mobile Software Applications	5	20
CS971	Evolutionary Computation for Finance	5	20
CS976	Information Retrieval	5	10
CS976	Business Analysis	5	10
CS988	Big Data Tools and Techniques	5	10

Or any other module as approved by the programme director.

Advanced Computer Science with Artificial Intelligence

A total of 100 credits from the following list:

Module Code	Module Title	Level	Credits
CS824	Quantitative Methods for Artificial Intelligence	5	10
CS826	Deep Learning Theory and Practices	5	20
CS823	Reasoning for Intelligent Agents	5	20

CS827	Deep Learning in Visual Computing Applications	5	10
CS825	Game Theory and Multi-agent Systems	5	10
Together with 30 credits chosen from the following:			
CS549	Distributed Information Systems	5	20
CS551	Mobile Software Applications	5	20
CS815	AI Finance	5	20
CS986	Fundamentals of Machine Learning for Data Analytics	5	10
CS976	Information Retrieval	5	10
CS976	Business Analysis	5	10
CS983	Evolutionary Computation for Finance 1 (not with CS815)	5	10
CS988	Big Data Tools and Techniques	5	10

Or any other module as approved by the programme director.

Examination, Progress and Final Assessment
6.   See General Academic Regulations - Postgraduate Taught Degree Programme Level.

7.   The final assessment will be based on performance in the examinations, coursework and the project, where undertaken.

Award
8.   **Degree of MSc**: In order to qualify for the award of MSc in the chosen programme, a candidate must have accumulated no fewer than 180 credits of which 60 must have been awarded in respect of the Project CS958.

9.   **Postgraduate Diploma**: In order to qualify for the award of the Postgraduate Diploma in the chosen programme, a candidate must have accumulated no fewer than 120 credits from the taught modules of the programme.

10. **Postgraduate Certificate**: In order to qualify for the award of the Postgraduate Certificate in the chosen programme, a candidate must have accumulated no fewer than 60 credits from the taught modules of the programme.