

M.Sc. in Computing  
Course Short Code  
MCM  
Course Year  
2  
Course Offering: 02

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## M.Sc. in Computing, Year 2, Part-Time

### \*\*\*IMPORTANT MESSAGE\*\*\*

**The purpose of this information sheet is to allow you view all modules connected to the Qualification, optional and core. You should print this sheet out and then continue to the next step where your registration will take place.**

**It is your responsibility to ensure that you register correctly**

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**You must Major in only one of the following 4 areas, you cannot change your choice of Major at a later stage:**

1. MSc in Computing (Major in Secure Software Engineering)
2. MSc in Computing (Major in Artificial Intelligence [Future Learn])
3. MSc in Computing (Major in Blockchain - Distributed Ledger Technologies [Future Learn])
4. MSc in Computing (Major in Data Analytics)

## **1. TO MAJOR IN SECURE SOFTWARE ENGINEERING**

### **Requirements:**

- **In Year 2 you must only register for a total of 60 credits**
- **You must take 15 credits of core modules per semester and the 30 credit practicum**

Register for all of the following CORE modules:

## SEMESTER 1

CA642A	Cryptography & Number Theory	7.5 Credits
CA688A	Blockchain: Basics & Applications	7.5 Credits

## SEMESTER 2

CA645A	Network Security	7.5 Credits
CA650A	Software Process Quality	7.5 Credits

## AUTUMN

CA694	Practicum (Secure Software Engineering Practicum)	30 Credits
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## 2. TO MAJOR IN ARTIFICIAL INTELLIGENCE [FUTURE LEARN]

### Requirements:

- In Year 2 you must only register for a total of 60 credits
- You must take 15 credits of core modules per semester and the 30 credit practicum

Register for all of the following CORE modules:

## SEMESTER 1

CA682i	Data Management and Visualisation	7.5 Credits
CA699i	Topics of AI	7.5 Credits

### Requirements:

- Semester 2 Options: Students can take up to a max. of 15ECTS of either DCU modules (CA681i/CA6005i/EE544) or NUIG modules (CA6006i/CA6007i/CA6008i), i.e: 2 x DCU or 3 x NUIG. A combination of DCU and NUIG modules is NOT permitted.

## SEMESTER 2

CA681i	Machine Translation	7.5 Credits
EE544	Computer Vision	7.5 Credits
CA6005i	Mechanics of Search	7.5 Credits
CA6006i	Reinforcement Learning & Multi-Agent Systems (NUIG)	5 Credits
CA6007i	Knowledge Representation (NUIG)	5 Credits
CA6008i	Tools and Techniques for Large Scale Data Analytics (NUIG)	5 Credits

## AUTUMN

CA689	Practicum (Artificial Intelligence)	30 Credits
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### 3. TO MAJOR IN BLOCKCHAIN - DISTRIBUTED LEDGER TECHNOLOGIES [FUTURE LEARN]

**Requirements:**

- In Year 2 you must only register for a total of 60 credits
- You must take 15 credits of core modules per semester and the 30 credit practicum

Register for all of the following CORE modules:

#### SEMESTER 1

EE516i	Blockchain Scalability	7.5 Credits
CA646i	P-Key Cryptography & Sec Protocols	7.5 Credits

#### SEMESTER 2

CA6001i	Developing Blockchain Systems	7.5 Credits
CA6002i	Computer Security	7.5 Credits

#### AUTUMN

CA6003	Practicum (Blockchain - Distributed Ledger)	30 Credits
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## 4. TO MAJOR IN DATA ANALYTICS

### Requirements:

- In Year 2 you must only register for a total of 60 credits
- You must take 15 credits of core modules per semester plus the 30 credit practicum

Register for all of the following compulsory modules:

### SEMESTER 1

CA660A	Statistical Data Analysis	7.5 Credits
CA675A	Cloud Technologies	7.5 Credits

### SEMESTER 2

CA683A	Data Analytics and Data Mining	7.5 Credits
CA652I	Artificial Intelligence, Information and Information Seeking	7.5 Credits

### AUTUMN

CA685	Practicum (Data Analytics)	30 Credits
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Last updated: 14th July 2023