

CENTRE FOR BLOCKCHAIN TECHNOLOGIES



UCL

MSc Emerging Digital Technologies

2021/22

Programme Summary

The MSc Emerging Digital Technologies programme merges technology and the management of technology. If you wish to pursue emerging technology-centric careers in complex business environments, then this programme can help you achieve that goal. By taking this programme, you will be armed with a comprehensive knowledge of a wide range of emerging technologies. You will gain an understanding of their limitations and current boundaries as well their opportunities and risks. You will take part in a variety of core modules that develop your hands-on skills with technology in areas such as data science, blockchain technologies and information management systems. This is supplemented with business strategies and management knowledge on how you can effectively deploy these technologies to innovate within the business environments.

As you progress through this programme, you will be able to hone your skills in areas such as machine learning, computer security and fintech and areas including entrepreneurship and digital policy.

The UCL Centre for Blockchain Technologies has created this programme. This multidisciplinary research centre focuses on how blockchain and other emerging technologies are impacting the world's socio-economic systems. The centre has numerous partnerships with some of the largest technology companies in the world.

Programme Structure

In term one, you will study about digital technologies and business strategy, and database and information management systems. These two modules constitute half of the core modules. You will also get the chance to explore fintech, machine learning and computer security. This will enable you to develop your hands-on technology skills.

In term two, you will study about blockchain technologies and data science. These are the other two core modules. They will give you a foundation of technology skills related to some of the most critical technologies being deployed in the business environment. You will also get the chance to pursue further learning in machine learning, network analysis, computer security and privacy, and entrepreneurship and digital policy.

Finally, in term three, you get the chance to work on a summer project. This will be an opportunity to undertake a substantial research project that results in a dissertation. This programme offers both Industry-based and purely Academic projects.

Industry-based projects are usually undertaken with an external partner organised by UCL staff as part of our wider [Industry Exchange Network \(IXN\) programme](#) and have both an academic and an industry supervisor. This gives you the experience of conducting project work in a real-life setting, which aligns with UCL's connected curriculum. Both you and the Industry partner will need to agree to work together. Industry partners who have participated in summer projects previously include Santander, Ernst & Young, Ripple, HSBC, Bank of England, Intel, NASA, PWC, AXA, Nomura et al. Purely Academic projects require you to agree on a subject with an UCL academic who will be your only supervisor.

The technology-related modules in this programme require hands-on programming skills and good quantitative ability. You should have some programming experience in either python, Matlab or C++. Some programming experience means that you have experience of working on projects deploying code or have passed modules/assessments in your previous education with coding components. If you do not have this knowledge, there will be tutorials offered at the beginning of the programme, but you will be expected to get up to speed rapidly. A self-assessment test will be available to determine if you will need additional support for coding. If you want to take the machine learning modules in this programme, you should be familiar with linear algebra and probability theory.

Programme Diet

Compulsory

- Blockchain Technologies (COMP0163)
- Digital Technologies and Business Strategy (COMP0165)
- Data Science (COMP0047)
- Database and Information Management Systems (COMP0022)
- MSc Emerging Digital Technologies Project (60 credits)

Optional

- Digital Finance (COMP0164)
- Innovation and Strategy in Finance (COMP0167)
- Introduction to Machine Learning (COMP0088)
- Applied Machine Learning (COMP0081)
- Machine Learning for Domain Specialists (COMP0142)
- Entrepreneurship: Theory and Practice (COMP0039)
- Digital Technologies and Policy (STEP0012)
- Security and Privacy (ELEC0138)
- Computer Security I (COMP0054)
- Networks and Systemic Risk (COMP0046)

All modules are 15 credits unless otherwise stated. Students may select up to four optional modules.

Information on the modules is available [here](#) (please search using the module code)

Employability & Alumni Summary

By taking this programme, you will have the option of working in technology management or development for technology companies or within technology departments at a forward-thinking organisation. You will gain demonstrable skills in forecasting current and future trends in technologies, business strategy and management of emerging technologies, data science and machine learning, and blockchain technologies. Depending on the optional modules chosen, you may also gain skills in digital innovation and policy, fintech, cybersecurity and network analysis.

As this is a new programme, there are no alumni. It is expected that students would be in great demand by businesses adopting new emerging technologies, especially given the tremendous skills deficit within this area.

Entry Criteria

An upper-second class UK Bachelor's degree (or equivalent overseas qualification) in computer science, mathematics, statistics, physics, engineering, or a similarly quantitative subject. Programming experience in a language such as Python, C++ or Matlab is an advantage but is not mandatory. Some programming experience means that you have experience of working on projects deploying code or have taken modules/assessments in your previous education with coding components. If you do not have this knowledge, there will be tutorials offered at the beginning of the programme, but you will be expected to get up to speed rapidly. A self-assessment test will be available to determine if you will need additional support for coding. A good knowledge of linear algebra, statistics and probability theory will be assumed. Relevant work experience will also be taken into account. Examples of relevant work experience include roles that require working with, applying and understanding digital technologies in roles such as product management, development, management and operations.

The English language level for this programme is: **Good**

Further information can be found on our [English language requirements](#) page.