



NEW START4U CIC
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12-14 Riley Square,
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MSc Web and Mobile Development Technologies (Part Time)

London Campus

Level of study: Postgraduate

Mode of study: Part-time

Duration: 2 years (16.5 weekends)

Overview

Technology is one of the greatest agents of change in the modern world and it represents a significant opportunity and risk for businesses of all sizes. Developers play a central role in how we interact with the online world and employment in the IT industry is expected to grow at nearly 5 times the UK average over the next decade (CIO, 2015).

The demands of our global, data-intensive, knowledge based economy is creating a skills gap and making now the perfect time to gain the skills necessary to meet demand.

Northumbria University's part-time MSc Web and Mobile Development Technologies is taught by industry experts around leading-edge content, and is designed to give you the knowledge and expertise to fill this gap.

Key facts

Part-time Masters degree based in Central London

Continue working while you study with lectures delivered on 16.5 weekends throughout the 2 year course. Build a firm grounding in strategic web development skills and mobile development. Learn how to manage and utilise the opportunities emerging technologies create. Undergraduate degree not essential for entry

Course information

Level of study: Postgraduate

Fees: To find out about current fees and student finance contact us

Entry requirements: 2:2 or above undergraduate degree from a recognised university in a relevant field, ideally with work experience .Mode of study: Part-time

Duration: 2 years (16.5 weekends)

Assessment methods: Coursework

Scholarships or bursaries: unavailable

Student finance: available

Payment plan: available



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Starts: Jan, Apr, Jul, Oct,

About this course:

What will I study?

Part-time MSc Web and Mobile Development Technologies provides a firm grounding in strategic web development skills, with a specific focus on mobile development. This programme also includes a module on the Internet of Things providing students with the required skills to help them join any industry investing in this multi-billion dollar sector.

Blending hands on training with academic rigour, our programme will enable you to develop the lifelong skills needed to rise to the challenge and opportunity of emerging technologies and engage in the 'bleeding edge' field. An area which is notoriously high risk and has an increased potential of unreliability.

Alongside the Internet of Things, you will study the core skills required to gain a deep understanding of contemporary web development, industry practice and analysis which forms the basis of next generation technologies. This programme also focuses on mobile development and web development skills you need to engage and succeed in the cutting edge of technology.

During the programme you will also develop independent research skills to manage risk and identify, recommend and deploy relevant technologies both now and in the future. Throughout the course, you will study with a diverse group like-minded IT professionals, share ideas, and build upon your professional network.

How will I be taught and assessed?

The part-time programme is designed to enable working professionals to fit their study around their work and personal life. The programme is assessed through modular assignments and a final dissertation, with no exams. All taught lectures are delivered on 16.5 weekends spread throughout the 2 year period, with approximately 24 hours of taught content per module. You will also be expected to engage in self-directed learning and reading, around 164 hours per module.

Our MSc Web and Mobile Development Technologies is a truly blended learning programme, offering extensive student support in and outside of the classroom. We have a dedicated delegate support team based in London to assist you throughout your programme and arrange one-to-one sessions with our experienced faculty

Entry requirements

Applicants should have the following:

Standard entry requirements. Minimum 2:2 or above from a recognised university in a relevant field (IT/Computer Science/related field)

Ideally some relevant IT/Developer experience Non-standard entry requirements. 3 years' demonstrable IT, software or development experience and/or a professional qualification



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Modules

All modules on this course are core.

Web Engineering (20 credits)

This module enables you to understand, learn and develop with emerging web engineering techniques and standards. By the end of the module you will be able to: demonstrate an understanding of specific technologies, methods, skills and concepts in developing and deploying systems relating to web design and authoring Identify user requirements in multi-platform, multi-device web development; analyse the requirements, compare and formulate solutions to address them in design and test implemented solutions against test scenarios. Demonstrate knowledge of web standards, system frameworks and protocols. Specify and critically evaluate their practice and implement reliable, optimised, and future-proof web applications using industrial strength platforms. Critically evaluate and apply ethical, accessibility and usability issues relating to data driven web authoring.

UX/UI Theory, Experience and Development (20 credits)

Learn how to succeed in front-end engineering through the application of User Experience. By the end of the module you will be able to: demonstrate knowledge of UX/UI theories, design principles and technologies and have a deep appreciation of the benefits and problems associated with UX/UI and development of interactive systems. Demonstrate knowledge of legislation and standards relevant to UX/UI, and recognise and be able to apply UX/UI standards and guidelines to the development of responsive/interactive systems. Explain usability criteria and how it can be effectively measured. Use UX/UI design principles to design/model a solution to a problem. Apply knowledge of cognitive and socio-psychological theories to the design, implementation and evaluation of UX/UI. Select and apply appropriate UX/UI evaluation techniques.

Mobile App Development (20 credits)

This module will enable you to model, design and implement native mobile applications. The module learning outcomes that are addressed by the assignments are: demonstrate knowledge and understanding of fundamentals and theories of mobile communication technologies. Able to make correct choices for the key tools, platforms and techniques enabling development of mobile apps for specific business requirements. For example, use Eclipse IDE with the Android emulator as a productive development environment to write and run Android applications – and show understanding of Android features and able to exploit the Android developer's SDK. Exploit hardware features available on a variety of devices to support mobile application development and deployment. Effectively evaluate and use external services and resources to support mobile application development and deployment. Demonstrate understanding of quality assurance procedures and techniques in the context of mobile application development and deployment. Please note there is an additional cost to this module of \$25* to host an application on Google Play as part of an assignment.

*subject to change

Cloud Computing (20 credits)



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This module is one of the optional modules available for this programme, of which you can choose one. The module learning outcomes addressed by this assignment are: show knowledge and understanding of design and development of services that access local and remote data from various data sources. Demonstrate how to develop and deploy services to cloud environments e.g. Windows Azure or Amazon Web Services. Identify technical terminology and concepts as they relate to the cloud and web services platforms. Describe and evaluate the impact and importance of Cloud Architecture. Demonstrate how to launch and manage cloud API's and databases and provide secure access. Deploy Infrastructure and Applications; create data bindings; query and manipulate cloud based data structures; expose service driven endpoints using web protocols e.g. SOAP, REST, JSON Create scalable, load-balanced services and implement growth strategies.

Web & Mobile Application Security (20 credits)

This module is one of the optional modules available for this programme, of which you can choose one. The aim of this unit is to provide learners with the understanding and skills needed to identify security risks in web applications and mitigate those risks by writing secure code. The module will enable you to develop understanding and analytical skills for the most critical/up-to-date web application security risks using professional security techniques e.g OWASP. You will also learn the practical skills and mitigation strategies to secure the risks. Define and discuss common website/mobile security risks. Be able to remotely identify vulnerabilities in web applications. Demonstrate and employ practical skills/practices to secure discrete units of code and explain native web browsers security defences. Apply the principles of information security in a practical setting. Undertake appropriate automated scanning and detection of risks. Design and model security models and be able to systematically evaluate the implications in specific context.

Internet of Things (20 credits)

This module will give you the opportunity to understand the technologies behind the Internet of Things, e.g. embedded systems, distributed computing, operating systems, network protocols, programming frameworks and cloud computing. The module covers technologies and modern business trends of the IoT utilizing Amazon cloud, typical IoT applications, architectures, network protocols, application programming and data analytics. A key point of the course is an understanding of IoT through hands-on activities including practical demonstrations and lab sessions. Students will also have the opportunity to design and implement applications for the Internet of Things applications using Raspberry Pi on Amazon Web Services IoT platform.

Research Methods and Final Project Preparation (0 credits)

The aim of this unit is to provide learners with the experience of undertaking a substantial piece of research related to the modules studied. It will require you to develop, consolidate and apply your independent research, academic study and research project management skills to the investigation of a topic of your own choice that is relevant to your programme of study, your workplace or your future career aspirations.

MSc Computer Science and Digital Technologies Project (60 credits)

The aim of this module is to enable you to undertake a substantial academic research project at Masters level and present the results from this work in both written and oral forms. Your project itself will be a



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major piece of independent and original research centred at the forefront of your programme discipline within the wider sphere of the computer science and digital technologies field.

You will experience the full life cycle of a research project from initial conception and development of a research proposal, through a critical review of the literature, planning, design, implementation and analysis of your main research project, to final evaluation, reflection and dissemination. You will be expected to consider and address the professional, ethical, legal and social issues related to this academic research project. You will also be expected to apply your expertise, project management and practical skills within your particular domain of computer science and digital technologies and demonstrate critical and innovative thinking and problem solving within a research environment.

Please note that your tuition fees do not include the cost of course books that you may choose to purchase, stationery, printing and photocopying, accommodation, living expenses, travel or any other extracurricular activities. As a London Campus student, you will have full access to our online digital library with over 400,000 e-books and 50,000 electronic journals.

The modules you will study do not require you to purchase additional textbooks although we recommend you allow an additional £200-250 for the duration of your studies should you choose to purchase any additional reading materials.

Please note there is an additional cost to host an application on the Google Play store of \$25 (subject to change) as part of the compulsory Module 3: Mobile App Development.