

Digital and Technology  
Solutions (BSc)



# DIGITAL SOLUTIONS AT THE UNIVERSITY OF EXETER

## Contact

For more information about  
this programme, contact:  
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We work in partnership with employers to offer a work-based learning experience backed by the educational excellence of Exeter. We provide employers with an affordable way to recruit high-calibre IT talent.

This programme gives employers an opportunity to shape the development of their next-generation employees. To meet specific employers' needs, pathways relating to specific role areas are available across six IT specialisms. Students will benefit from gaining extensive professional experience throughout their degree, graduating free of student debt into employment.

Our programme is distinctive in the way it minimises disruption to an apprentice's work for their employer. Teaching is structured around a one week residential visit each term and online learning.

Given that degree apprenticeships assess projects undertaken in the workplace, apprentices can bring business value from the outset which will increase with their skills and knowledge.

Offering this programme opens a relationship with the University spanning the early stages of development and recruitment through to graduation, with the option to recruit subsequent cohorts. During this time we will build a partnership with employers which establishes regular two-way feedback mechanisms such as company visits from academic staff or a forum for discussion with fellow employers.

Our dedicated education team will work with you to ensure that the work-based learning component of the programme is designed to meet your business needs and our educational standards. Apprentices will benefit from the same support as other Exeter undergraduates, including all aspects of the 'Exeter experience' such as the Students' Guild advice and careers services.



Teaching Excellence  
Framework assessment 2017



5 star rated from QS



A member of the Russell Group  
of universities

# PROGRAMME MODULES

Please note that availability of all modules is subject to timetabling constraints and that not all modules may be available every year. For-up-to-date details of all our programmes and modules, please check the degree apprenticeships section of our website at [www.exeter.ac.uk/business/people/degreeapprenticeships/dts](http://www.exeter.ac.uk/business/people/degreeapprenticeships/dts)

## Core Modules

### Business organisation

Development of knowledge in organisational theory, change management, marketing, strategic practice, human resource management, IT service management, and professional communications and application of these skills in a professional setting. The module also explores how to exploit data to deliver improved business insights.

### Interpersonal and foundation skills

Development of skills in communication, leadership and collaboration, negotiation, analytical and critical thinking and mathematical foundations.

### Systems development

Key processes related to building functioning applications for business. Application of the basic concepts of programming and programming logic and introduction to software engineering practice at an overview level.

### Information and data

Centred on the core skills of identifying organisational information requirements, modelling using conceptual data modelling techniques and converting the conceptual data models into relational data models, and then implementing and utilising a relational database using an industry standard database management system. Covers basic database administration tasks and key concepts of data quality and data security.

### IT project management

Study covers introduction to the processes, methods, techniques and tools that organisations use to manage their IT projects. Apprentices will learn how to apply a systematic methodology for initiating, planning, executing, controlling, and closing projects.

### Digital technology infrastructure

An introduction to basic computer system organisation and network infrastructure with an overall focus on the services and capabilities that network infrastructure solutions enable in an organisational context. Development of knowledge and skills needed for the planning, design, implementation and management of computer networks and understanding of the network infrastructure capabilities and limitations.

### Information security

This module provides knowledge on the fundamental principles of Information Technology Security and Risk Management at the organisational level. It focuses on critical information and cyber security principles and management, and the role of hardware, software, processes, communications, applications, people and policies and procedures with respect to organisational information security.

### Information systems

The ways an organisation can develop its capabilities using information technology. Gain an understanding of how information is used in organisations and how IT enables improvement in quality, speed, and agility. Alongside an introduction to systems and development concepts, technology acquisition, and various types of application software that have become ubiquitous in modern organisations and society.

### IT law and ethics

Addresses a wide range of legal, ethical and societal issues that confront IT professionals. Civil and criminal law as it pertains to digital technologies, focusing on pressing issues such as intellectual property, confidentiality, data protection, privacy, contracts and computer crime. Ethical issues in IT and software engineering, addressing the responsibility of the IT professional towards others and encompassing issues such as system reliability and relevant codes of conduct.

### Reflective practice

An opportunity for apprentices to apply what they learn during the apprenticeship in their day-to-day work and to develop useful workplace skills and behaviours. The aim is to allow integration and internalisation of skills and knowledge.



## Specialisms

Accredited by Tech Partnership Degrees, this programme allows businesses to recruit apprentices across six IT specialisms:

### Software engineer

A software engineer designs, builds and tests, high-quality software solutions following best practices and industry standards. The engineer will need to be able to interpret requirements specification documentation and designs in order to develop and test software that meets its requirements, even when these requirements may change.

### Network engineer

A network engineer designs, installs, maintains and supports communication networks within an organisation or between organisations. They will understand network configuration, cloud, network administration and monitoring tools, and be able to give technical advice and guidance being proficient in technology solutions as they will analyse system requirements to ensure the network and its services operate to desired levels.

### Data analyst

A data analyst collects, organises and studies data to provide new business insight. They provide upto-date, accurate and relevant data analysis for the organisation, typically involved with managing, cleansing, abstracting and aggregating data across the network infrastructure.

They have a good understanding of data structures, software development procedures and the range of analytical tools used to undertake a wide range of standard and custom analytical studies, providing data solutions to a range of business issues. They will document and report the results of data analysis activities making recommendations to improve business performance.

### IT business analyst

A business analyst is responsible for assessing the business impact of change, capturing, analysing and documenting requirements and supporting the communication and delivery of requirements with relevant stakeholders. They create detailed analysis of systems and make recommendations for improvement and produce specifications of user requirements that enable software engineers to develop the right software solutions.

### IT consultant

An IT consultant requires a broad set of skills in business analysis, solutions development, network infrastructure, data, cyber security etc. They will use consulting skills in order to advise clients on how to best utilise technology to meet their business objectives, overcome problems and increase productivity and provide strategic guidance to clients with regard to technology and facilitate changing business processes through enhancements to technology solutions. They will provide technical assistance and are responsible for providing training.

### Cyber security analyst

A cyber security analyst is responsible for the implementation, maintenance and support of the security controls that protect an organisation's systems and data assets from threats and hazards. They ensure that security technologies and practices are operating in accordance with the organisation's policies and standards to provide continued protection. They require a broad understanding of network infrastructure, software and data to identify where threat and hazard can occur and are responsible for performing periodic vulnerability assessments to evaluate the organisation's ongoing security posture and will provide visibility to management of the main risks and control status on an ongoing basis.





# PROGRAMME STRUCTURE

Apprentices will be full-time employees of your business, gaining a University of Exeter degree over four years through:

- Three short weeks of residential teaching in Exeter per year (September, January and May – adding up to 10-12 days)
- Weekly distance learning comprising online classes and workshops, interactive exercises and recorded lectures
- Work-based learning, assessing projects undertaken in the workplace

Approximately 20 per cent of the apprentice's time will be given over to study, though our model is designed to be flexible around the needs of employers and workloads. The programme is designed to mitigate disruption on the apprentice's daily role meaning we can work with employers across the country.

Our dedicated partnerships team liaise closely with employers throughout the programme; we can assist you with recruiting, education support and administration. Each apprentice is allocated a University Mentor to ensure their successful completion of the programme.

## Entry requirements

- A-levels AAB
- IB 34
- BTEC Level Three Extended Diploma DDD

Other qualifications of a similar level can be considered. We would encourage applicants with non-standard qualifications to contact us to discuss their eligibility.

Where a candidate has already gained a good undergraduate degree this may be offered to meet entry requirements. Please note that, due to the funded nature of this programme, applicants with undergraduate degrees in computing/ IT are not eligible.

# PROGRAMME STRUCTURE

Please note that the modules available may alter from year to year, as publicised by the University. Term dates are as publicised on the University website but some residentials and teaching may take place outside of these.

<b>Year One:</b> All modules are compulsory 4 x taught modules at 15 credits each  30 credits WBL	Term 1		Term 2		Term 3
	Business organisation	Interpersonal and foundation skills	Systems development 1	Information and data	Exams for Term 1 and 2 modules
	Reflective practice 1				Presentation
<b>Year Two:</b> All modules are compulsory 4 x taught modules at 15 credits each  30 credits WBL	Term 1		Term 2		Term 3
	IT project management	Systems development 2	Digital technology infrastructure	Information security	Exams for Term 1 and 2 modules
	Reflective practice 2				Presentation
<b>Year Three:</b> 2 x taught modules at 15 credits each 1 x elected specialism at 15 credits  45 credits WBL	Term 1		Term 2 – One module based on specialism		Term 3
	Information systems	IT law and ethics	IT consulting   software engineering   business consulting	Data analysis   cyber security   network engineering	Exams for Term 1 and 2 modules
	Reflective practice 3				Presentation
<b>Year Four:</b> 1 x elected specialism at 15 credits 1 x chosen module at 15 credits  60 credits WBL	Term 1 – Module based on specialism		Choose secondary specialism / independent study		Term 3
	IT consulting 2 software engineering 2 business consulting 2	Data analysis 2 cyber security 2 network engineering 2	IT consulting   software engineering   business consulting	Data analysis   cyber security   network engineering	Exams for Term 1 and 2 modules
	Synoptic project				Presentation

# UNIVERSITY OF EXETER DEGREE APPRENTICESHIPS

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## Civil Engineering Degree Apprenticeship

The Civil Engineering Degree Apprenticeship is unique in that it caters for both the Civil Engineering Site Management Degree Apprenticeship standard and the Civil Engineer Degree Apprenticeship standard.

[www.exeter.ac.uk/business/people/degreeapprenticeships/civilengineering](http://www.exeter.ac.uk/business/people/degreeapprenticeships/civilengineering)

## Senior Leader Degree Apprenticeship

Our Masters Level Degree Apprenticeship is accredited by the Chartered Manager Institute (CMI) and represents an exciting opportunity to gain a prestigious MBA.

[www.exeter.ac.uk/business/people/degreeapprenticeships/mba](http://www.exeter.ac.uk/business/people/degreeapprenticeships/mba)

## Contact:

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