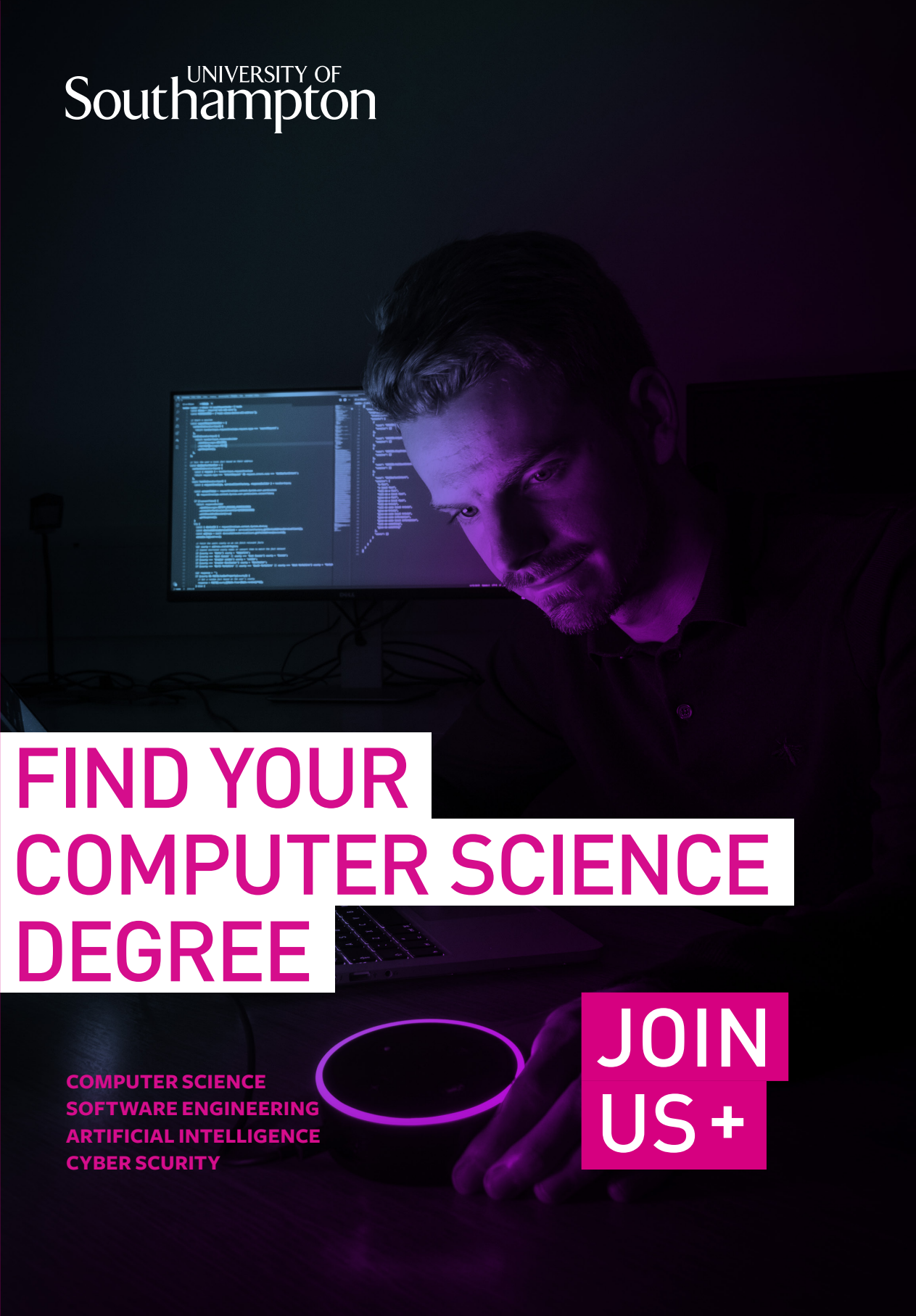
UNIVERSITY OF
Southampton



FIND YOUR COMPUTER SCIENCE DEGREE

COMPUTER SCIENCE
SOFTWARE ENGINEERING
ARTIFICIAL INTELLIGENCE
CYBER SCURITY

JOIN US +

FLEXIBILITY

In Electronics and Computer Science we are committed to making our courses as flexible as possible so that you have every opportunity to align your degree with your aspirations and interests as they develop. Our Computer Science and Software Engineering degrees share a common first year giving you the opportunity to learn foundational aspects of both subjects. We appreciate that many students won't have had previous experience of these subjects, so our programmes are designed to ensure that you are on the course best suited to you.

Optional modules

We offer a wide variety of optional modules and you can change your option choices up until two weeks after the start of each semester.

Transferring between programmes

You can transfer between our Computer Science and Software Engineering programmes at any time, provided you have studied the required modules if transferring to Software Engineering.

Transferring between BEng (three-year) and MEng (four-year) programmes

You can transfer from the BSc and BEng degrees to the MEng degree (provided your average mark is at least 58 per cent) at the end of Year 2 and possibly during Year 3. MEng students can choose to leave with a BSc/BEng degree at the end of Year 3.

Transferring between specialist programmes

You can transfer between any of our specialist MEng Computer Science with X programmes until the end of Year 2, and possibly later depending on your option choices.

"I think coming to Southampton was the best choice I could have made and it made me grow in a lot of ways: not only did I learn a lot about software and become a valuable engineer, but I also gained experience working on my own and as part of a team."

BSc Computer Science, 2019
Software Engineer at Aignostics

You must study eight modules each year

Year 1
Core foundations and skills

Algorithmics	●	●	●	●
Computer Systems I	●	●	●	●
Data Management	●	●	●	●
Foundations of Computer Science	●	●	●	●
Professional Development	●	●	●	●
Programming I	●	●	●	●
Programming II	●	●	●	●
Software Modelling and Design	●	●	●	●

Year 2
Specialising into degree stream

Software Engineering Group Project	●	●	●	●
Distributed Systems and Networks	●	●	●	●
Intelligent Systems	●	●	●	●
Interaction Design	●	●	●	●
Programming III	●	●	●	●
Theory of Computing	●	●	●	●
Programming Language Concepts	●	●	●	
Advanced Software Modelling and Design	○	●	○	
Computer Systems II	○		○	●
Principles of Cyber Security	○		○	

KEY

●/○/◎ Required/Optional/Specialist option

●/○/◎ Computer Science

●/○/◎ Software Engineering

●/○/◎ Computer Science with Artificial Intelligence

●/○/◎ Computer Science with Cyber Security

\+ Compulsory for all MEng students

* Students can only choose one Machine Learning Option

- Programmes may replace restrictions on the combinations of modules that can be studied, e.g. you are required to take certain options with specialist Artificial Intelligence, Cyber Security and Software Engineering programmes. For full details visit **www.ecs.soton.ac.uk/ug**
- Optional modules will only run if enough students choose them.
- Some optional modules require you to have already taken certain modules.
- All modules, subjects and policies contained in this leaflet are believed to be correct at the time of going to print (Sept 2021).
- Our programmes are regularly reviewed and updated, so changes are likely to occur. This affects new and continuing students.
- You may be allowed to back-track or forward-track optional modules in Years 2, 3 and 4.
- All transfers may be subject to visa restrictions

Year 3

Specialist knowledge and skills

- Individual Project (contributes 3 modules)
- Engineering Management and Law
- Web and Cloud Based Security
- Natural Language Processing
- Security of Cyber Physical Systems
- Web Infrastructure
- Advanced Computer Architecture
- Advanced Computer Networks
- Advanced Databases
- Causal Reasoning and Machine Learning
- Cloud Application Development
- Computational Biology
- Computer Vision
- Foundations of Machine Learning
- Game Design and Development
- Machine Learning Technologies
- Operational Research
- Optimisation
- Real Time Computing and Embedded Systems
- Robotic Systems
- Social Computing Techniques

Year 4

(MEng) Advanced knowledge and skills

- Group Design Project (contributes 3 modules)
- Software Security
- Automated Software Verification
- Advanced Machine Learning
- Algorithmic Game Theory
- Biologically Inspired Robotics
- Biometrics
- Computational Finance
- Cryptography
- Cyber Crime, Insecurity and the Dark Web (Cyber Security)
- Data Mining
- Data Visualisation
- Deep Learning
- E-Business Strategy
- Evolution of Complexity
- Image Processing
- Individual Research Project
- Intelligent Agents
- Open Data Innovation
- Reinforcement and Online Learning
- Semantic Web Technologies
- Simulation Modelling for Computer Science
- Social Media and Network Science
- Software Project Management and Cloud Development
- Wireless Networks

Find out more:
www.southampton.ac.uk/ecs/ugcourses

PROJECTS TO CHALLENGE YOU

Our students get the chance to develop their project skills throughout their programmes.

In Year 2 they are challenged to complete a group project that sees them tackling the problems of communication and scale in software engineering.

While in Year 3 they will work on an individual project that gives them the opportunity to take their degree in the direction that most interests them.

Often working alongside world-leading researchers, the project helps them develop unique skills that can set them apart from the rest.

The best student projects can lead to publications at international conferences and pave the way for careers in academia, research and development.

EMPLOYABILITY

At Southampton we ensure our students have the potential to graduate with a wide range of employable skills.

Our courses are highly regarded throughout industry – 100per cent of employed MEng Computer Science graduates are in professional and/or managerial positions six months after graduation*.

To enhance their employability further we encourage and support our students to take industrial summer placements. We also have a strong network of companies – from local software houses through to large international organisations – that regularly offer summer placements to our students.

In 2017 more than 250 companies and organisations advertised graduate roles and internships through the ECS Careers Hub, and over 60 companies visited the department to give presentations.

Some of our students also choose to spend a year with a company either as part of our 'with Industrial Studies' degrees or by suspending their studies for a year.

*Unistats 2018

Find out more:
www.southampton.ac.uk/ecs

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