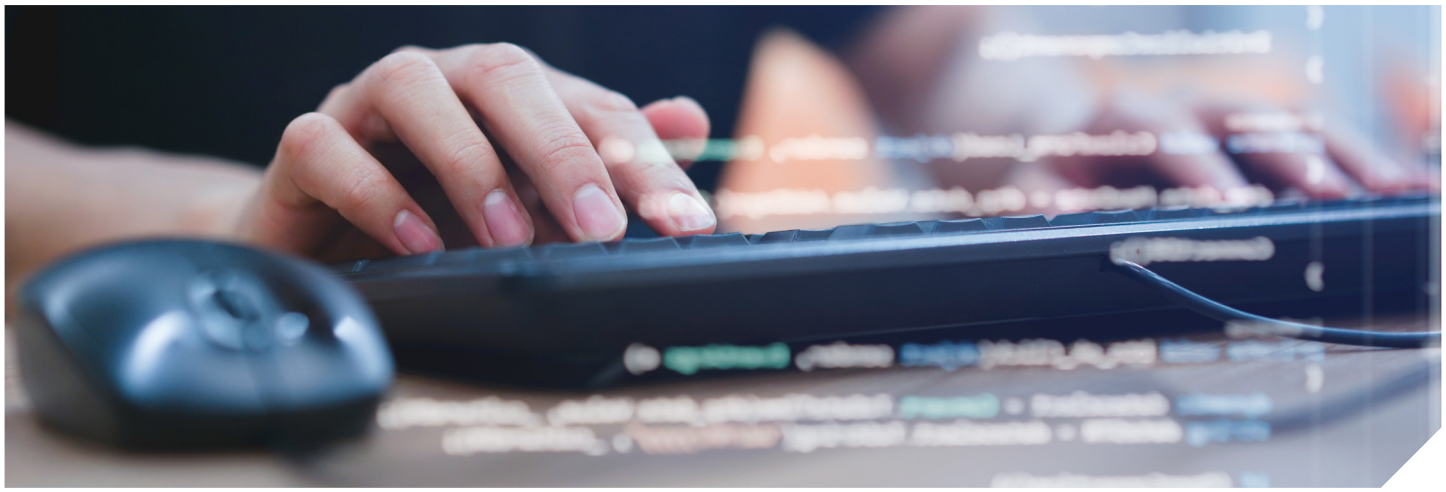
Software Engineering with a Year in Industry MEng (Hons)

UCAS Code: SE15 | **Duration: 5 years** | **Full-time** | **Hope Park** | **2024/2025**

Placement year opportunities available | Study Abroad opportunities



Course Overview

Modern society could not function without large software systems. National utilities and infrastructure, energy, communications, health, business and transport all rely on complex and large applications.

With the increasing complexity of these software systems comes an increasing difficulty in building and delivering a correct, and robust, solution to customers on time and on budget. Such software cannot be produced successfully, safely and efficiently without following some constraining, and managing, process. This is the domain of the software engineer.

Entry Requirements

This course follows the standard University entry requirements. Please see the website for further information.

Fees and Additional Costs

The tuition fees for 2024/2025 are £9,250 for full-time undergraduate courses.

If you are a student from the Isle of Man or the Channel Islands, your tuition fees will also be £9,250. The University reserves the right to increase Home and EU Undergraduate and PGCE tuition fees in line with any inflationary or other increase authorised by the Secretary of State for future years of study.

You will also need to consider the cost of your accommodation each year whilst you study at university.

Visit our accommodation webpages for further details about our Halls of Residence: **www.hope.ac.uk/halls**

LIVERPOOL HOPE UNIVERSITY
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Software Engineering with a Year in Industry MEng (Hons) Curriculum

Year One

Year one provides a broad introduction to computing in general with a particular focus on practical programming. Topics you will study include:

- Principles of problem solving using Python
- Introduction to web development
- Database
- Study skills
- Principles of software development
- Introduction to data structures and formal algorithms using Java
- Introduction to software source control management systems
- Mathematics for computing

Year Two

In year two you will build significantly on skills and knowledge acquired in year one. You will start to study the principles of software design and management. Your year will follow 4 main threads:

- Object Oriented Software Development using C++
- Introduction to the theory of Software Engineering
- Website development using PHP
- Practical Software Engineering:
- Comparative database technologies
- Java design patterns
- Introduction to software testing and monitoring
- Introduction to enterprise systems

Year Three

You will spend your third year in an industry placement.

Year Four

Your third year will explore many practical aspects of software engineering in depth. You will be learning in-demand skills that should prove immediately useful in your first jobs after university:

- Web Innovations
- IoT and Mobile Development
- Advanced Database
- Software Management
- Software Architecture
- Cloud Computing

Year Five

In year five you will look at modern paradigms for enterprise level software development, deployment, monitoring and maintenance. You will study:

- Computing in the cloud
- Solutions architectures focussing on microservice architectures
- Enterprise integration patterns
- Virtualization
- Software containerization and orchestration
- DevOps and monitoring in the cloud
- Hybrid cloud architectures
- Continuous integration and continuous delivery

You will undertake a significant project and produce an associated dissertation.

COURSE STRUCTURE

Teaching on this degree is structured into lectures, where all students are taught together, seminars of smaller groups of around 15-20 students, and tutorials which typically have no more than 10 students. During your first year of study, there are approximately 12 teaching hours each week, which reduces to approximately 10 teaching hours in your second and third years. On top of teaching hours, you are also expected to spend a number of hours studying independently each week, as well as studying in groups to prepare for any group assessments that you may have.

ASSESSMENT AND FEEDBACK

During your degree, there are a variety of assessment types to ensure you are given a range of opportunities to demonstrate your knowledge, skills and understanding of the academic and professional components of the degree. These include written exams, portfolios of tasks and activities, and practical coursework. In your final year, there is also a dissertation or extended research project to complete. You will be given written feedback on your assessments, and you will have the opportunity to discuss this with your tutor in more detail.

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