

INTERNATIONAL YEAR ONE (CERTHE) COMPUTER SCIENCE

Institute of Engineering, Computing and Advanced Manufacturing

Academic Level:	4	Credits:	120
UCAS Code:	Not applicable		
Awarding Body:	University of Cumbria		
Delivered by:	Malvern International		
Delivery Site:	International College – Lancaster Campus		
Programme Length:	1-year (IY0) + 2 years of core programme		
Mode of Delivery:	Face-to-face		
Pattern of Delivery:	Full-Time		
	Total weeks of study:	24 weeks	
	Delivery pattern:	2x 12 week semesters	
	Standard semester dates:	Yes	
Programme Webpage:	https://internationalcollege.cumbria.ac.uk/programmes/international-year-one/		

Entry Criteria

The University's standard criteria for admissions apply. Please refer to the [Applicant Information](#) pages of the University website for more information. [APL](#) is not accepted for these programmes.

Detailed criteria for admission to this programme can be found on the above programme webpage.

PROGRAMME AIMS AND OUTCOMES

Programme Aims

By the end of this programme, you will be able to:

1. Develop foundational knowledge in computer science essential for higher-level study in computer science and related fields.
2. Enhance English language proficiency and academic communication skills, enabling you to engage effectively in technical discussions, write structured reports, and present your work in both academic and professional computer science contexts.
3. Apply computational thinking and problem-solving techniques to design, implement, and test software solutions that address real-world problems, while considering efficiency, scalability, and ethical considerations.
4. Understand the role of digital technologies in shaping modern industries while developing skills in relevant software and programming languages.
5. Strengthen research and analytical skills to evaluate and apply academic knowledge to emerging trends and technologies in computer science.
6. Develop self-reflective and independent learning skills, promoting personal initiative, time management, and critical thinking to support academic success and professional growth in the dynamic field of computer science.

Programme Outcomes – Knowledge and Understanding

The programme provides opportunities for you to develop and demonstrate the following:

After 120 credits of study (CertHE) you will be able to demonstrate:

- K1.** Knowledge of fundamental computer science concepts and their application in solving real-world problems.
- K2.** An understanding of system architecture, hardware, and operating systems, with the ability to explain how these components interact to support the execution of software applications.
- K3.** Evaluate contemporary and emerging digital technologies, including artificial intelligence, cloud computing, Internet of Things, and cybersecurity,, and their impact in modern industries.
- K4.** Apply programming skills using industry-relevant languages (e.g., Python, Java, C++) and development tools, adhering to software design principles, best practices in debugging, and structure software engineering methodologies.

K5. An understanding of data management principles, including databases, data analysis, and data security, with a focus on how data is stored, accessed, and protected in modern computing environments.

K6. Analyse ethical, legal and social responsibilities in computer science, including privacy laws, security policies, intellectual property rights, and the environmental impact of digital technologies, and apply these considerations to professional practice.

Programme Outcomes – Skills and Other Attributes

The programme provides opportunities for you to:

After 120 credits of study (CertHE) you will be able to demonstrate:

S1. Develop effective programming skills in industry-relevant languages applying best practices in software development, debugging, and testing to create reliable and efficient software solutions.

S2. Apply computational thinking and problem-solving techniques to break down complex problems, design algorithms, and implement practical solutions using structured and object-oriented programming methods.

S3. Develop strong research and analytical skills, by critically evaluating emerging technologies, trends, and advancements in computer science, integrating theoretical knowledge with practical applications.

S4. Enhance digital literacy and technical proficiency by using industry standard software tools to support collaborative development and project management.

S5. Demonstrate the ability to work effectively in teams, collaborating on software development projects, and contributing to shared problem-solving tasks while also improving communication skills in technical discussions and presentations.

S6. Demonstrate strong time management and independent learning skills by meeting project deadlines, adapting to new technologies, engaging in self-directed study, and developing the resilience required for lifelong learning in a rapidly evolving field.

S7. Demonstrate an awareness of ethical issues in computer science and apply this understanding when designing, developing, and evaluating software solutions.

PROGRAMME FEATURES

Programme Overview

The International Year One (Level 4) programme is designed specifically for international students who:

- Have completed their secondary education but do not yet meet the academic and English language requirements for direct entry into undergraduate studies at university.
- Need to strengthen their understanding of core business and management concepts and develop the academic and communication skills necessary for higher-level study.
- Require enhanced proficiency in English to effectively participate in academic discussions, presentations, and written assignments within a business context.

By joining this programme, students will have access to the same facilities as any other student in the University, with the added advantage of being taught in smaller groups, ensuring greater individual support. This personalised approach helps students build the foundational skills required to succeed in both their academic studies and future business careers. Upon successful completion of the programme, students are guaranteed a place in a suitable business or management undergraduate degree programme.

Malvern International – International College

Our programme is designed to provide international students with a solid foundation in both technical computer science skills and academic English proficiency, preparing them for successful progression into higher education and future careers in the rapidly evolving field of computer science. The programme blends theoretical learning with practical, hands-on experience, ensuring students develop the essential skills needed to thrive in university and professional environments.

The programme places a strong emphasis on building foundational knowledge in key areas such as programming, algorithms, data structures, system architecture, and digital technologies. Alongside technical content, students will enhance their English language proficiency, focusing on academic writing, research skills, and effective communication for computer science topics. The programme also integrates problem-solving and computational thinking, encouraging students to apply theoretical concepts to real-world challenges.

Over the course of the year, students will explore the core principles of computer science, including programming paradigms, system architecture, databases, and software development. Students will also gain exposure to digital tools and platforms, enhancing their skills in coding, debugging, and project management. Additionally, the programme will introduce ethical and social considerations related to computer science, such as data privacy, security, and the environmental impact of

technology. Throughout the programme, students will strengthen their ability to critically evaluate new technologies and apply research skills to address contemporary challenges in computing.

The programme is grounded in academic disciplines such as computer science, software engineering, and information technology, providing a theoretical base for further study in these areas. It also prepares students for professional practice by incorporating industry-relevant programming languages, tools, and real-world case studies. The programme emphasises teamwork, collaboration, and project-based learning, ensuring students gain experience working in group settings similar to professional software development environments. By the end of the programme, students will be well-equipped to continue their studies in computer science or related fields and transition smoothly into academic and professional roles in the tech industry.

At admissions, you have selected the following pathway programme:

- BSc (Hons) Computer Science (Level 5)

Programme Structure

The duration of the programme is one academic year. The students will need to complete 120 credits to successfully pass the programme. Each module will have 72 hours of contact time and 128 hours of independent student learning, totalling 200 hours per module.

The structure of the programme is as follows:

- English for Technical Communication
- Mathematics for Computer Science
- Introduction to Computer Science
- Programming Fundamentals Systems
- Architecture and Operating Systems
- Web Project

Learning and Teaching

Teaching

A variety of blended learning teaching methods will be embedded in the programme to enable students to achieve the learning outcomes and to facilitate their personal and professional development. Methods of teaching and learning will include practical lab sessions, formal lectures, seminars, group work and discussions, tutorials and self-directed study. The teaching and learning will be supported by online asynchronous learning activities accessed via the Virtual Learning Environment. Underpinning the learning and teaching methods will be an enquiry-based learning approach where an exploration of scenarios and real-world problems will be utilised to discuss and develop the students understanding thereby integrating theory into practice.

At Level 3 you typically have around 6 contact hours per week per module, typically consisting of:

- 2 hours of lectures
- 2 hours of seminars

- 2 hours of workshop

Independent Learning

When not attending scheduled learning activities you will be expected to continue learning independently through self-study.

Teaching Staff

Teaching staff for this programme will typically have a blend of academic qualifications in the subject area and practical experience. In our pathway programmes, we ensure English language development is integrated with core subject knowledge. Our English for academic purposes and research skills team are applied linguistics professionals with academic experience in teaching English and research skills to international students. Our core subject specialists possess at least a Masters in the field of study and have extensive teaching experience in higher education. Often our subject leads also have extensive professional experience and/or are engaged in active research.

Assessment

Year 1

The programme makes use of both summative and formative assessments to meet the overall learning outcomes at the programme level and the individual learning outcomes at the modular level. The assessment strategy will enable students to integrate their learning and apply it to the academic environment. The assessments will also enable students to demonstrate a variety of skills required for academic autonomy and decision-making within the higher education setting.

Students will be assessed using a variety of methods including portfolios, reflective accounts, case studies, verbal presentations, reports and essays. Formative assessment will be embedded in all modules to allow for monitoring and progression of student learning.

Feedback

Feedback is provided within 20 working-days in either written or oral form.

Graduate Prospects

Upon successful completion of the International Year One in Computer Science, you will be eligible to progress to the second year. This programme is designed to develop the academic, technical, and independent learning skills needed for success in higher-level computing study. You will build a strong foundation in programming, systems architecture, web development, and computational problem-solving, enabling you to transition confidently into Level 5 modules. Through project-based learning, collaborative tasks, and case studies, you will also begin to develop transferable skills

such as teamwork, critical thinking, digital literacy, and technical communication. These skills support both your academic progression and long-term employability in the technology sector.

As part of your development, you will be introduced to the [Career Ahead Award](#), the University of Cumbria's flexible, online employability programme. You are encouraged to begin engaging with the award during your International Year One, focusing on:

- Skills – identifying and reflecting on the academic and technical skills you're building
- Experience – recording your project work, collaborative activities, and learning milestones
- Career Planning – beginning to explore your academic interests and future goals within computing

You will also have access to the [University's Careers and Employability Service](#), offering tailored support through workshops, resources, and 1:1 guidance to help you build confidence as a future computing professional.

On progression to Level 5, you will continue developing your technical expertise and deepen your understanding of core computer science principles, while further strengthening your professional skills for the digital workplace.

MODULES

Year 1			
Code	Title	Credits	Status
UCIC4007	English for Technical Communication	20	Compulsory
UCIC4008	Mathematics for Computer Science	20	Compulsory
UCIC4009	Introduction to Computer Science	20	Compulsory
UCIC4010	Programming Fundamentals	20	Compulsory
UCIC4011	Systems Architecture and Operating Systems	20	Compulsory
UCIC4012	Web Project	20	Compulsory
Students exiting at this point with 120 credits would receive a CertHE in Computer Science			

Additional Module Information
<ul style="list-style-type: none"> – Students must pass 120 credits in order to progress to the next level of studies. – Students must complete all the modules relevant to the selected pathway at the point of admission. There are no optional modules available to students at this level.

Key to Module Statuses	
Compulsory modules	Must be taken although it may be possible to compensate as a marginal fail (within the limits set out in the Academic Regulations and provided that all core or pass/fail elements of module assessment have been passed).

Timetables
<p>Timetables are normally available during Welcome Week. Please note that while we make every effort to ensure timetables are as student friendly as possible, scheduled learning can take place on any day of the week.</p> <p>Our Timetabling team work hard to ensure that timetables are available to students as far in advance as possible, however, there may be occasional exceptions such as in the case of teaching which falls outside of the usual academic calendar. The University of Cumbria academic calendar runs from July to July, so timetabling information for programmes which include teaching sessions in August may not be published until closer to the August delivery.</p> <p>All classes will be delivered in the centre with face-to-face teaching. There is no possibility for online delivery mode with this programme.</p>

ADDITIONAL INFORMATION

Student Support

Student Support Services

The [Student Enquiry Point](#) is a simple way to contact Student Services. Using the Student Enquiry Point tile on the Student Hub you can submit an enquiry to any of the Student Services teams, which includes:

- [Careers and Employability](#)
- [Chaplaincy](#) for faith and spiritual wellbeing
- [Mental Health and Wellbeing](#)
- [Digital Skills](#)
- [Disability and Specific Learning Difficulty \(SpLD\)](#)
- [International Student Support](#)
- [Library](#)
- [Money Matters](#)
- [Safeguarding](#)
- [Skills@Cumbria](#)
- [Sports and Fitness Facilities](#)
- [University Student Accommodation](#)

As a student at the University of Cumbria, you automatically become a member of the Students' Union. The Students' Union represents the views and interests of students within the University.

The Students' Union is led by a group of Student Representatives who are elected by students in annual elections. They also support approximately 400 Student Academic Reps within each cohort across the entire University. The Students' Union represent the views of their cohort and work with academic staff to continuously develop and improve the experience for all University of Cumbria students. You can find out more about who represents you at www.ucsu.me.

You can email at any time at studentvoice@cumbria.ac.uk

Induction

Induction takes place during Welcome Week, prior to the official start of teaching. All international year one students will participate in a shared induction programme with international college and University events, giving you the opportunity to meet students from your subject area as well as those from other foundation pathways. In addition, you will also take part in programme-specific induction activities, where you'll be introduced to your academic team, learn more about your modules and assessment types, and get to know the expectation of your chosen programme.

Throughout Welcome Week, you will take part in a range of activities designed to:

- Build a strong sense of community with your classmates
- Help you navigate life at the University
- Introduce you to the academic support and wellbeing services available

- Prepare you for the transition into UK higher education

You will be shown how to access and use our Virtual Learning Environment (VLE), Blackboard, and how to submit your assessments using Turnitin.

During your first week of teaching, you will be assigned a Personal Tutor (PT). Your PT will support you throughout the Foundation Year, providing academic guidance and helping you settle into university study. In addition, UCIC students benefit from dedicated support from the Student Services Team. This enhanced induction and support structure is specifically designed to ensure a successful transition to your follow-on course at the University of Cumbria.

Transitioning to Level 5: A series of coordinated activities will be organised by the International College and the academic department you are progressing into. These are designed to help you meet your future cohort, understand the structure and expectations of your undergraduate programme, and feel fully integrated into the wider university community.

Personal Tutor

All students on this programme are assigned a Personal Tutor (PT) from the International College academic team at the beginning of their International Year One programme. The Personal Tutor provides structured academic and pastoral support, helping students to engage with their studies, reflect on their progress, and access appropriate services when needed.

Personal Tutors:

- Offer one-to-one academic guidance
- Monitor student engagement and progress using tools such as the Student Progress Tracker (SPT)
- Support students in managing challenges that may impact their academic performance
- Refer students to relevant support services when necessary

The International College's Academic Development Policy underpins the delivery of personal tutoring through regular progress reviews, Individual Learning Plans (ILPs) where appropriate, and coordinated support from student services.

Upon successful completion of the Foundation Year, students progressing to Level 5 will be assigned a new Personal Tutor within their academic department at the University of Cumbria, in line with the University's Personal Tutoring Policy. This tutor will support students through the remainder of their undergraduate studies, offering discipline-specific academic advice and ongoing developmental support.

Library Services and Academic Skills

The Library home page can be accessed here: <https://my.cumbria.ac.uk/Student-Life/Learning>.

Module leaders will collaborate with Library Services to ensure that your online reading and resource lists are current and items are available via the library discovery tool OneSearch. In order to maximise access, availability and usefulness, ebooks and electronic journal titles will, in most

cases, be prioritised. You can access a wide range of electronic and print content using [OneSearch](#) and you can find out more about key texts, databases and journals for your subject by accessing the library's [subject resources webpages](#). Where appropriate, module reading and resource lists will be made available to you electronically on Blackboard.

Each campus library has a dedicated webpage. Check out local information about opening hours, reserving books, using self-service kiosks, printing and photocopying, booking study spaces and more. <https://my.cumbria.ac.uk/Student-Life/Learning/Libraries/>

An [Ask a Librarian](#) service runs from 17:00 - 09:00 weekdays and round the clock on weekends and holidays. This means you can get professional help using about library services, finding information, referencing and searching, even when the library is closed. <https://my.cumbria.ac.uk/Student-Life/Learning/Libraries/Ask/>

The [Skills@Cumbria](#) service can help support your academic, library and digital skills and success throughout your programme. It includes a suite of [online self-help resources](#) accessible 24/7 via the University's website and Blackboard site.

The [Student Enquiry Point](#) is a simple way to contact Library and [Skills@Cumbria](#) Services. Additional skills support for students is offered via:

- [Appointments](#)
- [Learn Well at Cumbria](#)
- [Study from Home Webpage](#)
- [Digital Capabilities](#) and [LinkedIn Learning Pathways](#)

Further support and guidance, including EDI and Safeguarding: We are an inclusive community, committed to supporting and learning from each other, find out more about [Equality, Diversity and Inclusion \(EDI\)](#). Depending on the nature of your course, you may well already know about or be learning about safeguarding in a professional context and to find out about the University of Cumbria's safeguarding policy and procedures visit: [Safeguarding](#).

Student Voice

As a student at the University of Cumbria you automatically become a member of the Students' Union. The Students' Union represents the views and interests of students within the University. The Students' Union is led by a group of Student Representatives who are elected by students in annual elections. They also support approximately 400 Student Academic Reps within each cohort across the entire University. The Students' Union represent the views of their cohort and work with academic staff to continuously develop and improve the experience for all University of Cumbria students. You can find out more about who represents you at www.ucsu.me.

You can email at any time on studentvoice@cumbria.ac.uk.

IT and Technical Support

Technology is an invaluable asset when it comes to studying, so it's important you know how to make the most out of the excellent [IT facilities](#) we have available. Our aim is to ensure you can access university electronic resources from anywhere or any device, whether on or off campus. The [Student Hub](#) is your one-stop gateway to all University systems, Outlook email, and OneDrive. Whether you consider yourself a computer expert or you're not confident about your IT skills, we're always around to ensure you get the level of support you need. We have a wealth of information and support available on the [IT Services website](#) and have a dedicated IT Service Desk where you can talk to someone by phone or log your question online from anywhere, at any time.

University Cumbria Students' Union (UCSU) Student Support

UCSU offers a free, independent and confidential advice service to all students. They can help with things like academic appeals, extenuating circumstances or if you're considering a formal complaint. UCSU are also on hand to represent you in any formal meetings, for example in malpractice panels or fitness to practice meetings. Appointments are telephone based and can be booked at www.ucsu.me/support.

Course Costs

Tuition Fees

Course fees can be found at <https://internationalcollege.cumbria.ac.uk/programmes/international-year-one/>

Additional Costs

The following course-related costs are not included in the fees:

- A laptop equipped to run software programs.

Exceptions to the Academic Regulations

This programme operates in accordance with the University's Academic Regulations and Academic Procedures and Processes.

External and Internal Benchmarks

All programme and assessment regulations, policies and procedures are aligned with The Framework for Higher Education Qualifications (FHEQ): [The Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies \(qaa.ac.uk\)](#)

The programme considered the Subject Benchmark statements in [QAA Subject Benchmark Statement: Computer Science \(2022\)](#) in the development of this foundation course.

Quality Assurance Mechanisms:

Quality assurance is undertaken as close as possible to the point of delivery. There is a route from the module level to course levels so that issues can be addressed and delivery enhanced in the appropriate arena.

Externality is guaranteed via external examiner reports who make judgements on the quality and standards of its provision.

Students can comment on their modules and courses in various ways including module evaluations, and course committees.

- Student evaluations and feedback
- Annual programme monitoring reports
- External examiners' reports and responses to reports
- Periodic teaching and learning review
- Moderation and standardisation processes
- Internal boards
- Internal and external stakeholder feedback
- Continuous evaluation of recruitment and retention data, progression and achievement data, student destination data, and data relating to student support.
- UoC Learning, Teaching and Assessment Strategy
- [UoC Academic Regulations and Academic Procedures and Processes](#)

Disclaimer

This programme has been approved (validated) by the University of Cumbria as suitable for a range of delivery modes, delivery patterns, and delivery sites. This level of potential flexibility does not reflect a commitment on behalf of the University or Malvern International to offer the programme by all modes/patterns and at all locations in every academic cycle. The details of the programme offered for a particular intake year will be as detailed on the programme webpage.

Date of Programme Specification Production	09/04/2025
Date Programme Specification was last updated	