

Programme Specification		
1	Awarding Institution/Body	University Centre Leeds
2	Delivery Location(s)	Mabgate Campus
3	Programme Externally Accredited by (e.g. PSRB)	N/A
4	Award Title(s)	BSc (Hons) Computer Science (Cyber Security) Top Up BSc (Hons) Computer Science (Data Analysis) Top Up BSc (Hons) Computer Science (Software Development) Top Up BSc Computer Science (Cyber Security) BSc Computer Science (Data Analysis) BSc Computer Science (Software Development) -To complete any 60 credits at Level 6
5	UCAS Code	I102 - BSc Hons Computer Science (Cyber Security) Top Up I260 - BSc Hons Computer Science (Data Analysis) Top Up I310 - BSc Hons Computer Science (Software Development) Top Up
6	Apprenticeship	N/A
7	HECoS Code and Description	100376 – computing and information security 100755 – data management 100374 – Software Engineering
8	Mode of Attendance	Full-time face to face
9	Relevant QAA Subject Benchmarking Group(s)	Subject Benchmark Statement, Computing, March 2022
10	Relevant Additional External Reference Points (e.g. National Occupational Standards, PSRB Standards)	Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (FHEQ) National Occupational Standards (NOS): Software Developer, Cyber Security Technologist, and Data Analyst, as outlined by the UK Tech Partnership and the UK Cyber Security Council. Professional, Statutory and Regulatory Body (PSRB) Standards: British Computer Society (BCS)

		• The Institute of Cyber Digital Investigation Professionals (ICDIP) The Chartered Institute for IT (CIIT) • Tech Nation Report • Data Protection and Cybersecurity Regulations																								
11	Date of Approval/ Revision	September 2026																								
12	The programme is designed for students who have successfully completed a Level 5 qualification in a computing-related field, such as a Foundation Degree in Computer Science or equivalent qualifications. We welcome applicants from a diverse range of backgrounds who can demonstrate the potential to succeed at Level 6 study. <u>Entry Criteria</u> <table><tr><td></td><td>Typical Offer</td><td>Minimum Offer</td></tr><tr><td>Foundation Degree:</td><td>An overall Pass of an FD in a relevant subject.</td><td>An overall Pass of an FD in a relevant subject or experience.</td></tr><tr><td>HND:</td><td>Pass grade in a relevant subject.</td><td>Pass grade in a relevant subject.</td></tr><tr><td>IELTS:</td><td colspan="2">IELTS 6.0 with no less than 5.5 in any component.</td></tr><tr><td>International qualifications:</td><td colspan="2">International qualifications will be assessed against these criteria.</td></tr><tr><td>Mature applicants:</td><td colspan="2">University Centre Leeds welcomes applications from mature* applicants who may not have met the academic criteria, but who can demonstrate a wealth of experience in their chosen field. Candidates in this category and otherwise are likely to be interviewed to assess their suitability for the course and may be asked to provide a portfolio of evidence to support their application.</td></tr></table> *21 years and over at the start of the course <u>Additional entry criteria</u> <table><tr><td></td><td>Criteria</td></tr><tr><td>GCSE English: Desirable</td><td>English Language Grade 4 or above. Key Skills Level 2, Functional Skills Level 2, and the Certificate in Adult Literacy are accepted in place of GCSEs.</td></tr><tr><td>GCSE Maths: Essential</td><td>Maths Grade 4 or above. Key Skills Level 2, Functional Skills Level 2, and the Certificate in Adult Numeracy are accepted in place of GCSEs</td></tr></table>			Typical Offer	Minimum Offer	Foundation Degree:	An overall Pass of an FD in a relevant subject.	An overall Pass of an FD in a relevant subject or experience.	HND:	Pass grade in a relevant subject.	Pass grade in a relevant subject.	IELTS:	IELTS 6.0 with no less than 5.5 in any component.		International qualifications:	International qualifications will be assessed against these criteria.		Mature applicants:	University Centre Leeds welcomes applications from mature* applicants who may not have met the academic criteria, but who can demonstrate a wealth of experience in their chosen field. Candidates in this category and otherwise are likely to be interviewed to assess their suitability for the course and may be asked to provide a portfolio of evidence to support their application.			Criteria	GCSE English: Desirable	English Language Grade 4 or above. Key Skills Level 2, Functional Skills Level 2, and the Certificate in Adult Literacy are accepted in place of GCSEs.	GCSE Maths: Essential	Maths Grade 4 or above. Key Skills Level 2, Functional Skills Level 2, and the Certificate in Adult Numeracy are accepted in place of GCSEs
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	Interviews / audition:	Applicants may be required to attend an interview either because entry requirements have not been fully met or to review relevant experience before a final decision is made.								
13	Educational Aims of the Programme The primary aim of this Level 6 top-up programme is to build upon existing knowledge and skills, enabling students to become independent, critically aware specialists in computer science. The curriculum is designed to deepen technical ability, foster advanced research and problem-solving abilities, and prepare graduates for senior roles in the computing industry or for postgraduate study. This programme aims to: – Enable students to critically evaluate and integrate advanced theoretical frameworks and emerging technologies to architect complex, scalable, and secure computing solutions within their specialism. – Develop strategic professional capabilities, empowering graduates to lead technical decision-making, manage ambiguity, and drive innovation within organisational contexts. – Equip students with a proficiency of industry standard practices, enabling them to refine development lifecycles and infrastructure in diverse industrial environments. – Cultivate the ability to conduct independent academic research and enquiry, synthesising disparate sources of information to propose novel solutions to open-ended computational problems. – Foster a sophisticated understanding of the societal, legal, and ethical impact of technology, empowering graduates to navigate complex ethical dilemmas and advocate for responsible digital citizenship, inclusivity, and sustainability. – Develop advanced communication and stakeholder management skills, enabling graduates to translate complex technical concepts for non-technical audiences and negotiate requirements within multi-disciplinary teams. – Instil a commitment to lifelong learning and professional currency, enabling graduates to autonomously critique emerging trends and proactively steer their career trajectory in a rapidly evolving digital landscape.									
14	Learning Outcomes The programme will enable students to develop the knowledge and skills listed below. On successful completion of the programme, the student will be able to: Knowledge and Understanding <table><tr><td>K1</td><td>Critically evaluate theories, concepts, and principles applicable to computing.</td><td rowspan="3"></td></tr><tr><td>K2</td><td>Critically evaluate and analyse a range of software specific techniques.</td></tr><tr><td>K3</td><td>Critically analyse the impact of ethical and legal issues relevant to the computing sector.</td></tr></table> Cognitive/Intellectual Skills			K1	Critically evaluate theories, concepts, and principles applicable to computing.		K2	Critically evaluate and analyse a range of software specific techniques.	K3	Critically analyse the impact of ethical and legal issues relevant to the computing sector.
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C1	Critically analyse and evaluate data/evidence from appropriate sources to make informed recommendations.	
C2	Demonstrate openness to adopting latest ideas, concepts, and techniques pertinent to specialist practices computing	
C3	Critically evaluate appropriate tools and methods to devise solutions to complex problems.	
Professional Skills		
P1	Effectively use a range of industry standard technical skills and workflows within a chosen computing sector.	
P2	Create innovative solutions to complex challenges/problems in computing.	
P3	Demonstrate the use of appropriate industry tools/software in the development of computing practices.	
P4	Apply a range of industry recognised frameworks when developing a practical solution to a computing problem.	
Key Transferable Skills		
T1	Communicate clearly, fluently, and effectively in a range of styles appropriate to the context.	
T2	Investigate and evaluate appropriate emerging workflows within industry specialists.	
Specialist Skills – Cyber Security		
CS1	Critically analyse cyber security issues and appropriate methodologies, to propose effective mitigation strategies.	
CS2	Demonstrate a comprehensive understanding of cybersecurity principles to evaluate how data confidentiality, integrity, and availability are maintained.	
Specialist Skills – Software Development		
SD1	Critically analyse complex software development problems across multiple platforms and apply structured engineering principles to design scalable, user-focused solutions.	
SD2	Demonstrate a use of software development methodologies, testing strategies, and platform-specific considerations in the implementation and testing of applications.	
Specialist Skills – Data Analyst		
DA1	Select and employ appropriate models, algorithms, and strategies to inform decision-making.	
DA2	Prepare and utilise data analytical tools and techniques to gather, normalise, process, model, to analyse and present insights from complex datasets.	

15 Key Learning & Teaching Strategy and Methods

Level 6 prepares students for leadership roles by cultivating professional autonomy. The curriculum challenges them to move beyond implementation, requiring a critical interrogation of why technologies are chosen and an analysis of their impact within complex environments.

The curriculum is designed to develop the student's autonomy. Students on the programme are working as junior practitioners and researchers. Students will work to develop projects with supervisors and staff mentors to support problem solving and synthesis on major projects.

The programme utilises a trimester model to allow students to focus intensively on fewer modules simultaneously, mirroring the "deep work" methodology valued in high-level software engineering and data science roles. This is particularly vital for the Major Project, ensuring students have the dedicated headspace to manage a substantial development lifecycle without the fragmentation of a crowded timetable.

To support this transition to independence, the programme employs specific high-level methodologies. Moving beyond traditional information transmission, contact time is reimagined as forums for critical debate. Students are expected to arrive prepared, having engaged with academic papers and technical documentation. Sessions focus on deconstructing complex theoretical concepts, challenging industry norms, and synthesising evidence to propose architectural solutions.

Practical sessions at Level 6 are environments for experimental prototyping. Students test hypotheses, stress-test systems, and explore the limitations of current tools.

The 40-credit modules Final Project and Team Project integrates the distinct pathways into a singular professional project. Students manage their own research trajectory, engaging in regular one-to-one milestone reviews with a supervisor that simulate the relationship between a Senior Developer and a Lead Architect.

The strategy embeds a "Digital First" professional mindset. The Virtual Learning Environment (VLE) transitions from a content repository to a Research Hub, to curate students own reading lists.

Where opportunities arise, guest lecturers and industry speakers are invited to contribute to the programme — including practitioners working in senior technical, research, and leadership roles across Cyber Security, Data, and Software Development contexts. These contributions are integrated with taught sessions and project work rather than treated as standalone events, giving students direct exposure to how the theoretical and methodological concepts covered in the programme are applied, contested, and evolved in contemporary professional practice. Guest input is particularly valued at Level 6 for illustrating the kinds of critical, strategic, and leadership judgements that distinguish senior technical work from execution — judgements that are difficult to convey through taught content alone.

Assessments mirror industry practices, concepts of DevOps and Continuous Integration are lived experiences; students manage repositories, commit code via version control (e.g., GitHub), and utilise project management platforms (e.g., Jira/Trello) to track the pacing of their projects. This ensures that graduates can work collaboratively, remotely, and use agile workflows of the modern digital economy.

16 **Key Assessment Strategy and Methods**

The assessment strategy for the BSc (Hons) Computer Science is designed to bridge the gap between academic grading and professional performance review. While Level 5 focused on the application of skills, Level 6 assesses the strategic justification of those skills. The strategy is designed to be rigorous yet accessible, allowing both internally progressing students and new entrants to rapidly integrate into a culture of high-performance technical delivery.

We align closely with QAA Level 6 descriptors. Students are not merely required to find "the answer," but to define the problem, evaluate competing architectural solutions, and defend their chosen methodology against professional scrutiny.

Building on the "Process over Product" philosophy established at the Foundation level, the Top-Up degree treats Generative AI as a standard industry tool that requires management.

Students are not just permitted to use AI; they are assessed on their ability to critique it. In the Individual Project and technical reports, students must demonstrate that they can identify hallucinations, optimise prompts for complex logic, and—crucially—take professional liability for the code they commit, regardless of its origin.

To ensure authenticity in an AI-augmented landscape, the strategy relies heavily on verbal defence. Major deliverables are coupled with a Viva, where students must explain their code and design choices in real-time, proving that they possess the deep understanding required of a graduate engineer.

The trimester model is utilised to prevent assessment bunching, ensuring students have the mental space required for the Final Project and Team Project. These 40-credit modules act as the narrative anchor of the degree, requiring a synthesis of technical craft, project management, and academic research.

The Final Project: Moving beyond "building a thing," this assesses the entire R&D lifecycle: literature review, methodology, ethical clearance, execution, and critical evaluation of success/failure.

Technical Defence (Viva): Simulates a "Lead Developer" review or stakeholder pitch. Students must verbally articulate complex technical concepts to both technical and non-technical audiences.

Critical Technical Reports: These are not descriptive essays. They are strategic documents (e.g., "Cloud Migration Strategy," "Security Audit & Remediation Plan") that require evidence-based decision-making.

Research Proposals: Assesses the ability to formulate a hypothesis, design a valid methodology, and plan resources effectively—skills vital for both industry leadership and postgraduate study.

Curated Portfolios: Students submit a "Best of" portfolio. The focus is not on the volume of work, but on the quality of the artifact and the professional presentation of the code/data assets (e.g. clean Git commit history).

The 40-credit Team Project complements the dissertation by simulating the dynamics of a modern development squad. Students collaborate on a complex product, but assessment is based solely on individual contribution. Using a "contribution audit" (Git histories, task-tracking

	logs, and peer moderation), we separate each student's performance from overall team outcomes. This ensures strong contributors aren't penalised for team issues and reflects industry practice, where developers are evaluated on the quality and timeliness of their own deliverables within a shared codebase. The Supervisory Dialogue at Level 6, the feedback dynamic shifts from "correction" to "consultation." Formative Occurs primarily through supervision meetings and "stand-ups." Feedback is dialogic tutors challenge the student's assumptions to refine their thinking before submission. Summative Feedback focuses on the professionalism of the output. Comments are framed in the context of industry standards (e.g., "This architecture works, but is not scalable because..."), guiding the student toward the expectations of a senior junior role. Digital Submission & Professional Tooling All assessment aligns with modern DevOps and DataOps practices. While Turnitin is used for academic integrity in writing, technical submissions are managed via professional version control platforms (e.g., GitHub/GitLab). Students are assessed not just on the final file, but on the traceability of their development, ensuring a clear audit trail of their individual contribution in a digital environment.
17	Industry Specific Skills Development The programme creates a bridge to senior technical roles, with each pathway mapping to advanced competencies identified by employer consultation and sector intelligence. The Cyber Security Pathway prepares graduates for roles such as Security Consultant, Information Security Manager, and Penetration Tester. Moving beyond basic configuration, the focus shifts to governance, advanced threat modelling, and strategic defence: • Advanced Offensive Security: executing complex "Red Team" engagements and exploiting advanced vulnerabilities (e.g., buffer overflows, privilege escalation). • Governance, Risk, and Compliance (GRC): Designing security policies that align with international frameworks (ISO 27001, GDPR) and managing organisational risk. • Security Architecture: Designing secure-by-default infrastructures, integrating Cloud Security Posture Management (CSPM), and Zero Trust principles. • Threat Intelligence: Analysing global threat actors and TTPs (Tactics, Techniques, and Procedures) to proactively harden systems. These skills are developed through the Individual Project and Team Modules, where students must not only identify vulnerabilities but also produce C-suite level reports justifying the ROI of specific security investments. The Data Analysis Pathway prepares graduates for roles such as Data Engineer, Machine Learning Engineer, and Strategic Analyst. The curriculum transitions from descriptive analysis to predictive capability and engineering rigor: • Advanced Machine Learning: Designing, training, and tuning neural networks and deep learning models using libraries such as TensorFlow or PyTorch.

- Data Ethics and Governance: Critically evaluating algorithmic bias, data privacy, and the ethical implications of AI deployment in society.
- Big Data Architectures: moving beyond static CSVs to handling unstructured data, APIs, and cloud-based data pipelines.
- Strategic Intelligence: Transforming raw data into actionable business strategy, communicating complex statistical findings to non-technical stakeholders.

Assignments mirror the demands of a Lead Analyst, requiring students to define the research question, select the methodology, and defend the validity of their models against scrutiny.

The Software Development Pathway aligns with the expectations for Software Engineers, Full Stack Leads, and Solutions Architects. The focus elevates from "making code work" to "engineering scalable systems":

- Enterprise Architecture: Designing scalable, maintainable systems using Microservices, APIs, and Cloud-Native design patterns.
- DevOps and CI/CD: Managing the full software lifecycle, implementing automated testing pipelines, containerisation (Docker/Kubernetes), and continuous deployment.
- Legacy Refactoring: The ability to analyse, document, and modernise existing codebases—a critical skill in mature software companies.
- Advanced Frameworks: using industry-standard stacks (e.g., MERN, .NET Core) to build robust, secure, and high-performance applications.

Students operate as a Dev Squad, using Agile methodologies to deliver complex software products where code quality, version control discipline, and architectural soundness are prioritised over simple functionality.

The curriculum strategy addresses the "Senior Skills Gap" highlighted in recent sector analysis. Level 6 targets the lack of professionals capable of independent problem-solving and system design.

Our design is informed by:

Tech Nation & DCMS Findings: Addressing the urgent demand for "T-shaped" professionals—those with deep technical specialism (the Vertical) allied with broad commercial awareness and communication skills (the Horizontal).

Employer feedback consistently highlights that technical graduates often lack the ability to communicate. Consequently, this programme embeds Project Defences, Vivas, and Client Presentations to ensure graduates can articulate complex technical concepts to stakeholders.

Industry feedback consistently indicates a shortage of graduates who understand the limitations and risks of AI, not just its capabilities. Employers across the Cyber Security, Data, and Software sectors have reported that early-career technologists frequently deploy AI tools without sufficient awareness of their failure modes, legal exposure, or downstream consequences. To address this, the programme embeds a dedicated strand of AI literacy, ethics, and safety content across all three pathways, with specific module learning outcomes designed to build critical judgement alongside technical competence.

These competencies are reinforced through authentic assessment tasks such as producing AI risk assessments for project proposals, critiquing case studies of documented AI failures (e.g., biased recruitment tools, flawed facial recognition deployments, copyright disputes arising from

	generative models), and defending AI-assisted technical decisions during Project Defences and Vivas. Students are required to document their use of AI tools transparently across assignments, mirroring the disclosure practices increasingly expected in professional environments. This emphasis aligns with guidance from the UK AI Safety Institute, the Alan Turing Institute's work on responsible AI, and the Ada Lovelace Institute's recommendations on AI governance, alongside direct employer feedback confirming that responsible AI literacy is now a baseline expectation for graduate hires rather than a specialist concern. By integrating topics such as Generative AI auditing and Cloud FinOps, the course ensures students are prepared not just for the current market, but for the emerging technologies of the next decade.
18	Transferable Skills Development At Level 6, the programme aims to produce "T-Shaped" professionals—graduates who possess deep technical specialism allied with the broad commercial, ethical, and interpersonal capabilities defined by the STEM7 framework to lead in a digital environment. The Top-Up year privileges autonomy, critical synthesis, and strategic influence. Persuasion and Negotiation Communication at this level moves beyond simple reporting to demonstrate high-level Commercial Awareness. Students are required to act as technical authorities, translating complex data into business strategy. In the Individual Project, students must defend their architectural choices against academic and professional scrutiny (Viva Voce), simulating the pressure of a 'Lead Developer' justifying a tech stack to a CTO. Assessments require the production of C-suite level documentation—executive summaries, security audit reports, and investment justifications—where the STEM7 attribute of effective Communication is paramount, ensuring clarity, brevity, and persuasive power sit alongside technical accuracy. Recognising that modern tech teams often operate remotely and asynchronously, the Team Project module simulates a distributed enterprise environment to foster Collaborative Teamwork and emerging Leadership. Students do not just "work together"; they are required to manage professional friction and practice emotional intelligence. They engage in rigorous peer code reviews, learning to give and receive constructive criticism on logic and efficiency without taking it personally. The use of platforms like GitHub is elevated from simple storage to full lifecycle management. Students manage merge conflicts, pull requests, and issue tracking, mirroring the collaborative discipline of high-performance software teams. Unlike previous levels where problems are often well-defined, Level 6 presents "wicked problems"—scenarios with incomplete data or competing constraints that demand Critical Thinking and Creative Problem Solving. Through the Dissertation/Project phase, students must locate, critique, and synthesise academic research and industry white papers. They learn to distinguish between "hype" and viable technology, a critical skill in an era dominated by rapid AI fluctuation. This ensures they can innovate rather than just replicate, applying creativity to overcome technical roadblocks. This fosters resilience and Self-Management skills that are indispensable for avoiding burnout in the industry. Reflective assessments encourage students to audit their own skill gaps and plan their continuing professional development (CPD), transitioning them from "students" to "lifelong learners."

	Futureproofing the Graduate By embedding these high-level STEM7 behaviours into the technical fabric of the course, we ensure graduates are equipped not just for their first role, but for their third and fourth. In a sector characterised by the disruptive rise of Generative AI, technical syntax may change, but the ability to research independently, communicate strategically, and collaborate empathetically remains timeless. This comprehensive approach ensures our graduates emerge as resilient, adaptive leaders ready to navigate the complexities of the global digital economy.
19	Sustainability The BSc (Hons) Computer Science elevates sustainability from a peripheral concern to a core non-negotiable design parameter. At Level 6, students are challenged to view sustainability through a "Triple Bottom Line" lens: Environmental, Social, and Technical/Economic. The curriculum asserts that a "working" solution is not a "successful" solution unless it is efficient, ethical, and maintainable over the long term. Building on the operational knowledge, the Top-Up year introduces the strategic principles of Green Software Engineering. In the advanced technical modules, students move beyond simply deploying to the cloud to analysing the carbon intensity of their architectural choices. Discussions include "GreenOps"—optimising Kubernetes clusters and serverless functions not just for cost, but to minimise idle compute time and Scope 3 emissions. Crucially, this extends to the sustainability of the workplace itself; students are prepared for Remote and Hybrid Working models. They learn to utilise asynchronous communication tools and distributed version control not only to reduce the carbon footprint of commuting but to operate effectively in the decentralised teams that define the modern, sustainable tech sector. Within the Data Analysis and Cyber Security pathways, the concept of "Data Sustainability" is critical. Students learn that hoarding "Dark Data" is not only a security risk (increasing the attack surface) but an environmental liability due to the energy required for perpetual storage. We move beyond "compliance" to "ethical leadership" through Multi-Disciplinary Collaboration. Students are taught that sustainable solutions cannot be built in technical silos; they require the integration of diverse perspectives. By simulating projects that interface with legal, design, and business constraints, students learn to navigate the complexity of real-world environments. They are challenged to debate the societal impact of their code—auditing algorithms for bias and assessing the environmental cost of cloud architectures—ensuring their solutions remain viable and compliant in a complex stakeholder ecosystem. A key differentiator at Honours level is the focus on Code Sustainability. The programme teaches that "Technical Debt" is a form of unsustainability that eventually bankrupts a project. Through the Team Project and Individual Project, students are assessed on the longevity of their code. They must demonstrate modular design and comprehensive documentation, understanding that "sustainable code" is code that can be read, fixed, and extended by others long after the original author has left. In the Software Development pathway, performance profiling is taught as a sustainability practice. Students learn that inefficient algorithms do not just slow down apps; they burn energy at scale. The programme recognises that sustainable tech must be trusted by society. Students are challenged to design systems that are accessible to diverse user bases (e.g., WCAG compliance), ensuring that digital innovation does not exacerbate the "Digital Divide." As students engage with advanced AI tools, they are required to audit their solutions for bias and

harm. A sustainable AI model is defined not just by its accuracy, but by its fairness and the transparency of its decision-making process.

Finally, the programme addresses the sustainability of the professional themselves. In an industry characterised by rapid obsolescence, we treat Continuous Professional Development (CPD) as a survival skill. The curriculum instils the expectation that graduation is merely the start of a lifelong educational process. By embedding reflective practice and independent research into assessments, we train students to identify their own "Skills Debt" and proactively upskill. The Team Project simulates a "Sustainable Agile" environment, discouraging "crunch culture" in favour of realistic planning. This builds Professional Resilience, producing graduates who can navigate remote work isolation and the "GenAI disruption"—professionals who are not burned out by change, but who are prepared to adapt, learn, and thrive in a fast-changing industry.

20	Level 6				
	Code	Title	Credits	Core/Option	Compensatable / non-compensatable
		Final Project	40	Core	Non - Compensatable
		Team Project	40	Core	Non - Compensatable
Software Development Pathway					
		Augmented Reality	20	Core	Compensatable
		Software Engineering	20	Core	Compensatable
Cyber Security Pathway					
		Penetration Testing	20	Core	Compensatable
		Cyber Ops & Computer Forensics	20	Core	Compensatable
Data Analyst Pathway					
		Algorithms for Data	20	Core	Compensatable
		Business Intelligence & Analytical Tools	20	Core	Compensatable

21 Programme Structure

Students are expected to attend 10 hours a week during this course. 4.5 hours per module, we have also allocated some specified time (1 hour) for tutorial/workshop session to help support students. The year is split into 3 trimesters with each trimester consists of 10 weeks Below is an example of the structure of the 2 days. Please note that the times may change.

	Day 1	Day 2
9:00	Module 1 1.5 Hours	Module 1 1.5 Hours
9:15		
9:30		
9:45		
10:00		
10:15	Module 1 1.5 Hours	Tutorial/Workshop 1 Hours
10:30		
10:45		
11:00		
11:15		
11:30	Module 2 1.5 Hours	Module 2 1.5 Hours
11:45		
12:00		
12:15		
12:30		
12:45	Module 2 1.5 Hours	
13:00		
13:15		
13:30		
13:45		
14:00	Module 2 1.5 Hours	
14:15		
14:30		
14:45		
15:00		
15:15	Module 2 1.5 Hours	
15:30		
15:45		
16:00		
16:15		
16:30		
16:45		
17:00		

The BSc (Hons) Computer Science is a 120-credit Level 6 top-up programme delivered over three trimesters. The curriculum is structured to ensure all students develop key project management and collaborative skills while also allowing them to pursue deep, specialist knowledge in a chosen area of computer science.

Level 6		
Trimester one 1 - 10	Final Project	Business Intelligence & Analytical Tools (Data Analysis pathway only)
		Software Engineering (Software Development pathway only)
		Penetration Testing (Cyber Security pathway only)
Trimester two 11 - 20	Final Project	Team Project
Trimester three 21 - 30	Algorithms for Data (Data Analysis pathway only)	Team Project
	Augmented reality (Software Development pathway only)	
	Cyber Ops & Computer Forensics (Cyber Security pathway only)	

The final year emphasises independent learning, technical application, and exploration of emerging trends in computer science.

Trimester 1:

- Final Project (Core, spans two trimesters): A capstone project where students independently research, design, and develop a solution to a complex problem.
- Cyber Pathway Module
 - Penetration Testing: This module teaches students the techniques and methodologies used to identify and exploit vulnerabilities in computer systems, focusing on ethical hacking practices and their role in improving security.
- Software Pathway Module
 - Software Engineering: This module focuses on software development methodologies, teaching students how to design, develop, test, and maintain software systems with an emphasis on scalability, reliability, and performance.
- Data Analyst Pathway Module
 - Business Intelligence Analytical Tools: This module introduces students to business intelligence tools and techniques for analysing and visualising data, enabling them to make informed decisions based on large datasets in a business context.

Trimesters 2:

- Final Project (40 credits): This is a substantial, individual capstone project that allows students to undertake an in-depth investigation, development, and evaluation of a complex problem within their area of specialism. It is designed to demonstrate a culmination of their research, planning, and technical development skills.
- Team Project (40 credits): This module provides students with experience of working in a group on a significant development task, mirroring the collaborative, agile environments found in the technology industry. It focuses on project management, teamwork, and the delivery of a shared outcome.

Trimester 3:

- Team Project (Core, spans two trimesters): Students work collaboratively on a large-scale project, applying their knowledge to solve real-world problems.
- Cyber Pathway

	○ Cyber OPs & Computer Forensics: This module equips students with the knowledge and skills to investigate cybercrimes and analyse digital evidence, using computer forensics tools and techniques to support cybersecurity operations and legal proceedings. • Software Pathway ○ Augmented Reality Development: This module introduces students to the principles and technologies behind augmented reality (AR), teaching them how to design and develop AR applications that merge real-world environments with digital content for interactive experiences. • Data Analyst Pathway ○ Algorithms for Data: Introduce students to the fundamental principles and practices of algorithms for data, highlighting their role in solving data challenges in computing. <u>Modes of Delivery</u> The programme is delivered in full-time mode, with potential for future implementation of part-time or blended/virtual learning options. Full-time delivery includes: Modules are sequenced to build progressively on knowledge and skills, ensuring students experience a coherent journey from foundational to advanced levels. Team and final projects ensure students apply theory in practical settings, fostering confidence in their ability to tackle real-world challenges.
22	Apprenticeships N/A
23	Support for Students and Their Learning At Level 6, the definition of "student support" evolves. While we maintain a safety net for wellbeing and welfare, the primary focus shifts to empowering students to become autonomous researchers and industry-ready professionals. The support infrastructure is designed to facilitate the high-level independence required for the Dissertation/Individual Project and the transition into the professional workforce. The University Centre Leeds Student Support team remains a vital resource, offering diagnostic assessments and tailored support plans for students with disabilities, neurodiversity, or mental health conditions. The team supports eligible students in applying for Disabled Students' Allowance (DSA) and implementing reasonable adjustments—crucial for ensuring equity during the intensive assessment periods of the final year. Recognising the pressure of final-year deliverables, our Counsellors provide strategies for stress management, resilience, and maintaining positive mental health during high-stakes project work. The Student Funding Adviser offers specific advice on budgeting for the final year and transitioning out of student finance, ensuring financial worry does not impact academic performance. To support the 40-credit Individual Project and Team Project students are provided with specialised technical resources beyond the standard lab environment. Students undertaking hardware-intensive projects (e.g., Cyber Security forensics, IoT, or high-performance computing) have access to the dedicated Server Room and isolated network environments. These facilities are strictly supervised to ensure a safe sandbox for testing security exploits or configuring enterprise-level infrastructure.

Recognising that modern Computer Science is cloud-native, we facilitate access to industry-standard platforms. This ensures that students are not limited by local hardware constraints when building complex data models or distributed applications.

Technical demonstrators are available to assist with environment configuration, troubleshooting code dependencies, and managing virtual machines, allowing students to focus on *innovation* rather than *installation*.

The tutorial model transitions from "progress tracking" to "academic consultancy." Every student is assigned a dedicated Project Supervisor. These one-to-one sessions mimic the relationship between a Senior Developer and a Lead Architect. Supervision focuses on research methodology, scope management, ethical clearance, and the critical evolution of the student's artifact.

The HE Librarian acts as a research partner, delivering advanced sessions on navigating academic journals (IEEE/ACM), synthesising literature, and managing citations. This support is critical for producing the high-quality academic writing required for the final dissertation.

While independence is encouraged, the Personal Tutor system remains in place to offer pastoral care and academic coaching, ensuring no student feels isolated during their self-directed study blocks.

At Level 6, "Employability" is replaced by "Career Launch." This is a student showcase where projects will be displayed for staff, peers and industry specialists to offer comments, questions and feedback to students on their work. This conference style platform will support students' confidence and skills development in presenting, networking and communication.

This is intended to be a chance for students to showcase their projects completed throughout the year to their peers, staff and professionals from industry. It will consist of students displaying work and projects with opportunity for and answer questions others might have about their development. This will hopefully help them build confidence with demonstrating their creations but also show their communication skills that will have been worked on throughout their studies.

We look for specific networking opportunities where students can engage with local tech employers, recruitment agencies, and SMEs. Unlike standard job fairs, these are focused on technical discussion, allowing students to demonstrate their knowledge to potential head-hunters.

We leverage our network of previous graduates who are now established in the sector. Through alumni panels and guest talks, current students gain insight into the reality of the first year in industry, salary negotiation, and the current demands of the local job market.

Careers support focuses on high-impact preparation: refining LinkedIn profiles for algorithmic recruitment, tailoring portfolios and repositories for technical leads to review, and conducting mock technical interviews (e.g., whiteboard coding tests) to simulate the recruitment process for graduate schemes.

The University Centre Leeds library and Virtual Learning Environment (VLE) serve as the research hub. Students have 24/7 access to e-journals, eBooks, and technical documentation. The physical campus offers collaboration zones designed to mimic co-working spaces, allowing project teams to hold stand-ups and sprint planning sessions in a professional environment.

Distinctive Features

This BSc (Hons) Computer Science top-up programme is a dynamic, final-year course designed to transform foundation-level graduates into highly skilled specialists equipped for long-term, sustainable careers in the rapidly evolving fields of Cyber Security, Data Analysis, and Software Development. Its curriculum, shaped by industry consultation, provides not only advanced technical expertise but the professional adaptability, reflective practice, and career agility required to remain relevant across a career in a sector defined by continuous change.

A defining feature of the programme is its explicit commitment to preparing students for a sustainable professional life, not just a successful first role. The digital sector is characterised by rapid technological change, shifting working patterns, and an increasing pace of skill obsolescence — and the programme responds to this reality as a central design principle rather than as an afterthought. Graduates are prepared not only for the roles available to them on graduation, but for the roles they will hold five, ten, and fifteen years later, in contexts that cannot yet be fully anticipated.

Continuing Professional Development is embedded as a core meta-competency across the programme rather than treated as a topic. Students are explicitly taught how to learn new technologies independently, engage with primary documentation, evaluate emerging tools critically against hype, and maintain the disciplined habit of structured reflection on their own practice. This focus ensures graduates possess the intellectual agility to adapt to disruptions — including the ongoing impact of generative AI on technical work — rather than being fluent only in the tools available at the time of their study. Reflective practice is built into assessments across the year, supporting the transition from supported student to self-directed professional who takes active responsibility for their own ongoing development.

Resilience and professional self-management are cultivated through the programme's approach to complex, open-ended work. The two substantial projects at the heart of the year — a collaborative Team Project and a major individual Final Project — are designed to simulate the genuine uncertainty and autonomy of professional practice, requiring students to scope problems, manage their own time, handle setbacks productively, and navigate the professional friction that all team-based technical work involves. Students are supported to develop the emotional intelligence and self-awareness needed to give and receive critical feedback constructively, recover from failure, and sustain focus on challenging work over extended periods — capabilities that employers consistently identify as distinguishing graduates who thrive from those who struggle.

Remote and distributed working proficiency is treated as a substantive professional skill rather than an incidental benefit of blended delivery. With remote and hybrid working now established features of technical employment, the programme deliberately uses its blended format to develop the specific disciplines of distributed work: asynchronous collaboration and communication, self-directed time management, maintaining focus and effectiveness outside a supervised environment, and the increasingly important practice of digital wellbeing — separating work from personal time and avoiding burnout in an industry characterised by "always-on" expectations. Students graduate with demonstrable experience of the working patterns they will encounter in contemporary technical employment.

The programme also prepares students for the diversifying shape of contemporary technical careers. Alongside traditional permanent employment, graduates are increasingly entering their first roles through fixed-term contracts, project-based engagements, freelance and consultancy work, and hybrid arrangements between employment and independent practice. The

programme's project-based pedagogy — with students required to define scope, manage deliverables, and communicate with stakeholders — builds the self-management and commercial awareness these patterns require. Employability content specifically addresses contract and freelance working alongside preparation for permanent roles, reflecting the realistic range of pathways graduates will navigate.

The programme's deep connection to industry underpins each of these commitments. Partnerships with employers across the digital sector provide exposure to professional environments through guest lectures, live project briefs, and recruitment opportunities, and ensure the curriculum remains aligned with current practice. The three-pathway structure reflects the real-world demand for specialist expertise within cross-functional teams, echoing the integrated working patterns of contemporary technical organisations rather than treating specialisms as silos. Students learn to work effectively alongside peers with different technical specialisations, developing the collaborative range that increasingly distinguishes effective technical professionals.

Finally, intensive specialisation is combined with robust, tailored student support throughout the year. Dedicated project supervision, one-on-one tutorials, and access to advanced study skills resources support the critical transition from directed learner to independent, self-directed professional. This scaffolding is deliberately designed to build the confidence, critical judgement, and professional identity graduates need to innovate, adapt, and sustain themselves across a long career in a competitive and rapidly evolving technological landscape — rather than simply to secure a first role at the point of graduation. This builds mastery of specialist pathways by requiring students to define their own technical parameters rather than following a pre-set script.

Map of Outcomes to Modules

Lv6																			
Module Titles	e.g., K1, C1, P1, T1	K1	K2	K3	C1	C2	C3	P1	P2	P3	P4	T1	T2	CS1	CS2	SD1	SD2	DA1	DA2
Team project			X	X	X	X		X		X	X	X							
Final Project			X	X	X	X		X		X	X	X							
Data Analyst Pathway																			
Business Intelligence analytical tools		X					X		X				X					X	X
Algorithms for Data		X					X		X				X					X	X
Software Development Pathway																			
Augmented Reality Development		X					X		X				X			X	X		
Software Engineering		X					X		X				X			X	X		
Cyber Security Pathway																			
Cyber Ops & Computer Forensics		X					X		X				X	X	X				
Penetration Testing		X					X		X				X	X	X				

Map of Teaching and Learning Methods

Level 6

Module Titles	Methods					
	Lectures	Case Studies	Skills Workshops	Practical's (design and production sessions)	Group activities	E Learning/ On-line forums
Team Project	X	X	X	X	X	X
Final Project	X	X	X	X		X
Data Analysis						
Business Intelligence analytical tools	X	X	X	X		X
Algorithms for Data	X	X	X	X		X
Software Development Pathway						
Augmented Reality in Mobile Apps	X	X	X	X		X
Software Engineering	X	X	X	X		X
Cyber Security Pathway						
Cyber Ops & Computer Forensics	X	X	X	X		X
Penetration Testing	X	X	X	X		X

Map of Assessment Methods

Methods					
Module Titles	Report	E-Portfolio	Viva	Presentation	Practical
Team Project		30% (3000 words wk 19)			70% (5 Assets wk 29)
Final Project		30% (3000 words wk 10)			70% (5 Assets wk 20)
Data Analyst Pathway					
Business Intelligence analytical tools				40% (20 mins words wk 10)	60% (4 Assets wk 09)
Algorithms for Data	40% (2000 words wk 26)				60% (4 Assets s wk 30)
Software Development Pathway					
Augmented Reality in Mobile Apps				40% (20 mins words wk 26)	60% (4 Assets wk 30)
Software Engineering			30% (15mins wk 10)		70% (5 Assets wk 09)
Cyber Security Pathway					
Cyber Ops & Computer Forensics	40% (2000 words wk 26)				60% (4 Assets wk 30)
Penetration Testing			30% (15mins wk 10)		70% (5 Assets wk 8)

Map Subject Benchmarks to Programme and Module Learning Outcomes

Excellent Level	Module & Learning Outcomes
Demonstrate an exceptional understanding of the main body of knowledge for their subject and be able to exercise insightful and critical judgement in the use of that knowledge. Be creative and innovative in the application of the principles covered in the curriculum, and be able to go beyond what has been taught in classes	Module(s): Final Project, Augmented Reality Development, Business Intelligence analytical tools This is achieved through learning outcomes requiring students to critically evaluate theories (K1), adopt the latest ideas and techniques (C2), and develop refined, complex solutions (P2), particularly within the self-directed Final Project.
Critically analyse and apply a wide range of concepts, principles and practices of the subject in the context of open scenarios, showing refined judgement and adaptability in the selection and use of tools and techniques	Module(s): All specialist pathway modules (e.g., Penetration Testing, Software Engineering, Algorithms for data), Final Project Students demonstrate this by critically analysing programme-specific techniques (K2), evaluating the use of appropriate tools and methods (C3), and proficiently employing a range of technical skills (P1).
Be able to demonstrate sophisticated judgement, critical thinking, research design, and well-developed problem-solving skills with a high degree of autonomy, and to create highly effective computational artefacts across complex and unpredictable circumstances	Module(s): Final Project, Team Project The Final Project is the capstone for this benchmark, requiring students to synthesise and evaluate evidence (C1), develop refined solutions to complex challenges (P2), and investigate emerging workflows (T2) with a high degree of autonomy.
Demonstrate the ability to undertake problem identification and analysis to appropriately design, develop, test, integrate or deploy a highly complex computing system and any associated	Module(s): Final Project, Software Engineering, Cyber Ops & Computer Forensics

artefacts; deeply understand the relationship between stages and be able to demonstrate related sophisticated problem-solving and evidence-informed evaluative skills	This is evidenced through the development of refined solutions (P2), the proficient use of industry tools (P3), and the application of recognised frameworks (P4), all of which are central to the Final Project and advanced practical modules.
Demonstrate the ability to work in a highly proactive and accomplished manner, including as a leading member of a team, making excellent use of tools and techniques to proficiently communicate, manage tasks and plan projects with minimum guidance	Module(s): Team Project, Final Project The Team Project is specifically designed to assess effective communication (T1) and collaboration. The Final Project demonstrates the ability to manage a large-scale project with minimum guidance, underpinned by investigating emerging workflows (T2).
Identify best-of-kind practices and effect highly principled solutions within a professional, legal and ethical framework to consistently address a wide breadth of relevant considerations – including data management and use, security, equality, diversity and inclusion (EDI) and sustainability – in the work that they undertake	Module(s): Final Project, Team Project, Cyber Ops & Computer Forensics This is explicitly assessed in the project modules through the requirement to critically analyse ethical and legal issues (K3). Students must also synthesise evidence from various sources to make informed and principled recommendations (C1).