COMPUTING, ENGINEERING AND BUILT ENVIRONMENT PROGRAMME

Programme Summary

Pathway		
Programme Title		
NQF		
Mode of Study		
Mode of Delivery		
Delivery Model		
Teaching Institution		
Awarding Institution		
School		
Teaching Location		
Intakes	One Semester	
	Two Semesters	

Credit Breakdown

Length	Credit Weighting	Notional Hours	Contact Hours	Directed Learning	Independent Study
One Semester	60	750	225	75	450
Two Semesters	120	1500	450	150	900

Articulation Programmes

DEGREE PATHWAYS	DEGREE AWARDS	NQF AWARD LEVEL
Computing	BSc (Hons) Computer Networks and Security	6
	BSc (Hons) Computing and Information Technology	6
	BSc (Hons) Computer Science	6
	BSc (Hons) Business Information Technology	6
	BSc (Hons) Cyber Security	6
	BSc (Hons) Computer Science with Artificial Intelligence	6
	BSc (Hons) Software Engineering	6
	BA (Hons) Game Art	6
	BA (Hons) Game Design	6
	BSc (Hons) Game Programming	6
	BSc (Hons) Game Technology	6
Engineering	BEng (Hons) Electrical and Electronic Engineering	6
	BEng (Hons) Mechanical Engineering	6
	BSc Sound Engineering	6
Built Environment	BSc (Hons) Architectural Technology	6
	BEng (Hons) Civil Engineering	6
	BSc (Hons) Construction Management	6
	BSc (Hons) Quantity Surveying	6
	BSc (Hons) Real Estate	6

Regulatory and Quality Frameworks

The International Foundation Year (IFY) in Computing, Engineering and Built Environment at BCUIC is delivered within a structured quality framework aligned with UK expectations for academic standards, quality of provision, and student outcomes, appropriate to its role as a Level 3 pathway to undergraduate study.

The programme is informed by the UK Quality Code for Higher Education (2024). In particular, it reflects:

- Principle 7, through a coherent and progressively structured curriculum aligned to progression requirements for computing, engineering, and built environment disciplines;
- Principle 10, via integrated academic skills, numeracy, and language support tailored to international students;
- Principle 11, ensuring that teaching, learning, and assessment practices develop the analytical, technical, and problem-solving skills required for undergraduate study.

The IFY is positioned at Level 3, comparable to UK Level 3 qualifications, and is designed to support progression to FHEQ Level 4 programmes in computing, engineering, and built environment disciplines. Academic standards are aligned to the Frameworks for Higher Education Qualifications (FHEQ) and informed by international benchmarking through UK ENIC (Ecctis).

While not a regulated higher education award, the programme operates within the regulatory environment of the Office for Students (OfS) through its association with Birmingham City University. It aligns with relevant OfS Conditions of Registration, including:

- B1 (Academic Experience) – a coherent, appropriately challenging, and discipline-relevant curriculum;
- B2 (Resources and Support) – access to academic support, laboratories, and specialist learning resources;
- B4 (Assessment and Awards) – valid and reliable assessment of technical and academic readiness for progression;
- B5 (Sector Recognised Standards) – alignment with sector reference points and progression expectations.

Delivery at BCUIC operates within the academic governance framework established with Birmingham City University, ensuring alignment of curriculum, assessment, and progression criteria with entry requirements for undergraduate programmes.
The programme is additionally governed by Navitas UK quality assurance frameworks, including programme approval, moderation, external examining, and annual monitoring processes.
Together, these frameworks ensure that the IFY maintains appropriate academic standards and effectively prepares students for progression to undergraduate study.

Course Description

The International Foundation Year (IFY) in Computing, Engineering and Built Environment at BCUIC is a Level 3 preparatory programme designed to equip international students with the academic knowledge, technical understanding, and study skills required for progression to undergraduate degrees within Birmingham City University.

The programme introduces students to key subject areas including mathematics, computing principles, engineering concepts, and the fundamentals of the built environment. Students develop the ability to apply quantitative methods, understand technical systems, and engage with problem-solving in practical and theoretical contexts.

Teaching and learning focus on developing analytical thinking, computational skills, and scientific reasoning, alongside academic literacy and communication. Assessment is designed to reflect undergraduate expectations, enabling students to demonstrate readiness for degree-level study.

The programme is delivered in one and two semester modes, allowing flexibility for students with varying academic and English language entry profiles. Extended routes provide additional time for the development of core subject knowledge, technical skills, and adaptation to UK academic practices.

On successful completion, students are prepared to progress to a range of undergraduate programmes at Birmingham City University, including degrees in Computer Science, Game Technology , Game Desing and Art, Software Engineering, Civil Engineering, Construction Management, and related disciplines, subject to meeting progression requirements.

Programme Aims

The International Foundation Year (IFY) in Computing, Engineering and Built Environment aims to prepare international students for successful progression to undergraduate study within Birmingham City University. The programme aims to:

1. Provide a strong academic foundation that supports transition from diverse educational backgrounds to FHEQ Level 4 study in computing, engineering, and built environment disciplines.
2. Develop core subject knowledge and technical understanding, including mathematics, computing, and engineering principles aligned to undergraduate entry requirements.
3. Equip students with analytical, numerical, and problem-solving skills, enabling them to interpret data, apply methods, and engage with technical challenges.
4. Enhance academic and English language proficiency, ensuring students achieve a minimum B2 (CEFR) level, equivalent to IELTS 6.0, to support academic study.
5. Foster independent and collaborative learning, enabling students to work effectively both individually and in teams within technical and academic contexts.
6. Support transition to UK higher education, promoting understanding of academic conventions, ethical practice, and academic integrity.
7. Encourage logical reasoning and applied thinking, supporting informed progression decisions and future study in technical and professional disciplines.

Delivery Modes (1 and 2)

1-Semester Route (Accelerated)

- Designed for students with strong academic and mathematical backgrounds
- Intensive focus on technical readiness and rapid progression
- Emphasis on application of knowledge and problem-solving under time constraints

2-Semester Route (Standard)

- Balanced development of subject knowledge, technical skills, and academic competencies
- Progressive strengthening of mathematics, computing, and engineering concepts
- Suitable for students meeting standard entry requirements

PROGRAMME LEARNING OUTCOMES

International Foundation Year – Computing, Engineering and the Built Environment (*RQF Level 3 – pre--degree foundation provision)*

On successful completion of the programme, students will be able to demonstrate the following learning outcomes:

A: Knowledge and Understanding:

KU1. Demonstrate a broad understanding of fundamental mathematical, computational, scientific and technological concepts underpinning computing, engineering and the built environment.

KU2. Explain key principles, terminology and practices relevant to applied technical disciplines, including programming, engineering systems, design concepts and the built environment.

KU3. Describe the role of technology, sustainability and innovation in addressing real-world- technical and societal challenges.

B: Cognitive/Intellectual Skills

C1. Apply basic analytical, numerical and logical reasoning techniques to interpret technical information and solve straightforward problems.

C2. Identify, analyse and evaluate technical problems using structured approaches and appropriate evidence.

C3. Interpret data, models and representations to support reasoned conclusions within computing and engineering contexts.

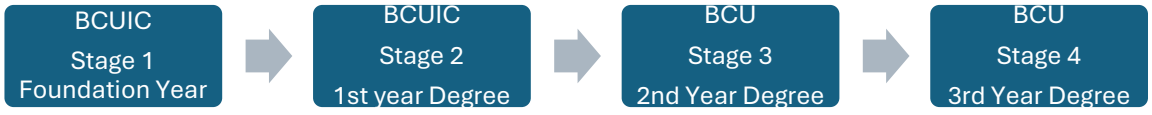
C: Practical Skills

P1. Apply foundational practical, technical and digital skills, including basic programming, numerical techniques and technological tools, to support academic and applied tasks.

P2. Communicate ideas, information and technical outputs effectively using written, oral, numerical, graphical and digital formats appropriate to academic study.

P3. Demonstrate effective independent learning, time management, collaboration and reflective practice to support progression to undergraduate study.

Stage(s) of Study



Curriculum Structure

Computing – 1 Semester

	Module Code	Module Title	Credits
	ILSC L3	Interactive Learning Skills and Communication	30
	TEE103	Digital Skill with AI	15
	TEE101	Numerical Techniques 2	15

Semester 1	TEE106	Programming Techniques 2	15
	TEE108	Introduction to Web Application	15

Computing – 2 Semesters

	Module Code	Module Title	Credits
Semester 1	ILSC L3	Interactive Learning Skills and Communication	15
	TEE103	Digital Skill with AI	15
	TEE101	Numerical Techniques 1	15
	TEE106	Programming Techniques 1	15
Semester 2	ILSC L3	Interactive Learning Skills and Communication	15
	TEE104	Numerical Techniques 2	15
	TEE109	Programming Techniques 2	15
	TEE108	Introduction to Web Application	15

Game & Technology – 2 Semesters

	Module Code	Module Title	Credits
Semester 1	ILSC L3	Interactive Learning Skills and Communication	15
	TEE103	Digital Skill with AI	15
	TEE101	Numerical Techniques 1	15
	TEE106	Programming Techniques 1	15
Semester 2	ILSC L3	Interactive Learning Skills and Communication	15
	TEE104	Numerical Techniques 2	15
	TEE109	Programming Techniques 2	15
	TEE108	Introduction to Web Application	15
	TEE105	Design Concepts	15

Engineering and Built Environment– 2 Semesters

	Module Code	Module Title	Credits
Semester 1	ILSC L3	Interactive Learning Skills and Communication	15
	TEE103	Digital Skill with AI	15
	TEE101	Numerical Techniques 1	15
	TEE102	Physics 1	15

Semester 2	ILSC L3	Interactive Learning Skills and Communication	15
	TEE104	Numerical Techniques 2	15
	TEE107	Physics 2	15
	TEE105	Design Concept	15

Learning, Teaching and Assessment Strategy

The Learning, Teaching and Assessment Strategy for this International Foundation Year is designed to support international students in developing the academic, numerical, technical and study skills required for progression to undergraduate programmes in computing, engineering and the built environment at Birmingham City University.

The programme is delivered by Birmingham City University International College (BCUIC) using a student-centred and applied learning approach. Teaching methods include lectures, seminars, workshops, practical labs and problem-based learning activities, which are constructively aligned to the programme learning outcomes and scaffolded to reflect RQF Level 3 pre-degree expectations.

Learning activities emphasise the application of theory to practice, enabling students to develop confidence in numerical reasoning, programming fundamentals, technical concepts and design thinking. Practical and skills-based modules support hands-on engagement with computing technologies, engineering principles and applied problem solving.

Digital learning is embedded through the effective use of the Virtual Learning Environment (VLE), which provides access to learning materials, assessments, feedback and independent study resources. Independent learning is progressively developed to prepare students for the academic demands of FHEQ Level 4 undergraduate study.

Student Engagement and Academic Support Strategy

The Student Engagement and Academic Support Strategy is designed to promote academic success, confidence and a smooth transition into UK higher education and technical study environments.

Students receive a structured induction introducing UK academic practices, assessment expectations, laboratory and digital learning environments, and available support services. Engagement is supported through small class sizes, regular contact with tutors, and a balance of taught, practical and guided independent learning.

Academic support is embedded through targeted skills development in academic English, numeracy, digital literacy and technical communication. Attendance and engagement are monitored systematically by BCUIC staff to support early identification of students who may require additional academic or pastoral support.

Pastoral support is provided through personal tutoring and access to wellbeing services. Opportunities for peer learning, collaborative activities and discipline-relevant enrichment activities support integration and confidence as students prepare for undergraduate progression.

Assessment Strategy

The Assessment Strategy is designed to be transparent, inclusive and constructively aligned to programme learning outcomes and teaching activities.

Assessment methods are appropriate to foundation-level study and reflect the technical and applied nature of the programme. Students are assessed through a range of methods including coursework, practical tasks, examinations, programming exercises, project work and presentations, as defined in individual module guides.

Formative assessment is embedded throughout the programme to support skills development, provide timely feedback and encourage reflective learning. Summative assessments are clearly briefed, use published marking criteria and are designed to prepare students for the assessment expectations of undergraduate study.

All summative assessments are moderated in accordance with BCUIC academic regulations, with oversight from BCU link tutors and external examiners, ensuring consistency, fairness and academic standards. Assessment practices promote academic integrity, assessment literacy and independent learning, supporting progression to FHEQ Level 4-degree programmes.

Assessment Principles

- Constructive alignment with learning outcomes and teaching activities
- Assessment methods and criteria are clearly published and assessable
- Reliable and consistent
- Fair and inclusive
- Fit for purpose and timely
- Feeback is purpose driven and supports learning
- Transparent, efficient and manageable
- Assessment literacy encouraging academic integrity
- Marking and moderation process are consistently applied
- Efficiency of assessment boards
- Systemic enhancement through feedback from stakeholders

Progression and Award Requirements

Each module offered on the programme has a minimum overall pass mark. Please refer to Module Guide (MD). The College's Policy and Regulation (CPR9) explains all our assessment regulations for further details on the assessment regulations and failing to progress. - https://bcuic.bcu.ac.uk/about/policies/

Final and intermediate awards

Students that successfully complete the programme with the minimum 120 credits in a two semester will be eligible to progress to their chosen BCU degree programme as per offer letter and CAS and receive a transcript.

Course Structure, Moderation, Progression and Award Requirements

This programme is delivered across one and two semester full-time. Both the delivery and assessment of the programme is in English. The mode of delivery is standard delivery mode.

A subject specialist within the College moderates a ten percent sample of each assessment. Link tutors from Birmingham City University and appointed external examiners are invited to review these samples.

Each module offered on the programme has a minimum overall pass mark. Please refer to Module Guide (MD). The College's Policy and Regulation (CPR9) explains all our assessment regulations for further details on the assessment regulations and failing to progress. - https://bcuic.bcu.ac.uk/about/policies/

Final and intermediate awards

Students that successfully complete the programme with the minimum 120 credits in a two semester will be eligible to progress to their chosen BCU degree programme as per offer letter and CAS and receive a transcript.

Categories of Performance

A (High Distinction, 70 - 100%) – Distinctive level of knowledge, skill and understanding which demonstrates an authoritative grasp of the concepts and principles and ability to communicate them in relation to the assessment event without plagiarism or collusion. Indications of originality in application of ideas, graphical representations, personal insights reflecting depth and confidence of understanding of issues raised in the assessment event.

B (Distinction, 60 - 69%) – Level of competence demonstrating a coherent grasp of knowledge, skill and understanding of the assessment and ability to communicate them effectively. Displays originality in interpreting concepts and principles. The work uses graphs and tables to illustrate answers where relevant. Ideas and conclusions are expressed clearly. Many aspects of the candidate's application and result can be commended.

C (Merit, 50 - 59%) – Level of competence shows an acceptable knowledge, skill and understanding sufficient to indicate that the candidate can make further progress. The outcome shows satisfactorily understanding and performance of the requirements of the assessment tasks. Demonstrates clear expression of ideas, draws recognisable and relevant conclusions.

D (Pass, 40 - 49%) – Evidence of basic competence to meet requirements of the assessment task and event. Evidence of basic acquaintance with relevant source material. Limited attempt to organise and communicate the response. Some attempt to draw relevant conclusions.

F (Fail 0- 39%) – The candidate's application and result shows that the level of competence being sought has not yet been achieved. The assessed work shows a less than acceptable grasp of knowledge, skill and understanding of the requirements and communication of the assessment event and associated tasks.

Progression Criteria:

*** ILSC module 'Interactive Learning Skills and Communication' requires a minimum pass mark of 60% achieved in all assessment events for progression.**

*** Minimum pass mark of 40% achieved for all other modules listed.**

NB: See individual module Guides for details marks classification

Appendix 1- Assessment Map

Modules	Group/Individual Presentation	Individual Project/Reflective Journal	Essay/report	Exam	Course Work
Interactive Learning Skills and Communication 1			70%	30%	
Numerical Techniques 1 & 2				100%	
Programming Techniques 1 &2				30%	70%
Digital Skills with AI				40%	60%
Introduction to Web Application					100%
Design Concepts	50%	50%			
Physics 1&2				100%	

Appendix 2: Constructive Alignment Matrix (Programme Level – Level 3)

International Foundation Year – Computing, Engineering and Built Environment

Core Modules	KU1	KU2	KU3	C1	C2	C3	P1	P2	P3
Interactive Learning Skills and Communication (ILSC)	P	–	P	P	–	–	PP	PP	PP
Numerical Techniques (1 & 2)	PP	–	–	PP	P	P	–	–	P
Programming Techniques (1 & 2)	P	PP	–	P	PP	P	PP	P	P
Digital Skills with AI	P	P	PP	P	–	–	PP	PP	P
Physics (1 & 2)	PP	P	P	PP	P	P	P	P	PP
Design Concepts / Applied Technical Project	P	PP	PP	P	PP	PP	PP	P	P
Introduction to Web Application	P	PP	–	P	PP	P	PP	P	P

Explanatory Note

This mapping demonstrates how the International Foundation Year curriculum collectively supports the development and assessment of programme learning outcomes across knowledge and understanding, cognitive skills, and practical skills. Quantitative and scientific foundations underpin analytical capability, while programming, digital and applied design modules develop technical competence and problem-solving- skills. Academic and independent learning skills are embedded through ILSC, ensuring readiness for progression to FHEQ Level 4 undergraduate study at Birmingham City University.

Appendix 3: Mapping of Programme and Module Learning Outcomes (Level 3)

Key P = Learning outcome is present = Learning outcome is prominently developed and/or assessed

Programme Learning Outcome	Teaching & Learning Activities (TLA)	Assessment Methods (AM)
KU1	Lectures introducing core mathematical, scientific and technical concepts; seminars contextualising theory across disciplines; guided problem-solving- sessions	Written coursework; examinations; in class- tests
KU2	Discipline contextualised- lectures; seminars exploring applied practice; tutor led- discussions	Coursework; short answer- examinations
KU3	Case based- seminars; applied lectures; sustainability focused- discussions	Written coursework; reflective tasks
C1	Numeracy workshops; programming and analytical labs; guided practice exercises	Examinations; applied coursework
C2	Problem based- learning; tutor guided- analytical workshops; formative exercises	Coursework; problem-solving- tasks
C3	Data interpretation sessions; modelling exercises; supervised lab activities	Coursework; in class- tests
P1	Practical labs; programming workshops; technical demonstrations; supervised practice	Practical coursework; technical submissions
P2	Academic skills sessions; presentations; technical reporting workshops	Written coursework; presentations
P3	Guided independent learning; group tasks; tutorial support; reflective activities	Reflective coursework; portfolio-based- assessment

Appendix 4: Key Skills Map

The table below identifies where key skills are Taught (T), Developed (D) and/or Assessed (A) across the merged programme.

Skills Area	ILSC	Numerical Techniques	Programming Techniques	Digital Skills with AI	Physics	Int. Web App. Development	Design / Applied Project
Knowledge base (technical)	TD	TDA	TDA	TD	TDA	TDA	TDA
Numeracy & quantitative reasoning	TD	TDA	TD	–	TDA	TD	TD
Programming & computational thinking	–	–	TDA	TD	–	TDA	TD
Data interpretation & modelling	TD	TDA	TD	–	TDA	TD	TD
Digital competence	TD	–	TD	TDA	–	TD	TD
Problem solving	TD	TD	TDA	TD	TD	TDA	TDA
Analysis	TD	TDA	TD	TD	TDA	TD	TDA
Evaluation	TD	TD	TD	–	TD	TD	TDA
Application of knowledge	TD	TDA	TDA	TDA	TDA	TDA	TDA
Academic communication	TDA	–	TD	TD	–	TD	TD
Research & referencing skills	TDA	TD	TD	TD	TD	TD	TD
Teamwork & collaboration	TD	–	TD	TD	–	TD	TDA
Autonomy & independent learning	TDA	TD	TD	TD	TD	TD	TD
Ethical & professional awareness	TDA	–	TD	TD	TD	TD	TD
Study skills for progression	TDA	TD	TD	TD	TD	TD	TD

Independence & lifelong learning	D	D	D	D	D	D	D

Explanatory Note

This skills map illustrates how the merged International Foundation Year programme systematically introduces, develops and assesses academic, quantitative, digital and technical skills essential for undergraduate readiness. Numeracy, programming, scientific and applied project modules build technical capability, while ILSC and skills-based- provision scaffold academic literacy, autonomy and reflective practice. Collectively, these skills support progression to FHEQ Level 4 undergraduate programmes in Computing, Engineering and the Built Environment.

Version Control Table

Version	Date	Author	Approved By	Summary of Changes
1.0	30/06/2025	DASS	Navitas Academic Registry	
2.0	31/03/2026	DASS/CDP	Navitas Academic Registry 13/04/2026	Enhanced structure of the Programme Specification, clarity of LOs, LTA and Engagement strategies