



BSc (Hons) Software Development Programme Specification

1. General Information

UCAS Code	Award	Programme Title	Expected Duration	Study Mode
N/A	BSc (Hons)	Software Development	3 years	Full-time Part-time 1 Part-time 2
		Programme Code	4 years	
		UK-LIBF-BASD	6 years	
	Exit Awards	<ul style="list-style-type: none"> • BSc (non-Hons) • Diploma of Higher Education • Certificate of Higher Education 		

Credit Count	360 FHEQ credits
Awarding Institution	The London Institute of Banking & Finance
Teaching Institution	The London Institute of Banking & Finance
Delivery Modes	<ul style="list-style-type: none"> • Face-to-face • Blended • Online - Synchronous • Online - Asynchronous

Date of original production: November 2023	Date of current version: November 2023
Record of modifications:	

2. Programme Overview

Programme Summary

In an era where digital technology continuously evolves and shapes multiple industries, the need for skilled software developers is more apparent than ever. The BSc (Hons) Software Development programme is designed to equip you with the necessary skills and knowledge to excel in this dynamic field. The programme provides a comprehensive understanding of the fundamental concepts and principles in the field of software development, preparing you for a successful career in a variety of industries and dynamic technological environments.

The core modules of the programme cover a broad spectrum of topics, providing a well-rounded understanding of software development. Modules such as Software Engineering Principles, Introduction to Programming with Python, and Database Modeling and Database Systems lay the foundation for your understanding of the software development landscape. Further subjects like Web Application Development, Techniques and Methods for Agile Software Development, and Ethics and Sustainability in IT delve deeper into the intricacies of software development. In addition to the core modules, the programme also offers a wide variety of elective modules, allowing you to explore areas that are most relevant to your interests and career goals. These include IT operations, cyber security, and artificial intelligence.

The BSc (Hons) Software Development programme is a robust and future-oriented course that prepares you for the challenges and opportunities in the field of software development. Whether you aspire to work for a tech giant, a start-up, or any industry that relies on software solutions, this programme will equip you with the required skills and knowledge to succeed.

Programme Aims

The BSc (Hons) Software Development programme aims to:

- provide you with a well-rounded understanding of software development principles, methodologies, and practices;
- equip you with the necessary skills to design, develop, and implement software solutions using a variety of programming languages and technologies;
- foster your ability to work effectively in different contexts and manage software projects;
- develop your critical thinking and problem-solving skills, enabling students to analyse software development problems and implement effective solutions;
- enhance your awareness of the ethical and sustainability considerations in software development, promoting responsible and ethical practices in the IT industry; and
- encourage you to engage in lifelong learning and continuous professional development, enabling you to stay abreast of rapidly evolving software technologies and methodologies.

Employability & Graduate Outcomes

Graduates of this programme are likely to pursue careers in a number of areas in the IT sector and software development field, including but not limited to IT project management, quality assurance, and web or mobile application development. This programme of study supports graduates in developing the following employability skills:

- Technical and digital skills
- Problem-solving skills
- Collaboration and communication skills
- Critical-thinking skills
- Adaptability
- Ethical awareness

3. Intended Learning Outcomes of the Programme

This programme has been developed in accordance with the QAA Subject Benchmark Statement for Bachelor's Degrees in Computing (C) (2022).

Please note: The programme's intended learning outcomes below are described at the Bachelor with Honours level (Level 6).

On successful completion of this programme, you will be expected to:

LO1	Demonstrate knowledge and a critical understanding of the key theories of software engineering from requirements engineering through design and implementation to testing and deployment.
LO2	Critically apply current sustainability solutions to software development and contribute towards environmentally friendly IT systems and technologies, considering a variety of ethical issues.
LO3	Apply programming skills to design, develop, and test both backend services and frontend applications for a range of platforms both independently and collaboratively.
LO4	Analyse software quality requirements and constraints to select and apply the appropriate technology for a given scenario, including database solutions and information systems.
LO5	Conduct object-oriented analysis on business requirements to apply concepts of object-oriented design and programming.
LO6	Analyse practical business problems to identify important stakeholders and their requirements for software solutions.

LO7	Critically analyse software design constraints including architectural styles or existing architecture documentation to develop improvements and integrate new components.
LO8	Evaluate defined requirements in terms of user stories and requirements specifications in the design of software solutions based on stakeholder criteria.
LO9	Evaluate software solution artifacts, considering the requirements by conducting both automated and manual testing measures.
LO10	Evaluate the algorithms and data structures used in software artifacts in terms of time and space complexity.
LO 11	Apply a range of research skills to conduct research in the field of software engineering through appropriate use of research methodology, data collection and analysis relevant to software development.

4. The Structure of the Programme

The BSc (Hons) Software Development programme is offered as a 3-year full-time programme or in part-time mode over a 4 or 6-year period. In full-time mode you will complete four modules each semester, in part-time 1 mode you will complete three modules each semester, and in part-time 2 mode you will complete 2 modules each semester.

The programme is divided into modules which include both compulsory and elective modules with a weighting of 15 credits each and a thesis with a weighting of 30 credits. All modules in the programme are assigned to one of three levels (L4/L5/L6) which reflect the depth of learning required in the relevant level and year of study.

To achieve a full-honours award, you need to complete modules with a combined weight of 360 credits, including the final thesis.

Table 1: Structure of the Programme

FT	PT 1	PT 2	Module Code	Module Name	Level	Credit	Compulsory/ Elective
Semester 1	Semester 1	Semester 1	LIBFOARPIGIS_E	Software Engineering Principles	4	15	C
			LIBFEXDLBDSIPWP	Introduction to Programming with Python	4	15	C
	Se me	Semester 2	LIBFEXDLBCSOOPJ	Object-oriented Programming with Java	4	15	C
			LIBFEXDLBCSDMDS	Database Modeling and Database Systems	4	15	C

Semester 2	Semester 3	Semester 3	LIBFOARPDLCSCW	Collaborative Work	4	15	C
		Semester 3	LIBFEXDLBCSRE	Requirements Engineering	4	15	C
	Semester 3	Semester 4	LIBFPDLBCSSQA	Software Quality Assurance	4	15	C
		Semester 4	LIBFPDLBROEPRS01_E	Programming with C/C++	5	15	C
Semester 3	Semester 4	Semester 5	LIBFAWDLBIAWITT	Introduction to Academic Work for IT and Technology	5	15	C
		Semester 5	LIBFAWDLBCSL-01	Algorithms, Data Structures, and Programming Languages	5	15	C
	Semester 6	Semester 6	LIBFAWDLBCSWAD	Web Application Development	5	15	C
		Semester 6	LIBFOPRRPAECP	Project: AI Excellence with Creative Prompting Techniques	5	15	C
Semester 4	Semester 5	Semester 7	LIBFAWDLBMIAMVRO1_E	Augmented, Mixed and Virtual Reality	5	15	C
		Semester 7	LIBFWACSDLBSEPENIT_E	Ethics and Sustainability in IT	5	15	C
	Semester 6	Semester 8		Elective from Group A		15	E
		Semester 8		Elective from Group A		15	E
Semester 5	Semester 6	Semester 9	LIBFWAPRIWNF2_E	Project: Agile Software Engineering	6	15	C
		Semester 9	LIBFWAREISSE_E	Seminar: Software Engineering	6	15	C
	Semester 7	Semester 10		Elective from Group B		15	E
		Semester 10		Elective from Group B		15	E
Semester 6	Semester 7	Semester 11		Elective from Group C		15	E
		Semester 11		Elective from Group C		15	E
	Semester 8	Semester 12	LIBFBTDLBBT	Bachelor Thesis	6	30	C

Table 2: List of Electives

Module Code	Module Name	Level	Credit	Subject Area*
Electives A				
LIBFWAWACB	Crypto and Blockchain	5	15	n/a
LIBFWAWAFT	Fintech	5	15	n/a
LIBFAWDLBCSEMSE1	Mobile Software Engineering I	5	15	n/a
LIBFAWDLBMIUID1_E	Web User Interface Design	5	15	n/a
LIBFWACSDLBSEPDOCDE	DevOps and Continuous Delivery	5	15	n/a
LIBFAWDLBSEPITIE	IT Infrastructure	5	15	n/a
LIBFIRPFSINTER1	Internship I ¹	5	15	n/a
LIBFIRPFSINTER2	Internship II ¹	5	15	n/a
Electives B				
LIBFWAWADLBINGDABDE	Data Analytics and Big Data	6	15	D&BI
LIBFOPRRPDLBDSBPBDM01	Project: Build a Data Mart in SQL	5	15	D&BI
LIBFWAWADLBCSITSM-01	IT Service Management	6	15	IT
LIBFWAPRDLBCSPITSM	Project: IT Service Management	6	15	IT
LIBFWAWADLBCEIDPITS	Introduction to Data Protection and Cyber Security	6	15	CS
LIBFWAWADLBCECT	Cryptography	6	15	CS
LIBFPDLBSEPCP01_E	Cloud Programming	6	15	CN
LIBFWAWADLBCECC	Cloud Computing	6	15	CN
LIBFWAWADLBCESEDE01	Data Engineering	6	15	DA&E
LIBFPDLBCESEDE02	Project: Data Engineering	6	15	DA&E
LIBFWAWADLBCEAIS1	Artificial Intelligence	6	15	AI

¹ Check eligibility before booking the module.

LIBFPDLBDSEAIS2	Project: Artificial Intelligence	6	15	AI
Electives C				
LIBFWAWADLBCSEBI1	Business Intelligence	6	15	D&BI
LIBFWAPRDLBCSEBI2	Project: Business Intelligence	6	15	D&BI
LIBFWAWADLBCSEITPAM1	IT Project Management	6	15	IT
LIBFWAWAIAMG_E	IT Architecture Management	6	15	IT
LIBFWAWATOISC	Technical and Operational IT Security Concepts	6	15	CS
LIBFWAPRPCASS	Project: Configuration and Application of SIEM Systems	6	15	CS
LIBFWAWADLBDSEILCD	Introduction to Low-Code Development	6	15	CN
LIBFWAPRDLBDBEPLCD	Project: Low-Code Development	6	15	CN
LIBFWAWADLBDSEDA01	Advanced Data Analysis	6	15	DA&E
LIBFWAPRDLBDSEDA02	Project: Data Analysis	6	15	DA&E
LIBFWAWADLBDSEAD1	Self-Driving Vehicles	6	15	AI
LIBFWAREDLBDSEAD2	Seminar: Current Topics and Trends in Self-Driving Technology	6	15	AI

*

D&BI = Data and Business Intelligence	IT = IT Project Management	CS = Cyber Security
CN = Cloud Native	DA&E = Data Analysis and Engineering	AI = Artificial Intelligence

5. Teaching, Learning and Assessment

Information about teaching, learning and assessment can be found in the Teaching, Learning and Assessment Strategy.

Our programmes are designed to:

- integrate theory with practice,
- develop your ability to critique and challenge models and theoretical frameworks,
- stimulate debate, discussion, and research,

- foster a variety of academic skills,
- be accessible and inclusive,
- develop global citizens.

You are expected to undertake a considerable amount of independent study, including reading, industry-related research, and personal reflection.

Teaching Formats

The programme may be offered in various teaching formats, for example online or via blended learning.

You will have access to both asynchronous and synchronous teaching formats.

Via the Course Feed in the virtual learning environment, myCampus, you will be able to contact the module tutor in a flexible and accessible way.

This is also where Intensive Live Sessions are conducted synchronously with video-based elements. They serve to answer students' individual questions as well as to allow for group discussions.

Additionally, Learning Sprints² will offer a seven-week intense learning experience in which the lecturers guide students through the learning material in a very structured manner, with the goal of successfully preparing them to take the final assessment at the end. During this time, frequent synchronous online meetings are held, offering keynote speeches and interactive tasks.

Both the Intensive Live Sessions and Learning Sprints are recorded to further assist asynchronous learning.

In the blended format, teaching and learning combines online and in-person learning in a *flipped* classroom concept. Traditional classroom activities like lectures are conducted online via the learning platform, while in-class time is used for interactive work. On-campus elements like study groups and library study time complement this approach.

Learning Resources

You will have access to a wide range of resources, which may include the following:

- myCampus: This Moodle-based central information and digital learning platform is organized based on programmes and modules. On the respective module pages in myCampus, you can access all study materials (e.g., course books (i.e., text books), reading lists, practice exams, and video galleries) as well as the links to all related resources and databases (e.g., MS Teams, links to the library for further reading, contact details of lecturers, links to the booking tool for online exams, and the Turnitin submissions page). In the blended model you have access to the same learning platform, with slight adaptations made to accommodate, for example, differences in study sequence.

² Offered only when the minimum number of participants is reached.

- Learnhub App: You can access your learning materials in a digital app and have all your notes and highlights synchronised. The app supports different learning formats, such as reading and annotating course books, using different colour codes, assessing knowledge with interactive self-tests, or watching the latest videos of the current module.
- Our comprehensive online library is aligned with the study content and kept up to date. Compulsory and further reading is mentioned in the course and module descriptions available for the students and aims to provide them with unlimited access.

Assessment & Feedback

Regulations relating to progression and assessment, including information on late submissions, are as set out in The London Institute of Banking & Finance's General and Academic Regulations for Students.

Assessment strategies follow The London Institute of Banking & Finance's Higher Education Accessible and Inclusive Learning Policy.

Assessment consists of both formative and summative approaches, and feedback and feedforward are provided as outlined in the London Institute of Banking & Finance's Higher Education Assessing Learning & Feedback Policy. The different types of assessment used by the London Institute of Banking & Finance are described in the Higher Education Types of Summative Assessment Guidance.

Module assessment methods are included in Module Handbooks which are made available in myCampus.

6. Credit and Award

Credit Framework

The BSc (Hons) Software Development programme is made up of 360 FHEQ credits. One credit approximates to 10 student effort hours; therefore, the total course requires an average of 3,600 hours of effort. Typically, one ECTS credit is the equivalent to two UK credits, although this may vary depending on the individual European state's requirements.

Award

On successful completion of the full programme, you will be awarded the

Bachelor's Honours Degree

360 credits, of which at least 90 credits must be at Level 6 and 30 credits must be obtained through the Bachelor Thesis

Regulations

The London Institute of Banking & Finance's General and Academic Regulations for Students detail

- regulations governing the award of credit,
- how grades for awards are granted,
- time limits for completion of programmes of study
- capping of marks and regulations relating to the resitting of assessment components
- academic misconduct e.g., malpractice, and
- accreditation of prior learning (APL).

Exit Awards

In line with The London Institute of Banking & Finance's General and Academic Regulations for Students, the following applies:

Bachelor's Degree (non-Honours)	minimum of 300 credits, of which at least 60 credits must be at Level 6
Diploma of Higher Education	minimum of 240 credits, of which at least 90 credits must be at Level 5
Certificate of Higher Education	minimum of 120 credits, of which at least 90 credits must be at Level 4

Note: The London Institute of Banking & Finance does not award interim qualifications. For example, a student registered for the bachelor's degree will not automatically be awarded a Diploma or Certificate of Higher Education on completion of the required number of credits.

7. Professional Recognition

Credits gained via accreditation of prior learning (APL) into our awards may mean that students will not get certain exemptions from other institutions' higher education or professional awards that may recognise our programmes.

8. Criteria for Admission

All applications will be considered holistically and offers will be based on qualifications, subjects studied, any relevant work experience and personal statements demonstrating a desire to work in the relevant industry.

Students must be able to satisfy the general admissions criteria of The London Institute of Banking & Finance. Entry requirements for all proposed undergraduate programmes are:

- 2 A Levels, and
- GCSE Maths 4 (C in old grading system) or above, and

- GCSE English 4 (C in old grading system) or above, and
- English language competence equivalent to IELTS 6.0 with no less than 5.5 in any element. An online English test is offered (SPEEX) if IELTS not available.

Overseas qualifications may be accepted and will be subject to evidence of equivalency normally verified through ECCTIS (UK ENIC).

If applicants do not satisfy these criteria, they can communicate with the LIBF Admissions Team and discuss entry requirements.

Suitable work experience may be accepted as an alternative on an individual basis.

Mature students who do not meet the entry criteria may be eligible to enrol under the LIBF mature student process. Applicants should contact a member of the Admissions Team if they do not meet the criteria.

9. Benchmarks

External

- QAA UK Quality Code, including:
 - Subject Benchmark Statement for Computing (2022)
 - Level 6 descriptors in the Framework for Higher Education Qualifications in England, Wales and Northern Ireland
 - Higher Education Credit Framework for England

Internal

- The London Institute of Banking & Finance Code of Practice
- The London Institute of Banking & Finance General and Academic Regulations for Students

In addition, research with the relevant sector has been undertaken to ensure that the learning outcomes of the programme address identified skills and knowledge gaps.

10. Links

Teaching, Learning and Assessment Strategy

[The London Institute of Banking & Finance's General and Academic Regulations for Students](#)

[The London Institute of Banking & Finance's Code of Practice for Quality Assurance, Chapter 3: Accreditation of Prior Learning \(APL\)](#)

Accessible and Inclusive Learning Policy

Types of Summative Assessment

Higher Education Assessing Learning & Feedback Policy

Subject Benchmark Statement for Computing
Framework for Higher Education Qualifications in England, Wales and Northern Ireland
Higher Education Credit Framework for England

11. Curriculum Map of Modules Against Intended Learning Outcomes of Programme

	Module Code	Module Name	Intended Learning Outcomes of the Programme										
			LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10	LO11
Year 1	LIBFOARPIGIS_E	Software Engineering Principles	X			X				X			
	LIBFEXDLBDSIPWP	Introduction to Programming with Python	X		X								
	LIBFEXDLBCSOOPJ	Object-oriented Programming with Java	X		X		X						
	LIBFEXDLBCSDMDS	Database Modeling and Database Systems	X	X	X								
	LIBFOARPDLBCSCW	Collaborative Work			X								
	LIBFEXDLBCSRE	Requirements Engineering	X	X		X		X	X	X	X		
	LIBFPDLBCSSQA	Software Quality Assurance	X		X	X			X		X	X	
	LIBFEXDLBDSEAIS1	Introduction to Artificial Intelligence	X			X							
Year 2	LIBFAWDLBIAWITT	Introduction to Academic Work for IT and Technology											X
	LIBFAWDLBCSL-01	Algorithms, Data Structures, and Programming Languages	X	X	X	X	X		X		X	X	
	LIBFAWDLBCSWAD	Web Application Development	X		X						X		
	LIBFPDLBROEPRS01_E	Programming with C/C++	X		X		X				X		
	LIBFAWDLBMIAMVR01_E	Augmented, Mixed and Virtual Reality	X	X					X				
	LIBFWACSDLBSEPENIT_E	Ethics and Sustainability in IT	X	X					X				X
	Elective from Group A												

	Elective from Group A													
Year 3	LIBFWAPRIWNF2_E	Project: Agile Software Engineering	X		X	X	X	X		X				
	LIBFWAREISSE_E	Seminar: Software Engineering	X	X										X
	Elective from Group B													
	Elective from Group B													
	Elective from Group C													
	Elective from Group C													
	LIBFBTDLBBT	Bachelor Thesis	X		X			X		X		X		X
This table shows the distribution of the programme's intended learning outcomes (as specified in the programme specification) across the programme modules.														

12. Mapping of Teaching Formats and Types of Media Used in the Programme Modules

	Module Code	Module Name	Type of Assessment ¹	Teaching Formats ²			Types of Media ³					
				CF	ILSE	LS ⁴	CB	RL	OT	RB	V	PE
Year 1	LIBFOARPIGIS_E	Software Engineering Principles	OARP	X	X	X	X	X	X		X	
	LIBFEXDLBDSIPWP	Introduction to Programming with Python	EX	X	X	X	X	X	X		X	X
	LIBFEXDLBCSOOPJ	Object-oriented Programming with Java	EX	X	X	X	X	X	X		X	X
	LIBFEXDLBCSDMDS	Database Modeling and Database Systems	EX	X	X	X	X	X	X		X	X
	LIBFOARPDLBCSCW	Collaborative Work	OARP	X	X	X	X	X	X		X	
	LIBFEXDLBCSRE	Requirements Engineering	EX	X	X	X	X	X	X		X	X
	LIBFPDLBCSSQA	Software Quality Assurance	P	X	X	X		X				
	LIBFPDLBROEPRS01_E	Programming with C/C++	P	X	X	X		X				
Year 2	LIBFAWDLBIAWITT	Introduction to Academic Work for IT and Technology	AW	X	X	X	X	X	X		X	
	LIBFAWDLBCSL-01	Algorithms, Data Structures, and Programming Languages	AW	X	X	X	X	X	X		X	
	LIBFAWDLBCSWAD	Web Application Development	AW	X	X	X	X	X	X		X	

	LIBFOPRRPAECP	Project: AI Excellence with Creative Prompting Techniques	OPRRP	X	X	X	X	X	X		X	
	LIBFAWDLBMIAMVR01_E	Augmented, Mixed and Virtual Reality	AW	X	X	X	X	X	X		X	
	LIBFWACSDLBSEPENIT_E	Ethics and Sustainability in IT	WACS	X	X	X	X	X	X		X	
	Elective from Group A											
	Elective from Group A											
Year 3	LIBFWAPRIWNF2_E	Project: Agile Software Engineering	WAPR	X	X	X		X				
	LIBFWAREISSE_E	Seminar: Software Engineering	WARE	X	X	X				X		
	Elective from Group B											
	Elective from Group B											
	Elective from Group C											
	Elective from Group C											
	LIBFBTDLBBT	Bachelor Thesis	BT									
This table shows the distribution of teaching formats and types of media used in the programme modules.												
¹ EX = Exam, WAWA = Written assignment, WACS = Case study, WARE = Research essay, WAPR = Project report, P = Portfolio, AW = Advanced Workbook, OARP = Oral Assignment + Reflection Paper, OPRRP = Oral Project Report + Reflection Paper, BT/MT = Bachelor / Master Thesis ² CF = Course Feed, ILSE = Intensive Live Sessions, LS = Learning Sprints ³ CB = Course Book, RL = Reading List, OT = Online Tests, RB = Review Book, V = Videos, PE = Practice Exams ⁴ Offered only when the minimum number of participants is reached.												

