

KEY PROGRAMME INFORMATION

Originating institution(s) Bournemouth University	Faculty responsible for the programme Faculty of Science and Technology						
Final award(s), title(s) and credits BSc (Hons) Software Engineering - 120 (60 ECTS) Le Level 6 credits	vel 4, 120 (60 ECTS) Level 5, 120 (60 ECTS)						
Intermediate award(s), title(s) and credits Dip HE Computing - 120 (60 ECTS) Level 4, 120 (60 ECTS) Level 4 credits	ECTS) Level 5 credits						
UCAS Programme Code(s) (where applicable and if known) G602	HECoS (Higher Education Classification of Subjects) Code and balanced or major/minor load.						
External reference points							

- The UK Quality Code for Higher Education;
- Chapter A1: The National Level (incorporating the Framework for Higher Qualifications (FHEQ) in England, Wales and Northern Ireland);
- Chapter A2: The Subject and Qualification Level (incorporating the Subject benchmark statements for Computing (2022));
- BCS The Chartered Institute for IT guidelines
- United Nations Sustainable Development Goals (SDGs)

Professional, Statutory and Regulatory Body (PSRB) links

BCS - The Chartered Institute for IT accreditation

(https://www.bcs.org/media/1209/accreditation-guidelines.pdf)

Places of delivery

Bournemouth University, Talbot Campus

Mode(s) of delivery	Language of delivery
Full-time/Full-time sandwich	English

Typical duration

UG September start (3 years full time or 4 years full time with 30 weeks sandwich placement)

Date of first intake September 2023	Expected start dates September	
Maximum student numbers N/A	Placements 30 weeks, optional	
Partner(s) N/A	Partnership model N/A	

Date of this Programme Specification

July 2022

Version number

v2.0-0924

Approval, review or modification reference numbers

E2017038

BU 1819 01

EC 1819 34, Approved 15/08/19, Previously v1.1-0919

FST 1819 16, Approved 15/08/19, Previously v1.1-0919

FST 1819 21, Approved 04/09/19, Previously v1.1-0919

FST 1920 21, approved 05/02/20. Previously v1.2-0919

BU 2021 01, approved 30/09/20 - previously v1.3-0920

FST 2021 07, approved 10/03/21- previously v1.4-0920

FST 2021 09, approved 05/05/2021 - Previously v1.5-0920

FST 2122 10, approved 11/01/22 - previously v1.6-0921

Previously v1.7-0922

E212216

EC 2122 78

EC 2223 32

Author

Deniz Cetinkaya

PROGRAMME STRUCTURE

Programme Award and Title: BSc (Hons) Software Engineering

Year 1/Level 4

Unit Name	Core/ Option	No. of Credits	Assess Weight	ment E ings	lement	Expected Contact hours per	Unit Version No.	HECoS Code (plus	
			Exam 1	Cwk 1	Cwk 2	unit		balanced or major/ minor load) (balanced)	
Computer Fundamentals	Core	20	50%	50%		36	3.0	100734 100735	
Mathematics for Computing	Core	20	50%	50%		36	1.0	100400	
Programming	Core	20	50%	50%		36	1.0	100956	
Data Management	Core	20	50%	50%		36	1.0	100754 100755	
Introduction to Reliable Computing Systems	Core	20		100%		36	1.0	100162 100374	
Computing and Society	Option	20		100%		36	1.0	100631 100367	

Progression requirements: Requires 120 credits at Level 4

Exit qualification: Cert HE Computing (requires 120 credits at Level 4)

Year 2/Level 5										
Unit Name	Core/ Option	No. of Credits			lement	Expected Contact hours per	Unit Version No.	HECoS Code (plus		
			Exam 1	Cwk 1	Cwk 2	unit		balanced or major/ minor load) (balanced)		
Machine Learning	Core	20		40%	60%	36	2.0	100992		
Software Engineering	Core	20	30%	70%		36	2.0	100374		
System Analysis and Design	Core	20	50%	50%		36	1.0	100753		
Technological Innovations in Computing	Core	20	30%	70%		36	1.0	100360 100373		
Data Structures and Algorithms	Core	20	30%	70%		36	1.0	100956		
Software Business	Option	20		100%		36	1.0	100360		

Progression requirements: Requires 120 credits at Level 5

Exit qualification: Dip HE Computing (requires 120 credits at Level 4 and 120 credits at Level 5)

Compulsory/Optional placement year in industry/business:

Students who successfully complete the one year placement will be awarded a degree in sandwich mode.

Progression requirements:

Satisfactory completion of a minimum 30-week placement (up to a year) in industry/business and placement report.

Year 3/Level 6											
Unit Name	Core/ Option	No. of Credits		ment E ings	lement	Expected Contact hours per	Unit Version No.	HECoS Code (plus			
			Exam 1	Cwk 1	Cwk 2	unit		balanced or major/ minor load) (balanced)			
Software Quality Assurance	Core	20		100%		36	1.0	100374			
Systems Development	Core	20		100%		36	1.0	100374 100956			
Deep Learning and Applications	Option	20		100%		36	1.0	100359 100992			
Digital Innovation and Transformation	Option	20		100%		36	1.0	100362 101221			
Data Visualisation and Storytelling	Option	20		100%		36	1.0	100632 100755			
Internet and Wide Area Networks	Option	20		100%		36	1.0	100365			
Digital Futures	Option	20		100%		36	1.0	100373 100440			
Individual Project	Core	40		100%		21	1.0	100358 (major) 100812 (minor)			

Exit qualification: BSc (Hons) Software Engineering

Sandwich UG award: Requires 120 credits at Level 4, 120 credits at Level 5, 120 credits at Level 6 and successful completion of a placement year.

Full-time UG award: Requires 120 credits at Level 4, 120 credits at Level 5 and 120 credits at Level 6.

AIMS OF THE DOCUMENT

The aims of this document are to:

- define the structure of the programme;
- specify the programme award titles;
- identify programme and level learning outcomes:
- articulate the regulations governing the awards defined within the document.

AIMS OF THE PROGRAMME

The BSc (Hons) Software Engineering programme has been running successfully for many years, with continuous improvements and updates to reflect the technological changes and industry needs. The demand for software engineers has been on the rise for quite some time now, and shows no sign of stopping. Software developer employment is projected to grow much faster than the average projected rate of growth for all occupations by the end of 2030. According to the Royal Society report from April 2022, software quality (skills cluster two) is the largest of the skills clusters and was growing fast before the pandemic. According to the 2020 UK Government Shortage Occupation List, software engineers are highly needed and companies were affected by the lack of candidates with technical skills.

Students studying for the BSc (Hons) Software Engineering programme will examine in depth the rigorous methods, techniques and tools used in the development of large and/or highly complex software systems, especially those where quality is at a premium, for example, systems of a safety-critical nature. Hence, the course will focus on the design and development of applications which support enterprise activities with an emphasis on software productivity in large-scale distributed, heterogeneous applications; and software quality and testing.

The first year (Level 4) consists of a common first semester between all undergraduate programmes offered by the department, while the second semester is common within the pathway. This offers students a solid background in general computing related areas and in the subjects related to the pathway, as well as the option of easy switching between the courses in the department after the first semester or between the programmes in the pathway after the first year.

The second year (Level 5) continues with the specialisation in programme related subjects. First and second years consist of 6 units worth 20 credits each, among which 5 are offered by the department and 1 is an elective from the university "open curriculum".

After an optional placement year, the final year (Level 6) explores advanced programme related subjects and includes a final year project. There are four units including one elective and one option unit from other programmes in addition to core units, and a final year project worth 40 credits.

ALIGNMENT WITH THE UNIVERSITY'S STRATEGIC PLAN

The BSc (Hons) Software Engineering programme is informed by and well aligned with Bournemouth University's BU2025 vision, values and strategic plan. The programme is based on Fusion at BU bringing together research, education and practice to create best student experience. Students are supported by academics with a wealth of industry experience, many of whom are actively engaged in various projects with several external organisations at national and international level. Academics delivering the programme are actively engaged in cutting edge research, while students are encouraged to participate in a range of co-creation and co-publication projects. The programme's innovative pedagogic approach offers students the opportunity to learn by engaging in a series of practical and industry focused tasks in case based and problem based learning approaches. These are aimed at equipping students with the full range of skills necessary to succeed in the contemporary ICT environment, and are informed by the academic team's own industrial experience as well as by a network of industry contacts, who may also contribute directly to the programme by delivering guest lectures. Staff, students and graduates will enrich society as active citizens in their communities. The programme is aligned with BU Strategic Plan for supporting the development of attributes such as global

outlook and citizenship as well as to contribute society by having a significant impact on challenges worldwide through fusion.

LEARNING HOURS AND ASSESSMENT

Bournemouth University taught programmes are composed of units of study, which are assigned a credit value indicating the amount of learning undertaken. The minimum credit value of a unit is normally 20 credits, above which credit values normally increase at 20-point intervals. 20 credits is the equivalent of 200 study hours required of the student, including lectures, seminars, assessment and independent study. 20 University credits are equivalent to 10 European Credit Transfer System (ECTS) credits.

The assessment workload for a unit should consider the total time devoted to study, including the assessment workload (i.e. formative and summative assessment) and the taught elements and independent study workload (i.e. lectures, seminars, preparatory work, practical activities, reading, critical reflection).

Assessment per 20 credit unit should normally consist of 3,000 words or equivalent. Dissertations and Level 6 and 7 Final Projects are distinct from other assessment types. The word count for these assignments is 5,000 words per 20 credits, recognising that undertaking an in-depth piece of original research as the capstone to a degree is pedagogically sound.

STAFF DELIVERING THE PROGRAMME

Students will usually be taught by a combination of senior academic staff with others who have relevant expertise including – where appropriate according to the content of the unit – academic staff, qualified professional practitioners, demonstrators/technicians and research students.

INTENDED LEARNING OUTCOMES - AND HOW THE PROGRAMME ENABLES STUDENTS TO ACHIEVE AND DEMONSTRATE THE INTENDED LEARNING OUTCOMES

PROGRAMME AND LEVEL 6 INTENDED PROGRAMME OUTCOMES

[<u> </u>
A: Subject knowledge and understanding This programme/level provides opportunities for students to develop and demonstrate knowledge and understanding of:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme/level learning outcomes:
 A1 Principles, techniques and concepts used in software engineering and during the design and development of large-scale, distributed, high quality software systems; A2 Enabling technologies for software engineering of high quality software systems and applications; A3 A rigorous engineering approach to investigating and solving software engineering and computing problems or other problems in business context with an emphasis on software quality and productivity; A4 The management, analysis, design and development of software or IT solutions to address computing problems or other problems in business context; A5 The professional, legal and ethical responsibilities of software engineering personnel within the organisational, technical and global contexts in which software engineering is applied. 	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): • lectures (A1-A5); • labs/seminars (A1-A5); • directed reading (A1-A5); • use of VLE (A1 – A5) • independent research (for dissertation) (A1-A5). Assessment strategies and methods (referring to numbered Intended Learning Outcomes):
engineering is applied.	 coursework (A1 – A5); assessments (A1 – A5); dissertation (A1 – A5).
B: Intellectual skills This programme/level provides opportunities for students to:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme/level outcomes:
 B1 Critically thinking, problem-solving and decision-making to solve software engineering and computing problems; B2 Analyse, interpret and synthesise information from research and relevant literature; 	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): • lectures (B1 – B5);
B3 Critically evaluate and justify alternative approaches to solutions development while ensuring that conclusions are supported by evidence;	seminars (B1 – B5);directed reading (B1 – B5);
B4 Formulate, plan, execute, and report on a software engineering project involving original contributions;	• use of the VLE (B2 – B5);

B5 Communicate findings according to the professional and academic standards, and demonstrate independent thought.	 independent research (for dissertation) (B1 – B5). Assessment strategies and methods (referring to numbered Intended Learning Outcomes): coursework (B1 – B5); assessments (B1 – B5); dissertation (B1 – B5).
C: Practical skills This programme/level provides opportunities for students to:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme/level learning outcomes:
C1 Retrieve, select and evaluate information from a variety of sources;	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):
C2 Analyse, specify, design and implement software applications with security considerations to meet business needs and other technical goals;	• lectures (C1 – C4);
C3 Select appropriate methods and tools for solving software engineering and computing problems or other organisational problems;	 seminars (C1 – C4); directed reading (C1 – C4).
C4 Plan, monitor and evaluate the progress and operation of a software development project.	 independent research and building an artefact for dissertation (C1 – C4).
	Assessment strategies and methods (referring to numbered Intended Learning Outcomes):
	coursework (C1 – C4);assessments (C1 – C3);
	 dissertation (C1 – C4).
D: Transferable skills This programme/level provides opportunities for students to:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme/level learning outcomes:
D1 Demonstrate problem solving skills and the application of knowledge across the software engineering discipline;	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):

- **D2** Gather, select, and analyse data and present professionally using appropriate tools and methods as an individual as well as in teams to develop creative solutions to problems;
- **D3** Structure and communicate ideas professionally and effectively both orally and in writing to appropriate professional and academic standards;
- **D4** Demonstrate initiative, self direction and exercise personal responsibility for management of own learning;
- **D5** Distil, synthesise and critically analyse alternative approaches and methodologies to problems and research results reported in the literature and elsewhere.

- lectures (D1 D5);
- seminars (D1- D5);
- use of the VLE (D1 D5);
- directed reading (D1- D5).

Assessment strategies and methods (referring to numbered Intended Learning Outcomes):

- coursework (D1 D5);
- assessments (D1 D5);
- dissertation (D1 D5).

LEVEL 5/DipHE INTENDED LEVEL OUTCOMES

A: Knowledge and understanding

This programme/level provides opportunities for students to develop and demonstrate knowledge and understanding of:

The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:

- **A1** Principles, techniques and concepts used in software engineering and during the design and development of large-scale, distributed, high quality software systems;
- **A2** Enabling technologies for software engineering of high quality software systems and applications;
- **A4** The management, analysis, design and development of software or IT solutions to address computing problems or other problems in business context;
- **A5** The professional, legal and ethical responsibilities of software engineering personnel within the organisational, technical and global contexts in which software engineering is applied.

Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):

- lectures (A1, A2, A4, A5);
- seminars (A1, A2, A4, A5);
- directed reading (A1, A2, A4, A5);
- group work (A1, A2, A4, A5);
- use of the VLE (A1, A2, A4, A5);

Assessment strategies and methods (referring to numbered Intended Learning Outcomes):

- examinations (A1, A2, A4, A5);
- coursework (A1, A2, A4, A5).

BSc (Hons) Software Engineering Version 2.0-0924 © Bournemouth University 2022

B: Intellectual skills This programme/level provides opportunities for students to:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:							
This programme, is to provide appointment to								
B1 Critically thinking, problem-solving and decision-making to solve software engineering and computing problems;	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):							
B2 Analyse, interpret and synthesise information from research and relevant literature;	• lectures (B1 - B3, B5);							
B3 Critically evaluate and justify alternative approaches to solutions development while ensuring that conclusions are supported by evidence;	seminars (B1 - B3, B5);directed reading (B1 - B3, B5);							
B5 Communicate findings according to the professional and academic standards, and demonstrate independent thought.	group work (B1 - B3, B5);use of the VLE (B1 - B3, B5).							
	Assessment strategies and methods (referring to numbered Intended Learning Outcomes):							
	• examinations (B1 - B3, B5);							
	• coursework (B1 - B3, B5).							
C: Practical skills This programme/level provides opportunities for students to:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:							
	assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning							
This programme/level provides opportunities for students to: C1 Retrieve, select and evaluate information from a variety	assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes: Learning and teaching strategies and methods (referring to numbered							
C1 Retrieve, select and evaluate information from a variety of sources; C2 Analyse, specify, design and implement software applications with security considerations to meet	assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes: Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): • lectures (C1 – C3);							
 C1 Retrieve, select and evaluate information from a variety of sources; C2 Analyse, specify, design and implement software applications with security considerations to meet business needs and other technical goals; C3 Select appropriate methods and tools for solving software engineering and computing problems or other 	assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes: Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): • lectures (C1 – C3); • seminars (C1 – C3); • group work (C1 – C3);							
 C1 Retrieve, select and evaluate information from a variety of sources; C2 Analyse, specify, design and implement software applications with security considerations to meet business needs and other technical goals; C3 Select appropriate methods and tools for solving software engineering and computing problems or other 	assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes: Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): Iectures (C1 – C3); seminars (C1 – C3); group work (C1 – C3); directed reading (C1 – C3). Assessment strategies and methods (referring to numbered Intended							
 C1 Retrieve, select and evaluate information from a variety of sources; C2 Analyse, specify, design and implement software applications with security considerations to meet business needs and other technical goals; C3 Select appropriate methods and tools for solving software engineering and computing problems or other 	assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes: Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): Iectures (C1 – C3); seminars (C1 – C3); group work (C1 – C3); directed reading (C1 – C3). Assessment strategies and methods (referring to numbered Intended Learning Outcomes):							

D: Transferable skills

This programme/level provides opportunities for students to:

The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:

- **D1** Demonstrate problem solving skills and the application of knowledge across the software engineering areas;
- D2 Gather, select, and analyse data and present professionally using appropriate tools and methods as an individual as well as in teams to develop creative solutions to problems;
- **D3** Structure and communicate ideas professionally and effectively both orally and in writing to appropriate professional and academic standards;
- **D4** Demonstrate initiative, self direction and exercise personal responsibility for management of own learning;

Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):

- lectures (D1 D4);
- seminars (D1 D4);
- use of the VLE (D1 D4);
- group work (D1 − D4);
- directed reading (D1- D4).

Assessment strategies and methods (referring to numbered Intended Learning Outcomes):

- coursework (D1 − D4);
- presentations (D1 D4);
- examinations (D1 D3).

LEVEL 4/Cert HE INTENDED LEVEL OUTCOMES

A: Knowledge and understanding

This programme/level provides opportunities for students to develop and demonstrate knowledge and understanding of:

The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:

- **A1** Principles, techniques and concepts used in software engineering and during the design and development of large-scale, distributed, high quality software systems;
- **A4** The management, analysis, design and development of software or IT solutions to address computing problems or other problems in business context:
- **A5** The professional, legal and ethical responsibilities of software engineering personnel within the organisational, technical and global contexts in which software engineering is applied.

Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):

- lectures (A1, A4, A5);
- seminars (A1, A4, A5);
- directed reading (A1, A4, A5).

Assessment strategies and methods (referring to numbered Intended Learning Outcomes):

BSc (Hons) Software Engineering Version 2.0-0924 © Bournemouth University 2022

	examinations (A1, A4, A5);coursework (A1, A4, A5).
B: Intellectual skills This programme/level provides opportunities for students to:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:
 B1 Critically thinking, problem-solving and decision-making to solve software engineering and computing problems; B2 Analyse, interpret and synthesise information from research and relevant literature; B5 Communicate findings according to the professional and academic standards, and demonstrate independent thought. 	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): • lectures (B1, B2, B5); • seminars (B1, B2, B5); • directed reading (B1, B2, B5).
	Assessment strategies and methods (referring to numbered Intended Learning Outcomes): • examinations (B1, B2, B5); • coursework (B1, B2, B5).
C: Practical skills This programme/level provides opportunities for students to:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:
 C1 Retrieve, select and evaluate information from a variety of sources; C3 Select appropriate methods and tools for solving software engineering and computing problems or other organisational problems; 	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): • lectures (C1, C3); • seminars (C1, C3);
	 group work (C1, C3). Assessment strategies and methods (referring to numbered Intended Learning Outcomes): examinations (C1, C3); presentations (C1, C3);

BSc (Hons) Software Engineering Version 2.0-0924 © Bournemouth University 2022

	• coursework (C1, C3).
D: Transferable skills This programme/level provides opportunities for students to:	The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:
 D2 Gather, select, and analyse data and present professionally using appropriate tools and methods as an individual as well as in teams to develop creative solutions to problems; D3 Structure and communicate ideas professionally and effectively both orally and in writing to appropriate professional and academic standards; D4 Demonstrate initiative, self direction and exercise personal responsibility for management of own learning; 	Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): • lectures (D2, D3, D4); • seminars (D2, D3, D4); • use of the VLE (D2, D3, D4); • group work (D2, D3, D4); • directed reading (D2, D3, D4). Assessment strategies and methods (referring to numbered Intended Learning Outcomes): • presentations (D2, D3, D4); • coursework (D2, D3, D4); • examinations (D2, D3, D4).

Programme Skills Matrix

Uni	ts	s Programme Intended Learning Outcomes																		
		A 1	A 2	A 3	A 4	A 5	B 1	B 2	B 3	B 4	B 5	C 1	C 2	C 3	C 4	D 1	D 2	D 3	D 4	D 5
	Systems Development	Х	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Х
L	Software Quality Assurance	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Х	Χ	Χ	Х	Х
E	Deep Learning and Applications			Х	Х	Х	Х	Х	Х		Х	Х	Χ	Х	Х	Х	Χ	Χ	Х	Х
V E	Internet and Wide Area Networks			Х	Х	Х	Х	Х	Х		Х	Х	Χ	Х	Х	Х	Χ	Χ	Х	Х
L	Digital Innovation and Transformation			Х	Х	Х	Х	Х	Х		Х	Х	Χ	Х	Х	Х	Χ	Χ	Х	Х
	Data Visualisation and Storytelling			Х	Х	Х	Χ	Х	Х		Х	Х	Χ	Х	Χ	Χ	Х	Х	Х	Х
6	Individual Project	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Х	Х	Х	Χ	Χ	Х	Х
	Digital Futures (Elective)	Х	Х	Х	Х	Х	Х	Х	Х		Х	Х	Χ	Х	Х	Х	Χ	Χ	Х	Х
L	System Analysis and Design	Х	Х		Χ	Χ	Χ	Χ	Х		Χ	Χ	Χ	Χ		Χ	Χ	Χ	Χ	
E	Software Engineering	Х	Х		Х	Χ	Χ	Χ	Х		Х	Х	Χ	Х		Χ	Χ	Х	Х	
٧	Machine Learning		Х			Х	Х	Х	Х		Х	Х	Χ	Х		Х	Χ	Χ	Х	
E	Technological Innovations in Computing	Х	Х		Х	Х	Х	Х	Х		Х	Х	Χ	Х		Х	Χ	Χ	Х	
<u>۔</u>	Data Structures and Algorithms	Х	Х		Х	Х	Х	Х	Х		Х	Х	Χ	Х		Х	Χ	Χ	Х	
5	Software Business (Elective)	Х	Х		Х	Х	Х	Х	Х		Х	Х	Χ	Х		Х	Χ	Χ	Х	
	Computer Fundamentals	Х			Χ	Χ	Χ	Χ			Χ	Χ		Χ			Χ	Χ	Χ	
E	Programming	Х			Χ	Χ	Χ	Χ			Χ	Χ		Χ			Χ	Χ	Х	
V E	Mathematics for Computing	Х				Χ	Χ	Χ			Χ	Χ		Χ			Χ	Χ	Х	
Ĺ	Data Management	Х			Х	Χ	Χ	Х			Х	Х		Χ			Х	Х	Х	
١,	Introduction to Reliable Computing Systems	Х			Х	Χ	Χ	Χ			Х	Х		Χ			Χ	Χ	Х	
4	Computing and Society (Elective)	Х			Х	Χ	Χ	Χ			Х	Х		Х			Х	Х	Х	

A - Subject Knowledge and Understanding

This programme provides opportunities for students to develop and demonstrate knowledge and understanding of:

- 1. Principles, techniques and concepts used in software engineering and during the design and development of large-scale, distributed, high quality software systems;
- Enabling technologies for software engineering of high quality software systems and applications;
- A rigorous engineering approach to investigating and solving software engineering and computing problems or other problems in business context with an emphasis on software quality and productivity;
- 4. The management, analysis, design and development of software or IT solutions to address computing problems or other problems in business context;
- The professional, legal and ethical responsibilities of software engineering personnel within the organisational, technical and global contexts in which software engineering is applied.

C - Subject-specific/Practical Skills

This programme provides opportunities for students to:

- 1. Retrieve, select and evaluate information from a variety of sources:
- 2. Analyse, specify, design and implement software applications with security considerations to meet business needs and other technical goals;
- 3. Select appropriate methods and tools for solving software engineering and computing problems or other organisational problems:
- 4. Plan, monitor and evaluate the progress and operation of a software development project.

B - Intellectual Skills

This programme provides opportunities for students to:

- Critically thinking, problem-solving and decision-making to solve software engineering and computing problems:
- Analyse, interpret and synthesise information from research and relevant literature;
- Critically evaluate and justify alternative approaches to solutions development while ensuring that conclusions are supported by evidence:
- Formulate, plan, execute, and report on a software engineering project involving original contributions:
- Communicate findings according to the professional and academic standards, and demonstrate independent thought.

D - Transferable Skills

This programme provides opportunities for students to:

- Demonstrate problem solving skills and the application of knowledge across the software engineering discipline;
- 2. Gather, select, and analyse data and present professionally using appropriate tools and methods as an individual as well as in teams to develop creative solutions to problems:
- Structure and communicate ideas professionally and effectively both orally and in writing to appropriate professional and academic standards;
- Demonstrate initiative, self direction and exercise personal responsibility for management of own learning;
- 5. Distil, synthesise and critically analyse alternative approaches and methodologies to problems and research results reported in the literature and elsewhere.

ADMISSION REGULATIONS

Please refer to the course website for further information regarding admission regulations for this programme: BSc (Hons) Software Engineering | Bournemouth University

PROGRESSION ROUTES

Partnership arrangements provide formally approved progression routes through which students are eligible to apply for a place on a programme leading to a BU award. Please find information on Global Partnerships here: Global partnerships | Bournemouth University

ASSESSMENT REGULATIONS

The regulations for this programme are Bournemouth University's Standard Undergraduate Assessment Regulations.

WORK BASED LEARNING (WBL) AND PLACEMENT ELEMENTS

Students, under the guidance of lecturers and the Placement Office, are required to complete a sandwich year with a 30 week minimum placement requirement before Level 6.

The placement is assessed on a pass/fail basis using the log book and employer appraisal. The 30 week sandwich placement must be completed between Levels 5 and 6 and is a requirement for progression to Level 6 for the successful completion of the sandwich mode award.

Placement draws on some or all of the units studied on the first two levels of the programme. It provides the opportunity for the student to develop their abilities and understanding of software engineering related subjects, as well as providing a platform for successful entry into the profession following graduation. It applies and develops understanding and skills acquired in Levels 4 and 5, makes a major contribution to the understanding of the final level units, further develops final projects or dissertation research by utilising the context of the work experience as appropriate and enhances students' prospects of future employment.