

## KEY PROGRAMME INFORMATION

<b>Originating institution(s)</b> Bournemouth University	<b>Faculty responsible for the programme</b> Faculty of Science and Technology
<b>Final award(s), title(s) and credits</b> BSc (Hons) Software Engineering - 120 (60 ECTS) Level 4, 120 (60 ECTS) Level 5, 120 (60 ECTS) Level 6 credits	
<b>Intermediate award(s), title(s) and credits</b> Dip HE Computing - 120 (60 ECTS) Level 4, 120 (60 ECTS) Level 5 credits Cert HE Computing - 120 (60 ECTS) Level 4 credits	
<b>UCAS Programme Code(s) (where applicable and if known)</b> G602	<b>HECoS (Higher Education Classification of Subjects) Code and balanced or major/minor load.</b> 100374
<b>External reference points</b> <ul style="list-style-type: none"> <li>• The UK Quality Code for Higher Education;</li> <li>• Chapter A1: The National Level (incorporating the Framework for Higher Qualifications (FHEQ) in England, Wales and Northern Ireland);</li> <li>• Chapter A2: The Subject and Qualification Level (incorporating the Subject benchmark statements for Computing (2022));</li> <li>• BCS – The Chartered Institute for IT guidelines</li> <li>• United Nations Sustainable Development Goals (SDGs)</li> </ul>	
<b>Professional, Statutory and Regulatory Body (PSRB) links</b> BCS – The Chartered Institute for IT accreditation ( <a href="https://www.bcs.org/media/1209/accreditation-guidelines.pdf">https://www.bcs.org/media/1209/accreditation-guidelines.pdf</a> )	
<b>Places of delivery</b> Bournemouth University, Talbot Campus	
<b>Mode(s) of delivery</b> Full-time/Full-time sandwich	<b>Language of delivery</b> English
<b>Typical duration</b> UG September start (3 years full time or 4 years full time with 30 weeks sandwich placement)	
<b>Date of first intake</b> September 2023	<b>Expected start dates</b> September
<b>Maximum student numbers</b> N/A	<b>Placements</b> 30 weeks, optional
<b>Partner(s)</b> N/A	<b>Partnership model</b> N/A
<b>Date of this Programme Specification</b> July 2022	
<b>Version number</b> v2.0-0923	

## Programme Specification – Section 1

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### PROGRAMME STRUCTURE

Programme Award and Title: BSc (Hons) Software Engineering								
Year 1/Level 4								
Unit Name	Core/ Option	No. of Credits	Assessment Element Weightings			Expected Contact hours per unit	Unit Version No.	HECoS Code (plus balanced or major/ minor load) <b>(balanced)</b>
			Exam 1	Cwk 1	Cwk 2			
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
<b>Progression requirements:</b> Requires 120 credits at Level 4								
<b>Exit qualification:</b> Cert HE Computing (requires 120 credits at Level 4)								

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Year 2/Level 5								
Unit Name	Core/ Option	No. of Credits	Assessment Element Weightings			Expected Contact hours per unit	Unit Version No.	HECoS Code (plus balanced or major/ minor load) <b>(balanced)</b>
			Exam 1	Cwk 1	Cwk 2			
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
<b>Progression requirements:</b> Requires 120 credits at Level 5								
<b>Exit qualification:</b> Dip HE Computing (requires 120 credits at Level 4 and 120 credits at Level 5)								
<b>Compulsory/Optional placement year in industry/business:</b> Students who successfully complete the one year placement will be awarded a degree in sandwich mode.								
<b>Progression requirements:</b> Satisfactory completion of a minimum 30-week placement (up to a year) in industry/business and placement report.								

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Year 3/Level 6								
Unit Name	Core/ Option	No. of Credits	Assessment Element Weightings			Expected Contact hours per unit	Unit Version No.	HECoS Code (plus balanced or major/ minor load) <b>(balanced)</b>
			Exam 1	Cwk 1	Cwk 2			
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)
<b>Exit qualification:</b> BSc (Hons) Software Engineering								
<b>Sandwich UG award:</b> Requires 120 credits at Level 4, 120 credits at Level 5, 120 credits at Level 6 and successful completion of a placement year.								
<b>Full-time UG award:</b> 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

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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**

<p><b>A: Subject knowledge and understanding</b></p> <p>This programme/level provides opportunities for students to develop and demonstrate knowledge and understanding of:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme/level learning outcomes:</p>
<p><b>A1</b> Principles, techniques and concepts used in software engineering and during the design and development of large-scale, distributed, high quality software systems;</p> <p><b>A2</b> Enabling technologies for software engineering of high quality software systems and applications;</p> <p><b>A3</b> 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;</p> <p><b>A4</b> The management, analysis, design and development of software or IT solutions to address computing problems or other problems in business context;</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• lectures (A1-A5);</li> <li>• labs/seminars (A1-A5);</li> <li>• directed reading (A1-A5);</li> <li>• use of VLE (A1 – A5)</li> <li>• independent research (for dissertation) (A1-A5).</li> </ul>
<p><b>A5</b> The professional, legal and ethical responsibilities of software engineering personnel within the organisational, technical and global contexts in which software engineering is applied.</p>	<p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• coursework (A1 – A5);</li> <li>• assessments (A1 – A5);</li> <li>• dissertation (A1 – A5).</li> </ul>
<p><b>B: Intellectual skills</b></p> <p>This programme/level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme/level outcomes:</p>
<p><b>B1</b> Critically thinking, problem-solving and decision-making to solve software engineering and computing problems;</p> <p><b>B2</b> Analyse, interpret and synthesise information from research and relevant literature;</p> <p><b>B3</b> Critically evaluate and justify alternative approaches to solutions development while ensuring that conclusions are supported by evidence;</p> <p><b>B4</b> Formulate, plan, execute, and report on a software engineering project involving original contributions;</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• lectures (B1 – B5);</li> <li>• seminars (B1 – B5);</li> <li>• directed reading (B1 – B5);</li> <li>• use of the VLE (B2 – B5);</li> </ul>



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<p><b>B5</b> Communicate findings according to the professional and academic standards, and demonstrate independent thought.</p>	<ul style="list-style-type: none"> <li>• independent research (for dissertation) (B1 – B5).</li> </ul> <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• coursework (B1 – B5);</li> <li>• assessments (B1 – B5);</li> <li>• dissertation (B1 – B5).</li> </ul>
<p><b>C: Practical skills</b></p> <p>This programme/level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme/level learning outcomes:</p>
<p><b>C1</b> Retrieve, select and evaluate information from a variety of sources;</p> <p><b>C2</b> Analyse, specify, design and implement software applications with security considerations to meet business needs and other technical goals;</p> <p><b>C3</b> Select appropriate methods and tools for solving software engineering and computing problems or other organisational problems;</p> <p><b>C4</b> Plan, monitor and evaluate the progress and operation of a software development project.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• lectures (C1 – C4);</li> <li>• seminars (C1 – C4);</li> <li>• directed reading (C1 – C4).</li> <li>• independent research and building an artefact for dissertation (C1 – C4).</li> </ul> <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• coursework (C1 – C4);</li> <li>• assessments (C1 – C3);</li> <li>• dissertation (C1 – C4).</li> </ul>
<p><b>D: Transferable skills</b></p> <p>This programme/level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the programme/level learning outcomes:</p>
<p><b>D1</b> Demonstrate problem solving skills and the application of knowledge across the software engineering discipline;</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p>

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<p><b>D2</b> 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;</p> <p><b>D3</b> Structure and communicate ideas professionally and effectively both orally and in writing to appropriate professional and academic standards;</p> <p><b>D4</b> Demonstrate initiative, self direction and exercise personal responsibility for management of own learning;</p> <p><b>D5</b> Distil, synthesise and critically analyse alternative approaches and methodologies to problems and research results reported in the literature and elsewhere.</p>	<ul style="list-style-type: none"> <li>• lectures (D1 - D5);</li> <li>• seminars (D1- D5);</li> <li>• use of the VLE (D1 - D5);</li> <li>• directed reading (D1- D5).</li> </ul>
	<p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• coursework (D1 - D5);</li> <li>• assessments (D1 - D5);</li> <li>• dissertation (D1 - D5).</li> </ul>

### LEVEL 5/DipHE INTENDED LEVEL OUTCOMES

<p><b>A: Knowledge and understanding</b></p> <p>This programme/level provides opportunities for students to develop and demonstrate knowledge and understanding of:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:</p>
<p><b>A1</b> Principles, techniques and concepts used in software engineering and during the design and development of large-scale, distributed, high quality software systems;</p> <p><b>A2</b> Enabling technologies for software engineering of high quality software systems and applications;</p> <p><b>A4</b> The management, analysis, design and development of software or IT solutions to address computing problems or other problems in business context;</p> <p><b>A5</b> The professional, legal and ethical responsibilities of software engineering personnel within the organisational, technical and global contexts in which software engineering is applied.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• lectures (A1, A2, A4, A5);</li> <li>• seminars (A1, A2, A4, A5);</li> <li>• directed reading (A1, A2, A4, A5);</li> <li>• group work (A1, A2, A4, A5);</li> <li>• use of the VLE (A1, A2, A4, A5);</li> </ul>
	<p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• examinations (A1, A2, A4, A5);</li> <li>• coursework (A1, A2, A4, A5).</li> </ul>

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<p><b>B: Intellectual skills</b></p> <p>This programme/level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:</p>
<p><b>B1</b> Critically thinking, problem-solving and decision-making to solve software engineering and computing problems;</p> <p><b>B2</b> Analyse, interpret and synthesise information from research and relevant literature;</p> <p><b>B3</b> Critically evaluate and justify alternative approaches to solutions development while ensuring that conclusions are supported by evidence;</p> <p><b>B5</b> Communicate findings according to the professional and academic standards, and demonstrate independent thought.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• lectures (B1 - B3, B5);</li> <li>• seminars (B1 - B3, B5);</li> <li>• directed reading (B1 - B3, B5);</li> <li>• group work (B1 - B3, B5);</li> <li>• use of the VLE (B1 - B3, B5).</li> </ul> <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• examinations (B1 - B3, B5);</li> <li>• coursework (B1 - B3, B5).</li> </ul>
<p><b>C: Practical skills</b></p> <p>This programme/level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:</p>
<p><b>C1</b> Retrieve, select and evaluate information from a variety of sources;</p> <p><b>C2</b> Analyse, specify, design and implement software applications with security considerations to meet business needs and other technical goals;</p> <p><b>C3</b> Select appropriate methods and tools for solving software engineering and computing problems or other organisational problems.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• lectures (C1 – C3);</li> <li>• seminars (C1 – C3);</li> <li>• group work (C1 – C3);</li> <li>• directed reading (C1 – C3).</li> </ul> <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• examinations (C1 – C3);</li> <li>• presentations (C1 - C3);</li> <li>• coursework (C1 – C3).</li> </ul>

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<p><b>D: Transferable skills</b></p> <p>This programme/level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:</p>
<p><b>D1</b> Demonstrate problem solving skills and the application of knowledge across the software engineering areas;</p> <p><b>D2</b> 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;</p> <p><b>D3</b> Structure and communicate ideas professionally and effectively both orally and in writing to appropriate professional and academic standards;</p> <p><b>D4</b> Demonstrate initiative, self direction and exercise personal responsibility for management of own learning;</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• lectures (D1 – D4);</li> <li>• seminars (D1 – D4);</li> <li>• use of the VLE (D1 – D4);</li> <li>• group work (D1 – D4);</li> <li>• directed reading (D1- D4).</li> </ul> <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• coursework (D1 – D4);</li> <li>• presentations (D1 – D4);</li> <li>• examinations (D1 – D3).</li> </ul>

### LEVEL 4/Cert HE INTENDED LEVEL OUTCOMES

<p><b>A: Knowledge and understanding</b></p> <p>This programme/level provides opportunities for students to develop and demonstrate knowledge and understanding of:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:</p>
<p><b>A1</b> Principles, techniques and concepts used in software engineering and during the design and development of large-scale, distributed, high quality software systems;</p> <p><b>A4</b> The management, analysis, design and development of software or IT solutions to address computing problems or other problems in business context;</p> <p><b>A5</b> The professional, legal and ethical responsibilities of software engineering personnel within the organisational, technical and global contexts in which software engineering is applied.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• lectures (A1, A4, A5);</li> <li>• seminars (A1, A4, A5);</li> <li>• directed reading (A1, A4, A5).</li> </ul> <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p>

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	<ul style="list-style-type: none"> <li>• examinations (A1, A4, A5);</li> <li>• coursework (A1, A4, A5).</li> </ul>
<p><b>B: Intellectual skills</b></p> <p>This programme/level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:</p>
<p><b>B1</b> Critically thinking, problem-solving and decision-making to solve software engineering and computing problems;</p> <p><b>B2</b> Analyse, interpret and synthesise information from research and relevant literature;</p> <p><b>B5</b> Communicate findings according to the professional and academic standards, and demonstrate independent thought.</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• lectures (B1, B2, B5);</li> <li>• seminars (B1, B2, B5);</li> <li>• directed reading (B1, B2, B5).</li> </ul> <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• examinations (B1, B2, B5);</li> <li>• coursework (B1, B2, B5).</li> </ul>
<p><b>C: Practical skills</b></p> <p>This programme/level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:</p>
<p><b>C1</b> Retrieve, select and evaluate information from a variety of sources;</p> <p><b>C3</b> Select appropriate methods and tools for solving software engineering and computing problems or other organisational problems;</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• lectures (C1, C3);</li> <li>• seminars (C1, C3);</li> <li>• group work (C1, C3).</li> </ul> <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• examinations (C1, C3);</li> <li>• presentations (C1, C3);</li> </ul>

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	<ul style="list-style-type: none"> <li>• coursework (C1, C3).</li> </ul>
<p><b>D: Transferable skills</b></p> <p>This programme/level provides opportunities for students to:</p>	<p>The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level/stage learning outcomes:</p>
<p><b>D2</b> 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;</p> <p><b>D3</b> Structure and communicate ideas professionally and effectively both orally and in writing to appropriate professional and academic standards;</p> <p><b>D4</b> Demonstrate initiative, self direction and exercise personal responsibility for management of own learning;</p>	<p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• lectures (D2, D3, D4);</li> <li>• seminars (D2, D3, D4);</li> <li>• use of the VLE (D2, D3, D4);</li> <li>• group work (D2, D3, D4);</li> <li>• directed reading (D2, D3, D4).</li> </ul> <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> <li>• presentations (D2, D3, D4);</li> <li>• coursework (D2, D3, D4);</li> <li>• examinations (D2, D3, D4).</li> </ul>

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Programme Skills Matrix

Units		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	
LEVEL 6	Systems Development	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Software Quality Assurance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Deep Learning and Applications			X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	
	Internet and Wide Area Networks			X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	
	Digital Innovation and Transformation			X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	
	Data Visualisation and Storytelling			X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	
	Individual Project	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Digital Futures (Elective)	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	
LEVEL 5	System Analysis and Design	X	X		X	X	X	X	X		X	X	X	X		X	X	X	X		
	Software Engineering	X	X		X	X	X	X	X		X	X	X	X		X	X	X	X		
	Machine Learning		X			X	X	X	X		X	X	X	X		X	X	X	X		
	Technological Innovations in Computing	X	X		X	X	X	X	X		X	X	X	X		X	X	X	X		
	Data Structures and Algorithms	X	X		X	X	X	X	X		X	X	X	X		X	X	X	X		
	Software Business (Elective)	X	X		X	X	X	X	X		X	X	X	X		X	X	X	X		
LEVEL 4	Computer Fundamentals	X			X	X	X	X			X	X		X			X	X	X		
	Programming	X			X	X	X	X			X	X		X			X	X	X		
	Mathematics for Computing	X				X	X	X			X	X		X			X	X	X		
	Data Management	X			X	X	X	X			X	X		X			X	X	X		
	Introduction to Reliable Computing Systems	X			X	X	X	X			X	X		X			X	X	X		
	Computing and Society (Elective)	X			X	X	X	X			X	X		X			X	X	X		

## Programme Specification - Section 2

<p><b>A – Subject Knowledge and Understanding</b></p> <p>This programme provides opportunities for students to develop and demonstrate knowledge and understanding of:</p> <ol style="list-style-type: none"> <li>1. Principles, techniques and concepts used in software engineering and during the design and development of large-scale, distributed, high quality software systems;</li> <li>2. Enabling technologies for software engineering of high quality software systems and applications;</li> <li>3. 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;</li> <li>4. The management, analysis, design and development of software or IT solutions to address computing problems or other problems in business context;</li> <li>5. The professional, legal and ethical responsibilities of software engineering personnel within the organisational, technical and global contexts in which software engineering is applied.</li> </ol>	<p><b>C – Subject-specific/Practical Skills</b></p> <p>This programme provides opportunities for students to:</p> <ol style="list-style-type: none"> <li>1. Retrieve, select and evaluate information from a variety of sources;</li> <li>2. Analyse, specify, design and implement software applications with security considerations to meet business needs and other technical goals;</li> <li>3. Select appropriate methods and tools for solving software engineering and computing problems or other organisational problems;</li> <li>4. Plan, monitor and evaluate the progress and operation of a software development project.</li> </ol>
<p><b>B – Intellectual Skills</b></p> <p>This programme provides opportunities for students to:</p> <ol style="list-style-type: none"> <li>1. Critically thinking, problem-solving and decision-making to solve software engineering and computing problems;</li> <li>2. Analyse, interpret and synthesise information from research and relevant literature;</li> <li>3. Critically evaluate and justify alternative approaches to solutions development while ensuring that conclusions are supported by evidence;</li> <li>4. Formulate, plan, execute, and report on a software engineering project involving original contributions;</li> <li>5. Communicate findings according to the professional and academic standards, and demonstrate independent thought.</li> </ol>	<p><b>D – Transferable Skills</b></p> <p>This programme provides opportunities for students to:</p> <ol style="list-style-type: none"> <li>1. Demonstrate problem solving skills and the application of knowledge across the software engineering discipline ;</li> <li>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;</li> <li>3. Structure and communicate ideas professionally and effectively both orally and in writing to appropriate professional and academic standards;</li> <li>4. Demonstrate initiative, self direction and exercise personal responsibility for management of own learning;</li> <li>5. Distil, synthesise and critically analyse alternative approaches and methodologies to problems and research results reported in the literature and elsewhere.</li> </ol>



## **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.