Year 0 – Engineering - BSc

Programme Specification

Purpose

This Programme Specification provides detailed information on the above course for students, staff and stakeholders. It is also used for programme monitoring and academic quality assurance.

Disclaimer

International College Portsmouth has checked the information given in this Programme Specification and believes it to be correct. We will endeavour to deliver the course in keeping with this Programme Specification but reserve the right to change the content, timetabling and administration of the course whilst maintaining equivalent academic standards and quality.

Contents

1. Named Awards

BSc (Hons) Computer Networks

2. ICP Course Code and University Jupiter Code

1ES2 – A0007

3. ICP Stage of Study

Year 0 - RQF Level 3

4. Hours of study

One credit is equivalent to 10 hours of learning. This programme is comprised of 135 credit points, equivalent to 1350 notional hours comprised of 436 contact hours and 914 self-directed hours.

5. Awarding Body

University of Portsmouth

6. Award Level

Undergraduate - RQF Level 6

7. Teaching Institution

International College Portsmouth

8. Teaching Location

University Learning Centre, (Old Highbury Building, Winston Churchill Avenue)

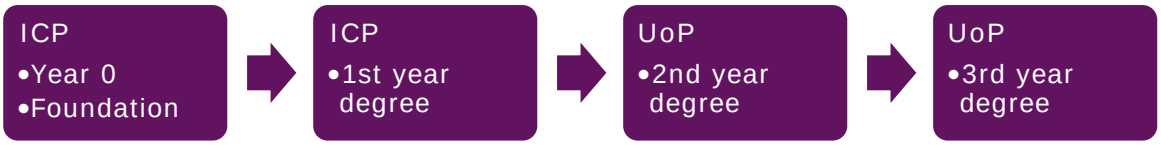
9. Faculty at Progression Stage

Faculty of Technology

10. QAA Benchmark Groups

Reference, where appropriate, to the following overall degree Leaning Outcomes: Note that the Intended LOs and academic framework have been made with reference to the following QAA Subject Benchmark Statement: SBS-Computing-2016; SBS-Engineering-2015.

11. Planned Programme



12. Document Control Information

Original Creation – January, 2012
Last Review - September, 2023

Strategic Rationale

The partnership between ICP and University of Portsmouth facilitates the acquisition of Select level degree by international students who, because of their previous educational experience, are not normally able to gain direct access to the University's degree schemes. The programme has therefore been developed to satisfy important pedagogical issues:

1. To ensure that international students have a dedicated period of time, in a familial and safe setting, to adjust to and acquire the skills to prepare for further studies within a western learning environment.
2. To satisfy the University's quality protocols, which in turn are directed by the QAA Subject Benchmark requirements, for articulation purpose.
3. Facilitate access to a programme leading to a University degree award.
4. Protect the entry tariff of the University to its degree schemes and ensure that the University does not need to lower its entry tariff in order to increase its international student population.
5. Widen access and participation in higher education in line with the University's internationalisation agenda.
6. Commit to the provision of best practice customer service and student experience for international students and thus add value to the University's award winning student lifestyle.
7. Support the integrity of the University's QAA commitment by adopting and adapting the University's quality regime to form the basis of a robust, quality driven academic provision and administrative systems and processes.
8. Facilitate effective and efficient, low risk public/private partnership in line with the University's strategic research mission.
9. Enhance the global reach of the University into previously untapped markets and market segments.
10. Add resource, human and financial, to the University's marketing process.
11. Facilitate access to a global recruitment process.
12. Assist in the diversification of the student body.
13. Make available the benefits derived from access to Navitas' global reach and corporate marketing arm.
14. Provide the University with third stream revenue via income flow from royalty payments each trimester and the ongoing pipeline revenue derived from fees paid by those students who progress to the University to complete their prescribed degree schemes.

Educational Aims

The programme has been devised in accordance with the partnership general educational aims and nominated outcomes and those formulated for ICP, see College Policy and Regulation QS4. The educational aims of this stage of study undertaken at the College are to:

1. Prepare students, who would not normally be considered qualified, to an appropriate standard for progression to the next stage of the programme at the University.
2. Develop in students a fundamental knowledge and understanding of key theoretical constructs underpinning engineering approaches, study, research and statistical methodologies and formal academic discourse, scholarship, ICT, presentation and communication skills, to support progression to the next stage of the programme at the University.

3. Develop in students an appreciation and desire to learn based on competent intellectual and practical skills that build to a set of transferable skills underpinning all aspects of their onward academic studies/career programme.
4. Ensure students acquire and foster an appreciation of wider engineering contexts and underlying principles, as well as the potential careers involved so as to support their preparedness for progression to the next stage of the programme at the University.
5. Ensure that students have attained the prescribed of inter-disciplinary language competence described as Level B2 'Proficient User' by the Council of Europe, see *Common European Framework of Reference for languages: Learning, teaching assessment 2001*, Council of Europe, CUP, Cambridge, p. 24, Table 1. *Common Reference Levels: global scale*.
6. Ensure that students have attained the prescribed level of inter-disciplinary language competence to a minimum pass mark of 60% (Grade C) in the ACL accredited module Interactive Learning Skills and Communication; and therein a minimum 6.0 IELTS equivalent.

Learning Outcomes

Generic Learning Outcomes

All modules have a set of generic Learning Outcomes (LOs) attached to them, please see the Definitive Module Descriptors (DMD's) for more information. These provide a basic set of core transferable skills that can be employed as a basis to further study and life-long learning. They are delivered using an interdisciplinary and progressive approach to build these core skills within the context of subject-specific learning. Incorporated in these core skills are the key themes of relationship-management, time-management, professional communication, technological and numerical understanding and competency.

Key knowledge will be demonstrated by demonstrated understanding of:

- Personal organisation and time-management skills to achieve research goals and maintain solid performance levels.
- Understanding of the importance of attaining in-depth knowledge of terminology as used in a given topic area, as a basis to further study.
- Understanding, knowledge and application of appropriate and effective methods of communication to meet formal assessment measures.
- Understanding and knowledge as to the development of the industry and/or scholarship in relation to a given topic under study.
- Understanding of the rules applying to plagiarism and collusion.
- Ability to work as an individual, in a small team and in a larger group to effect data collation, discussion and presentation of evidence.

Key skills will be demonstrated by the ability to:

- Meet converging assessment deadlines – based on punctuality and organisation with reference to class, group and individual sessions within a dynamic and flexible learning environment with variable contact hours and forms of delivery.
- Communicate clearly using appropriate nomenclature to enhance meaning in all oral and written assessments with no recourse to collusion or plagiarism.
- Present clearly, coherently and logically in a variety of oral and written formats using a variety of appropriate qualitative and quantitative tools and evidence bases.
- Demonstrate an understanding of the current themes of a given topic, the academic and practical foundation on which they are based – demonstrated by a lack of plagiarism and need for collusion in both individual and group work.
- Collate, summarise, reason and argue effectively on a given topic without reference to another's work or ideas/concepts.
- Meet and succeed in each of the varied assessments presented.

Intended Learning Outcomes

A. Knowledge and Understanding

1. The relationship the subject of engineering has to industry, business, human development and lifestyles and its applications to the contemporary world.
2. The principles underpinning design and the use of materials in engineering applications.
3. The theories and key concepts of physical science in an interdisciplinary context.
4. Physical laws and their relevance to engineering principles
5. The application of mathematical techniques to engineering and logical decision making process.
6. Key concepts in chemistry with a particular focus on hydrocarbon chemistry.
7. The application of ICT as a fundamental tool for extracting, sourcing, describing and presenting data and information in a variety of relevant forms, and distributing data and information via a range of channels and formats.
8. Key concepts in research methodologies/methods and the ability to think, argue and express ideas in a critical manner.
9. The techniques and forms of effective and clear communication in a variety of academic and professional settings in accordance with Level C1 'Proficient User' as described by the Council of Europe.

B. Cognitive / Intellectual Skills

1. Make full use of library and IT search (catalogue and bibliographic) resources.
2. Apply research techniques to sourcing and selecting appropriate academic data and literature.
3. Integrate oral, written, non-verbal and diagrammatic skills to effect clear communication.
4. Ability to analyse data and various modes of information using appropriate techniques.
5. Ability to begin to evaluate and start to apply, reasoned thinking and supportive evidence collation to conflicting sets of information and academic opinion.

C. Practical Skills

1. Transfer and utilise key skills at a higher level of study.
2. Employ analytical skills and methodologies as a basis for further study.
3. Ability to begin to engage critically with regard to the underlying challenges facing engineering-based industries.
4. Develop the knowledge and skills to carry out basic laboratory manipulations with reference to University of Portsmouth protocols and safety regulations.

D. Transferrable Skills

1. Select, read, digest, summarise and synthesise information material in a variety of forms, both qualitative and quantitative (text, numerical data and diagrammatic) and in an appropriate manner to identify and determine key facts/themes and relevancy.
2. Use and clearly communicate discursive, numerical, statistical and diagrammatic ideas, concepts, results and conclusions using appropriate technical and non-technical language and language style, structure and form.
3. Application of basic research and referencing techniques to all aspects of study, information collation, information presentation and formulation of academic opinion.
4. Embedding the importance of self-study and reliance. This involves cultivating and developing a responsibility within each student to take cognizance for their own learning, initiative, effective time-management and self-discipline within the academic and professional environments.

5. Students will also begin to develop a very good conceptual understanding and evaluation of the main aspects of engineering that can serve them well in their future studies and careers.

Learning and Teaching Strategies and Methods

The acquisition of learning outcomes is via a combination of small group lectures, small group-based tutorial coursework (oral and written presentation) and individual coursework (oral and written presentation) and summative examination. Application of the central programme themes throughout all core modules of the stage of study via examples and topics for assessment regimes. Additional support is provided through the provision of small peer-led tutorial group work; the addition of individual tutorial support; ICP module-specific subject specialists delivering modules; guest speakers (industry/topic specific); monitoring and appraisal by ICP academic management as well as Navitas Ltd (UK) management. Lecturers and the dedicated Student Services team are on hand via email or face-to-face in the College for additional support where required or desired.

All lectures and small group tutorials are held in the designated ICP class rooms, seminar rooms and dedicated IT laboratory. Field-trips will be taken as required. All candidates are expected to maintain a 100% attendance record in accordance with CPR M3 Attendance and Monitoring.

Students are encouraged throughout the stage of study to undertake independent study both to supplement and consolidate what is being taught/learnt and to broaden their individual knowledge and understanding of the subject. This can be through the use of the University's library and IT facilities for self-directed study and to use their private IT facilities where possible.

Candidates are always encouraged to further develop intellectual skills by independent self-directed study as in the setting and monitoring of projects and coursework that require research and compilation skills as well as in-course spot-tests, examinations and participation. Students are encouraged to understand and evaluate with critical awareness the concepts studied at this level. This is further supported by an assessment framework that requires a high level of self-directed study allows candidates to foster a range of analytical skills to support further study.

Using a combination of all delivery and assessment styles (oral and written, group and individual) used within the stage of study to demonstrate competence in presentation, reports, long and short essays (to enhance summarisation techniques and limit collusion and plagiarism), timed-assignments (indicating knowledge, organisation, time management and clear communication ability), of the following: design a persuasive message from the audience's perspective; demonstrate effective presentation delivery skills in a variety of situations; leave effective voice-mail messages; write persuasive E-mails, memos letters; and write factual essays and reports in plain English.

Feedback is given to all students on all work produced and, where appropriate, confirmed in individual appraisal events associated with modules and more generally Navitas Ltd (UK) academic management. Additional interviews are made with the lecturer and/or the Student Services Team to evaluate and discuss any emerging learning issues and therein candidates options.

Academics preferably have a strong programme related background as well as academic and teaching credentials to ensure that the stage of study satisfies the generic outcomes required by the QAA Foundation Degree qualification benchmark (applied here to Level 1 only) – application of concepts to the work environment.

ICP fully support the use of technology enhanced learning both within and beyond the classroom; please see the TEL Policy for further details. Ensuring all candidates acquire

grounding in University of Portsmouth and associated end-user IT platforms for academic study. The opportunity to interface regularly with noted platforms in College, University of Portsmouth library and independent environments to develop an understanding of the implications of the use of different computer and IT systems for research.

Assessment Strategy

All assessments for core units on this programme are considered to provide opportunities for students to demonstrate knowledge and understanding of the subject matter relating to the degree programme. Some assessments lend themselves more readily to the development and demonstration of cognitive skills. Others provide evidence of practical, professional and subject specific skills. Most assessments will provide opportunities for students to demonstrate the achievement of transferable and key skills.

Assessments include a combination of summative (closed-book) examinations and summative coursework along with written assignments and in-course assessments, computer-based coursework, project reports and presentations that test all analytical skills and require the application of taught methodology to solve queries across a range of subject areas.

This indicates an ability to effectively manage a complex and flexible timetable, combining a variety of delivery and assessment modes, some of which are conflicting in submission and style (oral/written and individual/small group, to demonstrate effective organisation, self-reliance and time-management skills.

Integrated themes used across the continuous assessment framework for the stage of study allow the testing of robust copiability skills in a number of environments.

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 (Credit, 50 - 59%) – Level of competence shows an acceptable knowledge, skill and understanding sufficient to indicate that the candidate is able to 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.
*Some modules may have higher marks, please check your module guide

Course Structure, Moderation, Progression and Award Requirements

This programme is taught across two semesters full-time. Both the delivery and assessment of the programme is in English. The mode of delivery is standard delivery model.

A thirty percent sample of each assessment is second marked by a subject specialist within the College. Link tutors from the University of Portsmouth and University appointed external examiners are invited to review these samples.

A minimum overall pass mark of 40% (Grade D) achieved in all modules with the exception of Engineering Principles 1 & 2 which requires a minimum pass mark of 60% (Grade B) and Numerical Techniques 1 & 3 and Programming Concepts which require a minimum pass mark of 50%.

Please refer to College Policy and Regulation (CPR) 9 – Assessment Regulations for further details on the assessment regulations and failing to progress.

Unit Assessment Map

Level	Module Name	Module Code	Core/ Option	Credit	Assessment Type	Weighting (%)	Issued to Student	Submission Date
3	ICT Skills	BUS107BL	Core	10	(A) Practical exercise covering word and excel skills	40	Week 4	Week 8
					(B) 2 hour closed book exam	60	Week 13	Week 13
3	Engineering Principles 1	ENS101	Core	20	(A) 1500 word laboratory report	20	Week 5	Week 7
					(B) 1 hour closed book exam	30	Week 6	Week 6
					(C) 2 hour closed book exam	50	Week 13	Week 13
3	Interactive Learning Skills and Communication	ILSCBL0	Core	20	(A) Research and Reference a Topic	10	Week 4	Week 6
					(B) Oral Presentation	20	Week 4	Week 7
					(C) Group Project	20	Week 6	Week 10
					(D) Closed Book Examination 2.5 hours to include listening component	40	Week 13	Week 13
					(E) PDP Portfolio	10	Week 2	Week 10
3	Numerical Techniques 1	SCI101ES	Core	20	(A) 2 Hour closed book exam	40	Week 6	Week 6
					(B) Final 2 hour closed book	60	Week 13	Week 13
3	Engineering Principles 2	ENS102	Core	20	(A) 1 hour closed book exam -mid semester	30	Week 6	Week 6
					(B) 1500 word maximum laboratory report	20	Week 8	Week 10
					(C) 2 hour closed book exam	50	Week 13	Week 13

3	Numerical Techniques 3	SCI103	Core	20	(A) 2 Hour closed book exam	40	Week 6	Week 6
					(B) Final 2 hour closed book	60	Week 13	Week 13
3	Research Method, Critical Thinking & Expression	RES101	Core	20	(A) 1 hour in-class exercise	20	Week 4	Week 8
					(B) 1000 word written argument	20	Week 8	Week 10
					(C) Final 2 hour closed book exam	60	Week 13	Week 13
3	Programming Concepts	SCI107	Core	10	(A) MCT (20 mins)	5	Week 4	Week 4
					(B) MCT (20 mins)	5	Week 6	Week 6
					(C) MCT (20 mins)	5	Week 8	Week 8
					(D) Problem solving task	25	Week 6	Week 10
					(E) 2 hour closed book exam	60	Week 13	Week 13

Unit Learning Outcomes Map

Level	Module Name	Module Code	A 1	A 2	A 3	A 4	A 5	A 6	A 7	A 8	A 9	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
3	ICT Skills	BUS107BL	✓	✓ ✓	✓				✓ ✓	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓
3	Interactive Learning Skills and Communication	ILSCBL0	✓				✓		✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓		✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓
3	Numerical Techniques 1	SCI101ES			✓	✓	✓ ✓					✓	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓			✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓
3	Engineering Principles 1	ENS101			✓ ✓	✓ ✓	✓ ✓		✓	✓		✓	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓
3	Engineering Principles 2	ENS102			✓ ✓	✓ ✓	✓ ✓		✓	✓		✓	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓
3	Numerical Techniques 3 (Engineering)	SCI103			✓	✓	✓ ✓					✓	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓			✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓
3	Research Method, Critical Thinking & Expression	RES101	✓		✓		✓		✓	✓ ✓	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓
3	Programming Concepts	SCI107	✓	✓			✓		✓ ✓	✓	✓ ✓	✓	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓	✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓	✓ ✓

Unit Delivery Schedule – Semester 1

Week	Total Hours									
	BUS107BL		ENS101		ILSCBLO		SCI101ES		Contact hours/week	Self-directed study hours/week
	ICT Skills		Engineering Principles 1		Interactive Learning Skills and Communication		Numerical Techniques 1			
	Contact hours	Self-dir study	Contact hours	Self-dir study	Contact hours	Self-dir study	Contact hours	Self-dir Study		
1	3	5	5	10	5	10	5	10	18	35
2	3	5	5	10	5	10	5	10	18	35
3	3	5	5	10	5	10	5	10	18	35
4	3	5	5	10	5	10	5	10	18	35
5	3	5	5	11	5	11	5	11	18	38
6	3	5	5	11	5	11	5	11	18	38
7	3	5	5	11	5	11	5	11	18	38
8	3	5	5	11	5	11	5	11	18	38
9	3	5	5	11	5	11	5	11	18	38
10	3	5	5	11	5	11	5	11	18	38
11	3	5	5	11	5	11	5	11	18	38
12	3	5	5	11	5	11	5	11	18	38
13 (Exam)	2	2	2	10	4	10	2	10	18	38

Total hours / module	38	62	62	138	62	138	62	138	224	476
Notional hours / module	100		200		200		200		700	
Credit Points	10		20		20		20		70	

Unit Delivery Schedule – Semester 2

Week	Total Hours									
	ENS102 Engineering Principles 2		SCI103 Numerical Techniques 3		RES101 Research methods, critical thinking and expression		SCI107 Programming Concepts		Contact hours/week	Self-directed study hours/week
	Contact hours	Self-dir study	Contact hours	Self-dir study	Contact hours	Self-dir study	Contact hours	Self-dir Study		
1	5	10	5	10	4	8	3	5	17	33
2	5	10	5	10	4	8	3	5	17	33
3	5	10	5	10	4	8	3	5	17	33
4	5	10	5	10	4	8	3	5	17	33
5	5	11	5	11	4	8	3	5	17	35
6	5	11	5	11	4	8	3	5	17	35
7	5	11	5	11	4	8	3	5	17	35
8	5	11	5	11	4	8	3	5	17	35
9	5	11	5	11	4	8	3	5	17	35
10	5	11	5	11	4	8	3	5	17	35
11	5	11	5	11	4	8	3	5	17	35
12	5	11	5	11	4	8	3	5	17	35
13 (Exam)	2	10	2	10	2	4	2	2	8	26

Total hours / module	62	138	62	138	50	100	38	62	212	438
Notional hours / module	200		200		150		100		650	
Credit Points	20		20		15		10		65	