



# Stage 1 Postgraduate - Science and Engineering

## **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.

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## **1. Named Awards**

MSc Advanced Manufacturing  
MSc Applied Aquatic Biology  
MSc Biotechnology  
MSc Civil Engineering  
MSc Civil Engineering with  
Environmental Engineering  
MSc Civil Engineering with Geotechnical  
Engineering  
MSc Civil Engineering with Structural  
Engineering  
MSc Computer Network Administration  
and Management  
MSc Electronic and Electrical Engineering  
MSc Construction Project Management  
MSc Electronic Engineering  
MSc Engineering Geology  
MSc Geographical Information Systems  
MSc Geological and Environmental  
Hazards  
MSc Medical Biotechnology  
MSc Mechanical Engineering  
MSc Petroleum and Gas Engineering  
MSc Quantity Surveying  
MSc Real Estate Management  
MSc Applied Sport & Exercise Performance  
MSc Engineering Management  
MSc Water and Environmental  
Engineering

## 2. ICP Course Code and University Jupiter Code

PMSE – A0047

## 3. ICP Stage of Study

Stage 1 Postgraduate - RQF Level 6

## 4. Hours of study

One credit is equivalent to 10 hours of learning. This programme is comprised of 80 credit points, equivalent to 800 notional hours comprised of 216 contact hours and 584 self-directed hours.

## 5. Awarding Body

University of Portsmouth

## 6. Award Level

Postgraduate - RQF Level 7

## 7. Teaching Institution

International College Portsmouth

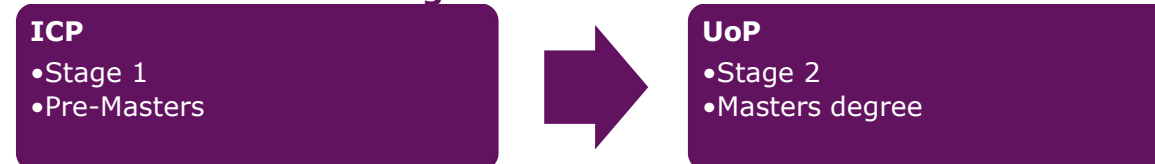
## 8. Teaching Location

University Learning Center

## 9. Faculty at Progression Stage

Faculty of Science and Faculty of Technology

## 10. Planned Programme



## **11. Document Control Information**

Original Creation – November, 2014

Last Review - April, 2024

### **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. To develop in students a fundamental knowledge and understanding of key theoretical constructs underpinning Science and Technology approaches, study, research and statistical methodologies and formal academic discourse 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 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*.
5. Ensure that students have attained the prescribed level of inter-disciplinary language competence to a minimum pass mark of 65% (Grade C) in the ACL accredited module Interactive Learning Skills and Communication; and therein a minimum 6.5 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. Definitions, concepts, theories, frameworks and themes in the broad science and technology domain. An introduction to the role of science and technology in contemporary political, cultural and educational settings.
2. A selection of key underpinning phenomena in the discipline areas such as matter and energy, force and motion, cells, ecosystems, climate change and the internet.
3. The philosophical basis of science and technology.
4. Selected quantitative and qualitative data analysis methods with a focus on: approaches and decision making; and an appreciation of the limitations of qualitative and quantitative approaches.
5. The history and epistemology of scholarship and research.
6. A full range of research methodologies and research methods.
7. The ethics of research and the process of undertaking research.
8. Techniques and formats of research communication.
9. A full range of academic and personal skills required to study successfully at postgraduate level.
10. The techniques and forms of effective and clear communication in a variety of academic and professional settings in accordance with Level B2 'Independent User' as described by the Council of Europe.

**B. Cognitive / Intellectual Skills**

1. Demonstrate a critical approach to knowledge commensurate with postgraduate level study.
2. Understand the provisional basis of knowledge and how knowledge can be advanced.
3. Describe, analyse and interpret a range of data sets.
4. Identify and justify a research question of choice.
5. Reflect upon and critically judge research output in the science and technology area.
6. Present reasoned arguments to back up academic position(s).
7. Provide solutions to problems found in science and technology contexts.

### C. Practical Skills

1. Make full use of library and IT search (catalogue and bibliographic) resources.
2. Apply advanced research techniques to sourcing and selecting academic data and literature.
3. Produce a correctly formatted research proposal and research dissertation.
4. Select and apply the appropriate descriptive and statistical methods/tests to illustrate and analyse data.
5. Integrate oral, written, non-verbal and illustrative skills to effect clear communication.
6. Execute a range of basic laboratory techniques.

### D. Transferrable Skills

1. Select, read, digest, rationalise, summarise and synthesise information in a variety of forms and in an appropriate manner to identify and determine key findings/themes and relevancy.
2. Use and clearly communicate discursive, numerical, statistical and diagrammatic ideas, results and conclusions using appropriate technical and non-technical language, structure and form.
3. Application of basic research and referencing techniques to all aspects of study, information collation and presentation, and the formulation of academic opinion.
4. Embedding the importance of independent study and self- reliance.
5. Developing a solid conceptual understanding and evaluation of the key aspects of science and technology that underpin future study and career choices.

## 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 capability 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.

## Course Structure, Moderation, Progression and Award Requirements

This programme is taught across Select number of semesters full-time. Both the delivery and assessment of the programme is in English. The mode of delivery is Insert mode of delivery.

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 50% (Grade D) achieved in all modules.

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
4	Interactive Learning Skills and Communication	ILSCPGB	Core	20	(A) Comparison of two opposing theoretical positions	30	Week 2	Week 5
					(B) Chairing a meeting to secure productive outcomes	30	Week 3	Week 4
					(C) Critique exam of a published academic paper in the relevant subject domain	40	Week 11	Week 11
4		PGBM101	Core	20	(A) Midterm	40	Week 6	Week 6

	Research Methods for PG Study				(B) Final 2 hour closed book exam	60	Week 11	Week 11
4	Mini Dissertation	PGBM103	Core	20	(A) Protocol (B) Dissertation	20 80	Week 1 Week 1	Week 4 Week 10
4	Principles of Science and Technology	PGST102	Core	20	(A) 1500 word laboratory report	20	Week 4	Week 6
					(B) 3000 word in class critique of research topic	20	Week 8	Week 8
					(C) Final 2 hour closed book exam	60	Week 11	Week 11

### 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	A 10	B 1	B 2	B 3	B 4	B 5	B 6	B 7	C 1	C 2	C 3	C 4	C 5	D 1	D 2	D 3	D 4	D 5	D 6
6	Interactive Learning Skills and Communication	ILSCPGB				✓				✓	✓	✓	✓	✓	✓			✓		✓	✓			✓	✓	✓	✓	✓	✓	
6	Research Methods for PG Study	PGBM101		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓		
6	Mini Dissertation	PGBM103		✓		✓		✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

6	Principles of Science and Technology	PGST102	✓	✓	✓	✓	✓								✓	✓					✓	✓	✓	✓	✓					✓	✓
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### Unit Delivery Schedule – Semester 1

Week	Total Hours										Contact hours/week	Self-directed study hours/week
	ILSCPGB		PGBM101		PGBM103		PGST102					
	Contact hours	Contact hours	Contact hours	Self-dir study	Contact hours	Self-dir study	Contact hours	Self-dir study				
1	6	14	6	14	3	17	6	14	21	59		
2	6	14	6	14	3	17	6	14	21	59		
3	6	14	6	14	3	17	6	14	21	59		
4	6	14	6	14	3	17	6	14	21	59		

<b>5</b>	6	14	6	14	3	17	6	14	21	59
<b>6</b>	6	14	6	14	3	17	6	14	21	59
<b>7</b>	6	14	6	14	3	17	6	14	21	59
<b>8</b>	6	14	6	14	3	17	6	14	21	59
<b>9</b>	6	14	6	14	3	17	6	14	21	59
<b>10</b>	6	12	6	12	3	17	6	12	21	53
<b>11 (Exam)</b>	2	-	2	-	-	-	2	-	6	0
<b>Total hours / module</b>	6	14	6	14	3	17	6	14	216	584
<b>Notional hours / module</b>	<b>200</b>		<b>200</b>		<b>200</b>		<b>200</b>		<b>800</b>	
<b>Credit Points</b>	<b>20</b>		<b>20</b>		<b>20</b>		<b>20</b>		<b>80</b>	