

KEY PROGRAMME INFORMATION

| | |
|---|---|
| Originating institution(s) Bournemouth and Poole College | Faculty responsible for the programme Faculty of Science and Technology |
| Final award(s), title(s) and credits HNC Engineering (Marine Technologies) – 120 (60 ECTS) Level 4 | |
| Intermediate award(s), title(s) and credits Not applicable | |
| UCAS Programme Code(s) (where applicable and if known) J610 | HECoS (Higher Education Classification of Subject) Code and balanced or major/minor load 100191 100184 |
| External reference points <ul style="list-style-type: none"> • UK Quality Code for Higher Education (The QAA): • Part A: Setting and Maintaining Academic Standards • Part B: Assuring and Enhancing Academic Quality • Subject benchmark statements - Engineering (2015) • UK Standard for Professional Engineering Competence: Engineering Technician, Incorporated Engineer and Chartered Engineer Standard (UK-SPEC) third edition from the Engineering Council UK (January 2014) • UK Standard for Professional Engineering Competence: The Accreditation of Higher Education Programmes third edition from the Engineering Council UK (May 2014) | |
| Professional, Statutory and Regulatory Body (PSRB) links Accredited by Institution of Engineering Designers (IED) to be sought March 2019 | |
| Places of delivery Bournemouth and Poole College, North Road Campus | |
| Mode(s) of delivery Part-time/Full-time | Language of delivery English |
| Typical duration Programme duration: 2 years part-time / 1 year full-time | |
| Date of first intake September 2019 | Expected start dates September |
| Maximum student numbers Not applicable | Placements Not applicable |
| Partner(s) Bournemouth and Poole College | Partnership model Franchise |
| Date of this Programme Specification June 2019 | |
| Version number Version 1.1-0725 | |
| Approval, review or modification reference numbers E201718 64 BU 1819 01 EC 1920 40 EC 1920 43 | |
| Author Matthew White | |

Programme Specification – Section 1

PROGRAMME STRUCTURE

| Programme Award and Title: HNC Engineering (Marine Technologies) | | | | | | | | |
|--|-----------------|------------------|-------------------------------|----------|----------|--|------------------------|----------------------------------|
| Level 4 Part-time Year 1 & 2 Full-time Year 1 Students are required to complete all 6 core units | | | | | | | | |
| Unit Name | Core/ Option | No of credits | Assessment Element Weightings | | | Expected contact hours per unit | Unit version no. | HECoS Subject Code |
| | | | Exam 1 | Cwk 1 | Cwk 2 | | | |
| Analytical Methods for Manufacturing | Core | 20 | | 50% | 50% | 110 | 3.0 | 101028 |
| Business and Project Management | Core | 20 | | 60% | 40% | 110 | 3.0 | 100079 (Major) 100812 (Minor) |
| Marine Electrical and Electronic Principles | Core | 20 | | 60% | 40% | 110 | 1.0 | 100194 |
| Mechanical Design Principles | Core | 20 | | 60% | 40% | 110 | 3.0 | 100430 (Major) 100033 (Minor) |
| Project | Core | 20 | | 100% | | 110 | 3.0 | 100184 |
| Supply Chain Management | Core | 20 | | 60% | 40% | 110 | 1.0 | 100209 (Major) 100093 (Minor) |
| | | | | | | | | |
| | | | | | | | | |
| Progression requirements: Students with a minimum classification of Merit will be automatically accepted for entry with advanced standing to the FdEng Engineering programmes Exit qualification: HNC Engineering (Marine Technologies) (requires 120 credits at Level 4) | | | | | | | | |

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

This programme aims to develop critically informed, agile and resourceful graduates, who:

- have a range of knowledge and skills to enable successful operation within marine technologies
- have the transferable skills necessary to operate effectively within marine technologies
- have the analytical and research skills necessary for marine technologies
- have the ability to reflect upon the shortfalls
- are competent users of computer aided engineering and the management of modern marine technologies
- are competent practitioners in hardware/software design and simulation necessary for marine technologies
- have the ability to plan and manage the supply chain and quality process to make best use of available resources

The overall aim of the programme is to produce highly employable graduates who combine an in-depth knowledge and skills in marine technologies with a wide ranging understanding of more general professional requirements. They will be critical thinkers and independent learners, able to solve complex design/engineering-related problems individually and in teams, and to critically evaluate these solutions.

The programme will focus on the requirements of the marine industry, mainly in respect to craft up to 24m long, known as recreational and leisure craft. It aims to provide supervisory level graduates adept in manufacturing and production, supply chain, electrical and electronic, and mechanical design.

These aims have been aligned with the Engineering Design Specific Learning Outcomes for Engineering Council (UK) Accredited Degree Programmes. Graduates from accredited degree programmes must achieve a number of learning outcomes incorporating the key skills of knowledge and understanding, intellectual abilities, practical skills and general transferable skills. The learning outcomes are expressed in terms of science and mathematics; engineering analysis; design; economic, legal, social, ethical and environmental context; engineering practice; and additional general skills.

A key feature of this programme is its industrial relevance and close ties with the requirements of local industry. As the majority of the students are employed within engineering, projects can be 'live' and assignments related to and based on real experiences within industry. Seminars and group work give the students the opportunity to elaborate on their experiences within industry to their peers and therefore expand knowledge beyond a purely academic sense.

ALIGNMENT WITH THE UNIVERSITY'S STRATEGIC PLAN

The HNC Engineering (Marine Technologies) is informed by and aligned with Bournemouth University's 2012-18 strategic plan and the fusion agenda. The programme will substantially enhance, through external employer/industry engagement, the core area engineering education, thus creating fusion in action. It will continue to significantly enhance engagement with this industry sector (Creating/Inspiring/Sharing), with the opportunity to further expand student numbers. Well-formed industrial relationships have developed real 'live' projects that benefit local industry, the students and academia. Further opportunities such as industrial visits and work based briefs also result in enhancing the student experience for the whole of the department.

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

LEVEL 4/HNC INTENDED LEVEL OUTCOMES

| | |
|--|--|
| <p>A: Knowledge and understanding</p> <p>This programme 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 learning outcomes:</p> |
| <p>A1 Routine marine technological problems and appropriate mathematical skills</p> <p>A2 Major scientific theories appropriate to marine technologies</p> <p>A3 ITC relevant to marine technologies</p> <p>A4 Professional and ethical responsibilities</p> <p>A5 Regulatory framework for safe engineering practice</p> <p>A6 Marine techniques in the engineering context</p> | <p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> lectures (A1-A6); seminars (A1-A6); directed reading (A2, A4-A6); use of the VLE (A1-A2, A4, A6); project (A1-A6). |
| | <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> individual reports (A1-A6); |

Programme Specification - Section 2

| | |
|--|---|
| | <ul style="list-style-type: none"> • group reports (A1, A3); • laboratory reports (A1-A2); • unseen in-class tests (A1-A2). |
| B: Intellectual skills This programme provides opportunities for students to: | The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level learning outcomes: |
| B1 Use mathematical and scientific techniques in the analysis of routine marine technological problems with guidance B2 Use computer based techniques in the analysis of routine marine technological problems with guidance B3 Analyse routine marine technological problems at system, process and component level with guidance B4 Analyse routine marine technological problems relating to balancing of cost, benefit and aesthetics with guidance B5 Develop new processes or products through the synthesis of ideas and data gathered from a limited range of sources with guidance | Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): <ul style="list-style-type: none"> • lectures (B1-B4); • seminars (B1-B5); • directed reading (B4); • use of the VLE (B1, B3); • project (B1-B5). |
| | Assessment strategies and methods (referring to numbered Intended Learning Outcomes): <ul style="list-style-type: none"> • individual reports (B1-B5); • group reports (B1-B5); • laboratory reports (B1-B3); • unseen in-class tests (B1, B3). |
| C: Practical skills This programme provides opportunities for students to: | The following learning and teaching and assessment strategies and methods enable students to achieve and to demonstrate the level learning outcomes: |
| C1 Use appropriate test and measurement equipment for experimental laboratory investigation with guidance C2 Use engineering CAD, CAM and RM software to aid marine technologies with guidance C3 Apply experimental methods to evaluate the performance of marine products or systems with guidance | Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes): <ul style="list-style-type: none"> • lectures (C1-C4); • seminars (C1-C4); • use of the VLE (C4); • project (C2-C4). |

Programme Specification - Section 2

| | |
|---|---|
| <p>C4 Plan, schedule and execute routine projects within a marine technologies context with guidance</p> | <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> • individual reports (C1-C4); • group reports (C2, C4); • laboratory reports (C1). |
| <p>D: Transferable skills</p> <p>This programme 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 learning outcomes:</p> |
| <p>D1 Operate effectively in commerce or industry in a limited range of different situations with guidance</p> <p>D2 Analyse the outcomes of actions taken and reflect upon their effects with guidance</p> <p>D3 Communicate through report writing, presentation and debate</p> <p>D4 Function as part of a team and lead teams where appropriate in either a work or education based environment</p> | <p>Learning and teaching strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> • lectures (D1, D3); • seminars (D1-D4); • use of the VLE (D3); • project (D1-D4). |
| | <p>Assessment strategies and methods (referring to numbered Intended Learning Outcomes):</p> <ul style="list-style-type: none"> • individual reports (D1-D4); • group reports (D2-D4); • laboratory reports (D3-D4). |

ADMISSION REGULATIONS

The regulations for this programme are the University's Standard Undergraduate Admission Regulations.

PROGRESSION ROUTES

Internal Progression

Students who have successfully completed the HNC Engineering (Marine Technologies) programme at Bournemouth and Poole College with a minimum classification of Merit will be automatically accepted for entry with advanced standing to the FdEng Engineering (Mechanical Design, Manufacturing Management, Marine Technologies or Electronic Design) programmes at Bournemouth and Poole College and credited with 120 credits at Level 4.

ASSESSMENT REGULATIONS

The regulations for this programme are the University's Standard Assessment Regulations for Higher National Programmes (<https://intranet.bournemouth.ac.uk/pandptest/6a-standard-assessment-regulations-higher-national.pdf>) with the following exceptions:

COMPENSATION (Section 7)

Compensation may only be applied for up to 20 credits at level 4. The Project unit cannot be compensated.

WORK BASED LEARNING (WBL) AND PLACEMENT ELEMENTS

As the part time students are normally employed in the engineering industry, all units offer informal opportunity for reflection on current practice which may be documented subsequently as evidence of work based learning.

All students, both full-time and part-time, undertake an industry related Project. This can be carried out within a company or developed within the college environment. In both cases the projects involve direct contact with the customer and as such are 'live' projects. When a project is carried out at BPC, students will normally design and develop a project specified by a company.

Site visits, presentations by and discussions with industry representatives will also ensure that a "real world" understanding of project management is achieved.

Programme Specification - Section 2

Programme Skills Matrix

| Units | | Programme Intended Learning Outcomes | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--------------------------------------|-----|-----|-----|-----|-----|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | A 1 | A 2 | A 3 | A 4 | A 5 | A 6 | B 1 | B 2 | B 3 | B 4 | B 5 | B 6 | C 1 | C 2 | C 3 | C 4 | C 5 | C 6 | D 1 | D 2 | D 3 | D 4 | |
| LEVEL 4 | Analytical Methods for Manufacturing | * | * | | | | | * | | | | | | | | | | | | | | | | |
| | Business and Project Management | | | | * | * | | | | | * | * | | | | | * | | | * | * | * | * | |
| | Marine Electrical and Electronic Principles | * | * | * | * | * | * | * | * | * | | | | * | * | | * | | | * | | | | |
| | Mechanical Design Principles | * | * | * | | | | * | | * | | | | * | | * | | | | | | * | * | |
| | Project | * | * | * | * | * | * | * | * | * | * | * | | * | * | * | * | | | * | * | * | * | |
| | Supply Chain Management | * | * | | | * | * | * | | | * | * | * | | | * | * | | | * | | | | |
| A – Subject Knowledge and Understanding This programme provides opportunities for students to develop and demonstrate knowledge and understanding of: <ol style="list-style-type: none">1. Routine marine technological problems and appropriate mathematical skills2. Major scientific theories appropriate to marine technologies3. ITC relevant to marine technologies4. Professional and ethical responsibilities5. Regulatory framework for safe engineering practice6. Marine techniques in the engineering context | | | | | | | | C – Subject-specific/Practical Skills This programme provides opportunities for students to: <ol style="list-style-type: none">1. Use appropriate test and measurement equipment for experimental laboratory investigation with guidance2. Use engineering CAD, CAM and RM software to aid marine technologies with guidance3. Apply experimental methods to evaluate the performance of marine products or systems with guidance4. Plan, schedule and execute routine projects within a marine technologies context with guidance | | | | | | | | | | | | | | | | |
| B – Intellectual Skills This programme provides opportunities for students to: <ol style="list-style-type: none">1. Use mathematical and scientific techniques in the analysis of routine marine technological problems with guidance2. Use computer based techniques in the analysis of routine marine technological problems with guidance3. Analyse routine marine technological problems at system, process and component level with guidance4. Analyse routine marine technological problems relating to balancing of cost, benefit and aesthetics with guidance5. Develop new processes or products through the synthesis of ideas and data gathered from a limited range of sources with guidance | | | | | | | | D – Transferable Skills This programme provides opportunities for students to: <ol style="list-style-type: none">1. Operate effectively in commerce or industry in a limited range of different situations with guidance2. Analyse the outcomes of actions taken and reflect upon their effects with guidance3. Communicate through report writing, presentation and debate4. Function as part of a team and lead teams where appropriate in either a work or education based environment | | | | | | | | | | | | | | | | |

Programme Specification - Section 2

THE SUMMARY OF UK-SPEC SPECIFIC LEARNING OUTCOMES

| | Units | Level | O or C? | US1i | US2i | US3 | E1i | E2i | E3i | E4i | D1i | D2i | D3 | D4i | D5i | D6i | S1 | S2 | S3 | S4 | S5 | P1i | P2i | P3i | P4i | P5 | P6i | P7i | P8i |
|-------------------|---|-------|---------|------|------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|----|----|----|----|----|-----|-----|-----|-----|----|-----|-----|-----|
| HNC | Business and Project Management | 4 | C | | | | ✓ | ✓ | | | | | | | | | ✓ | ✓ | ✓ | ✓ | | | | | | | | | |
| | Marine Electrical and Electronic Principles | 4 | C | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | | | ✓ | | ✓ | ✓ | | | ✓ | |
| | Project | 4 | C | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Supply Chain Management | 4 | C | | | | ✓ | ✓ | | | | | | ✓ | | | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Mechanical Design Principles | 4 | C | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | | | | | | ✓ | | | | | | |
| | Analytical Methods for Manufacturing | 4 | C | ✓ | ✓ | | ✓ | ✓ | | | | | | | | | | | | | | | | | | | | | |
| FdEng | The Engineering Professional | 5 | C | | | | | | | | | | | | | | | | ✓ | ✓ | ✓ | | | | | | | | |
| | Work Based Unit | 5 | C | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Major Project | 5 | C | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Marine Auxiliary Systems | 5 | C | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | | | ✓ | | ✓ | ✓ | | | ✓ | |
| | Quality Management | 5 | C | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | | | ✓ | |
| Total HNC | | | | 3 | 3 | 1 | 5 | 6 | 3 | 3 | 3 | 2 | 1 | 3 | 1 | 2 | 3 | 2 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 |
| Total FdEng | | | | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 2 | 3 | 4 | 2 | 2 | 4 | 2 |
| Total HNC & FdEng | | | | 6 | 6 | 4 | 9 | 10 | 7 | 7 | 6 | 5 | 5 | 6 | 4 | 5 | 6 | 5 | 7 | 7 | 3 | 6 | 5 | 6 | 7 | 4 | 4 | 7 | 4 |