| PROGRAMME SPECIFICATION |  |
|---|---|

| | | |
|---|---|---|
| **1** | **Awarding Institution** | Newcastle University |
| **2** | **Teaching Institution** | Newcastle University |
| **3** | **Final Award** | MEng (Hons) |
| **4** | **Programme Title** | Marine Technology with Honours in: |
| **5** | **UCAS/Programme Code** | Marine Technology with Foundation Year - J616<br>Naval Architecture - H503<br>Marine Engineering - H501<br>Offshore Engineering – H365<br>Small Craft Technology – H524 |
| **6** | **Programme Accreditation** | RINA, IMarEST |
| **7** | **QAA Subject Benchmark(s)** | Engineering including Annex B4 – MEng.Degrees |
| **8** | **FHEQ Level** | 7 |
| **9** | **Date written/revised** | September 2007 |

**10 Programme Aims**

1. To produce graduates who have developed well founded knowledge skills and understanding within one or more specific subject areas of Marine Technology.
2. A comprehensive understanding of techniques applicable to their own advanced scholarship and originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline.
3. To couple a sound theoretical grasp of the subject with practical application, awareness of responsibilities to society and the environment, the requirement for flexibility and the ability to assemble information from a variety of sources; the ability to prioritise work and meet deadlines; the ability to work alone and also within teams.
4. To prepare a student for one of four well recognised sectors of the marine industries worldwide, namely Marine Engineering, Naval Architecture, Offshore Engineering and Small Craft Technology.
5. To provide a programme which meets the FHEQ at Honours level and which takes appropriate account of the subject benchmark statements in Engineering (E) document as referenced in (http://www.qaa.ac.uk/crntwork/benchmark/engineering.pdf)

**11 Learning Outcomes**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas. The programme outcomes have references to the benchmark statements for (subject) (X).

1. To equip students having diverse backgrounds with knowledge skills and understanding in their chosen programme that will enable them to be able to deal with complex issues both systematically and creatively, to make sound judgements in the absence of complete data, and to communicate their conclusions clearly to specialist and non-specialist audiences.
2. To ensure students receive the core material recommended by the accrediting professional institutions (The Institute of Marine Engineering, Science and Technology and the Royal Institution of Naval Architects).
3. To enable students to enhance their projects by facilitating the School's exceptional research base to inform teaching and lecturing activities and to demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional equivalent level.
4. To equip students with appropriate transferable practical skills in computing and information technology, data collection and analysis, problem formulation and solving and

communication skills, (both oral and written), and for effective group participation including independent action, accepting responsibilities, formulating ideas proactively, planning and developing strategies, implementing and executing agreed plans, leading and managing teams where required, evaluating achievement against specification and plan, and decision making.

5. To encourage students to develop awareness and responsible attitudes towards the needs of society and the environment in the application of their engineering knowledge, including a regard for safety appropriate to their profession.
6. To have a repertoire of skills to enable the acquisition, evaluation and interpretation of information.
7. To have the ability to communicate effectively, make presentations, work as a member of a team, manage their time, prioritise and manage their work effectively
8. To instil in students an awareness of their professional responsibilities and the need for their own continuing professional development.
9. To contribute to the working environment within the School, such that students enjoy the University learning experience and wish to maintain contact with the School in its future activities, professionally as well as socially.

**Knowledge and Understanding**

On completing the programme students will have gained and be able to demonstrate:

A1. A comprehensive knowledge and understanding of Mathematical models and Physics principles that are relevant to Marine Technology and an appreciation of their limitations (E and B4).

A2. The comprehensive understanding of the fundamental concepts, principles and theories of Marine Technology (E and B4).

A3. Extensive knowledge and understanding of business and management techniques that are relevant to marine technology marine technologists (and B4).

A4. Detailed knowledge and understanding of the essential facts, concepts, principles and theories relevant to the student's chosen area of specialisation within Marine Technology (E and B4).

A5. The role of marine technologists in society and the constraints within which their engineering judgement will be exercised (E).

A6. The professional and ethical responsibilities of marine technologists (E).

A7. The environmental issues that affect Marine Technology and the issues associated with sustainable engineering solutions.

A8. Conceptual and detailed design of artefacts appropriate to their area of Specialisation (E and B4)

A9. Production practice including codes of practice, design, the assessment of safety risks, and the legislative framework for safety.

**Teaching and Learning Methods**

- Acquisition of 1 and 2 is through a combination of lectures, tutorials, example classes, laboratory experiments, coursework and projects in Stages 1 and 2.
- Acquisition of 3 is through a combination of lectures, supervisions, coursework and projects in Stages 3 and 4.
- Acquisition of 4 is through a combination of lectures, laboratory experiments, coursework and projects in Stages 3 and 4.
- Acquisition of 5 and 6 is through lectures throughout the programme and coursework in Stage 3.
- Acquisition of 7 is through a combination of lectures, seminars, coursework and projects especially in Stages 3.
- Acquisition of 8 is through the Group Project in Stages 4, the design projects in Stages 3 and 4 and lectures and coursework in Stages 2 and 3.
- Acquisition of 9 is addressed in lectures throughout the course.

**Assessment Strategy**

Testing the knowledge base is through a combination of unseen written examinations (1-4, 9) and assessed coursework (1-9) in the form of laboratory experiment write-ups (1, 2, 4), examinations (8), coursework reports (3-9) and project reports and presentations (2, 3, 4, 7,8).

**Subject-specific/professional skills**

A successful student will be able to:

B1 Plan, conduct a programme of investigative work and reports the results by integrating presentational techniques for maximum impact (E and B4).

B2 Analyse and solve engineering problems by:

- using fundamental knowledge to investigate new and emerging technologies;
- extracting from given data, that which is pertinent to an unfamiliar problem, using computer based engineering tools where appropriate;
- selecting appropriate data from a range of possible data sets and presenting them in alternative forms to create deeper understanding and/or greater impact (E and B4);

B3 Generate an innovative design for systems, components or processes to fulfil new needs (E and B4).

B4 Be creative in the solution of problems and in the development of designs by:

- applying engineering techniques taking account of a range of commercial and industrial constraints;
- researching and using new methods required for novel situations and adapting to specific purposes if necessary;
- recognising the capabilities and limitations of computer based methods for engineering problem solving, with awareness of the future developments of IT tools;
- learning new theories, concepts, methods etc. in an unfamiliar situation outside the discipline area (E and B4);

B5 Evaluate designs and make improvements (E)

B6 Integrate and evaluate information and data from a variety of sources (E)

B7 Take a holistic approach to solving problems and designing systems, applying professional judgements to balance risks, costs, benefits, safety, reliability, aesthetics and environmental impact (E)

**Assessment Strategy**

Analysis and problem solving skills are assessed through unseen written examinations and coursework. Experimental, research and design skills are assessed through laboratory experiment write-ups, coursework projects and project reports, presentations and unseen written examinations. Creative and design skills are assessed through coursework and unseen written examinations.

**Teaching/Learning Methods and Strategies**

Intellectual skills are developed through the teaching and learning programme outlined above (and in section 11).

Analysis and problem solving skills are further developed through example, classes, tutorials, coursework and project work.

Experimental, research and design skills are further developed through coursework activities, laboratory experiments, research and design projects. Individual feedback is given to students on all work produced.

Creative and design skills are developed through group design and project work.

**Practical Skills**

On completing the programme students should be able to:

C1. Execute safely a series of experiments (E);

C2. Use laboratory equipment to generate data (E);

C3. Analyse experimental or computational results and determine their strength and validity(E);

C4. Prepare technical drawings;

C5. Prepare technical reports;

C6. Give technical presentations;

C7. Use the scientific literature effectively;

C8. Take notes effectively;

C9. Use computational tools and packages and have:

- a comprehensive knowledge and understanding of the role and limitations of ITC;
- an awareness of development technologies in ITC;
- an understanding of the capabilities of computer based models for solving problems in engineering;
- the ability to assess the limitations of particular cases (E and B4);

C10. Produce a conceptual or elemental design to a specification;

C11. Search for information to develop concepts.

**Teaching/Learning Methods and Strategies**

Practical skills are developed through the teaching and learning programme outlined above (and in section 11).
Practical experimental skills (1-3) are developed through laboratory experiments and project work.
Skill 4 is taught through lectures and developed through drawing coursework exercises.
Skill 5 and 6 are taught through classes in Stage 1 and then developed through feedback on reports written and presentations made as part of coursework assignments.
Skill 7 is developed through research project work.
Skill 8 is taught in Stage 1 and practised throughout the programme.
Skill 9 is taught and developed through coursework exercises and project work.
Skill 10 is taught and developed through the design project in Stage 3 and lectures and coursework in Stages 2 and 3.
Skill 11 is practised through the group design project and course marks.

**Assessment Strategy**

Practical skills are assessed through laboratory experiment write-ups, coursework reports, project reports and presentations.

**Transferable/Key Skills**

A successful student will be able to:

D1. Communicate effectively (in writing, verbally, group presentations and through drawings) by integrating presentational techniques and the information to be presented for maximum impact (E and B4);
D2. Apply mathematical skills (algebra, geometry, modelling, analysis);
D3. Work as a member of a team with strong capabilities for independent action, accepting responsibility, formulating ideas proactively, planning and developing strategies, implementing and executing agreed plans, leading and managing teams where required, evaluating achievement against specification and plan, and decision making (E and B4);
D4. Use Information and Communications Technology (E);
D5. Manage resources and time (E);
D6. Learn independently in familiar and unfamiliar situations with open-mindedness and in the spirit of critical enquiry (E);
D7. Learn effectively for the purpose of continuing professional development and in a wider context throughout their career (E).

**Teaching and Learning Methods**

Transferable skills are developed through the teaching and learning programme outlined above (and in section 11).
Skill 1 is taught through classes and the design project in Stage 3 and then developed through feedback on reports written and presentations made as part of coursework assignments.
Skill 2 is taught through lectures and tutorials and developed throughout the course.
Skill 3 is developed through group project work.
Skill 4 is developed in many modules and is a skill developed as essential part of project work and report writing.
Skill 5 is developed through laboratory experiments, projects and other coursework activities and individual learning.
Skill 6 is introduced in Stage 1 and developed throughout the course with particular emphasis in Stage 3 on the investigative project.
Skill 7 although not specifically taught, the other skills are nurtured and developed throughout the course.

**Assessment Strategy**

Skill 1 is assessed through coursework reports, presentations and oral examinations.
Skill 2 is assessed primarily through examinations.
Skill 4 is assessed through examinations and through research project work.
The other skills are not formally assessed.

## 12 Programme Curriculum, Structure and Features

**Basic structure of the programme**

The normal Undergraduate year is approximately 31 weeks, arranged in three terms and currently divided into two Semesters. The course normally lasts four years, although it is possible to take a gap year or spend time abroad at an approved university.
Every Honours student studies 120 credits in each Stage (or year), resulting in M.Eng. candidates completing 480 credits. Candidates must complete one Stage before proceeding to the next; the only part-time study is limited provision for the repetition of failed modules.
All students follow the same programmes in Stages 1. In the second year, students elect more extensively within Marine Technology. This is enhanced and extended in Stage 3 and Stage 4. .
*The programme is structured on a semester pattern. You study modules comprising 120 credits in each of Stage I, II, III and IV . After successful completion of four years full-time study, students may receive a degree of Master of Engineering (MEng).*
*In addition there are the following exit points:*

- *Certificate of Higher education, following successful completion of Stage I ;*
- *Diploma of Higher education, following successful completion of Stage II ;*
- *Degree of Bachelor of Engineering following successful completion of Stage III.*

*The duration of all the courses may be extended by one year through enrolment on the Engineering Foundation Year.*
*A University credit is the equivalent of 10 student study notional hours. Each module is a self-contained part of the programme of study and carries a credit rating*

**Key features of the programme (including what makes the programme distinctive)**

Much of the study undertaken at Masters level reflects research at the forefront of Engineering and, in particular, Ship Science. You will have demonstrated originality in the application of knowledge, and you will understand how the boundaries of knowledge are advanced through research. You will be able to deal with complex issues both systematically and creatively, and show originality in tackling and solving problems, individually and as part of a team. You will have the qualities needed for employment in circumstances requiring sound judgement, personal responsibility and initiative, in complex and unpredictable professional environments.

**Programme regulations (link to on-line version)**

http://www.ncl.ac.uk/regulations/programme/2007-2008/programme/h501_j616_h503_j616_h356_j616_h524_j616.php

**13 Criteria for admission**

*Entry qualifications*
Admission offers normally conform to the UK Engineering Council "SARTOR" minimum requirements for M.Eng. and B.Eng with Chartered Engineer status (i.e. UK GCE A-level grades BBB and CCC respectively (both including Mathematics) for Stage 1 admission). In addition, the University recruits candidates with a wide range of equivalent qualifications based on its knowledge of SARTOR equivalents and other international qualifications. A limited number of international qualifications and HND holders with appropriate subjects and grades may be considered for direct entry to Stage 2.

Unlike many other Universities, the School is committed to retaining its B.Eng. programme, both in recognition of the number of international students who wish to graduate after three years and to avoid exclusion of potentially good applicants who have not yet been able to demonstrate M.Eng. academic standards. The first three years of B.Eng. and M.Eng. are essentially the same and any candidate passing Stage 3 "with Merit" may enter Stage 4 M.Eng., with permission from the Degree Programme Director (DPD).
*Admissions policy/selection tools*
Engineering requires a wide range of attributes and abilities, so selection is not solely based on academic grades. Selectors seek evidence of motivation and commitment from the Personal Statement and Reference on UCAS forms and applicants are encouraged to attend for interview whenever possible.

*Non-standard Entry Requirements*
Notwithstanding adherence to SARTOR standards, the School is committed to widening access, particularly for "late developers". Links exist with the Engineering Access Course at Newcastle College and there is a Faculty Foundation Year (Stage 0) for those with insufficient science and

mathematics to enter Stage 1 directly. Limited numbers of places may be available to Regional candidates through the University's "Partners Programme". All UCAS forms, including Late or Summer applications are considered, but the School does not normally take candidates through Clearing.

*Additional Requirements*

*Level of English Language capability*
Those applicants whose first language is not English, would be required to demonstrate achievement of IELTS 6.0 or equivalent certificate in English.

All new students whose first language is not English are required to take an English Language Proficiency Test. This is administered by INTO Newcastle University Centre on behalf of Newcastle University. Where appropriate, in-sessional language training can be provided. The INTO Newcastle University Centre houses a range of resources which may be particularly appropriate for those interested in an Erasmus exchange.

## 14 Support for Student Learning

*Induction*
During the first week of the first semester students attend an induction programme. New students will be given a general introduction to University life and the University's principle support services and general information about the School and their programme, as described in the Degree Programme Handbook. New and continuing students will be given detailed programme information and the timetable of lectures/practicals/labs/ tutorials/etc. The International Office offers an additional induction programme for overseas students.

*Study skills support*
Students will learn a range of Personal Transferable Skills, including Study Skills, as outlined in the Programme Specification. Some of this material, e.g. time management is covered in the appropriate Induction Programme. Students are explicitly tutored on their approach to both group and individual projects.

Numeracy support is available through Maths Aid.

Help with academic writing is available from the Writing Centre.

*Academic support*
The initial point of contact for a student is with a lecturer or module leader, or their tutor (see below) for more generic issues. Thereafter the Degree Programme Director or Head of School may be consulted. Issues relating to the programme may be raised at the Staff-Student Committee, and/or at the Board of Studies.

*Pastoral support*
All students are assigned a personal tutor whose responsibility is to monitor the academic performance and overall well-being of their tutees. In addition the University offers a range of support services, including one-to-one counselling and guidance or group sessions/workshops on a range of topics, such as emotional issues eg. Stress and anxiety, student finance and budgeting, disability matters etc. There is specialist support available for students with dyslexia and mental health issues. Furthermore, the Union Society operates a Student Advice Centre, which can provide advocacy and support to students on a range of topics including housing, debt, legal issues etc.

*Support for students with disabilities*
The University's Disability Support Service provides help and advice for disabled students at the University - and those thinking of coming to Newcastle. It provides individuals with: advice about the University's facilities, services and the accessibility of campus; details about the technical support available; guidance in study skills and advice on financial support arrangements; a resources room with equipment and software to assist students in their studies.

*Learning resources*

The University's main learning resources are provided by the Robinson and Walton Libraries (for books, journals, online resources), and Information Systems and Services, which supports campus-wide computing facilities. The Kummerman Resource Centre is a School based dedicated Library/Information Centre..

## 15 Methods for evaluating and improving the quality and standards of teaching and learning

*Module reviews*
All modules are subject to review by questionnaires which are considered by the Board of Studies. Changes to, or the introduction of new, modules are considered at the School Teaching and Learning Committee and at the Board of Studies. Student opinion is sought at the Staff-Student Committee and/or the Board of Studies. New modules and major changes to existing modules are subject to approval by the Faculty Teaching and Learning Committee.

*Programme reviews*
The Board of Studies conducts an Annual Monitoring and Review of the degree programme and reports to Faculty Teaching and Learning Committee.

*External Examiner reports*
External Examiner reports are considered by the Board of Studies. The Board responds to these reports through Faculty Teaching and Learning Committee. External Examiner reports are shared with institutional student representatives, through the Staff-Student Committee.

*Student evaluations*
All modules, and the degree programme, are subject to review by student questionnaires. Informal student evaluation is also obtained at the Staff-Student Committee, and the Board of Studies. The National Student Survey is sent out every year to final-year undergraduate students, and consists of a set of questions seeking the students' views on the quality of the learning and teaching in their HEIs. With reference to the outcomes of the NSS and institutional student satisfaction surveys actions are taken at all appropriate levels by the institution.

*Mechanisms for gaining student feedback*
Feedback is channelled via the Staff-Student Committee and the Board of Studies.

*Faculty and University Review Mechanisms*
The programme is subject to the University's Internal Subject Review process. Every five years degree programmes in each subject area are subject to periodic review. This involves both the detailed consideration of a range of documentation, and a two-day review visit by a review team which includes an external subject specialist in addition to University and Faculty representatives. Following the review a report is produced, which forms the basis for a decision by University Teaching and Learning Committee on whether the programmes reviewed should be re-approved for a further five year period.

*Accreditation reports*
The programme is accredited by:
Institute of Marine Engineering, Science and Technology (IMarEST)
Royal Institution of Naval Architects ( RINA)

*Additional mechanisms*
The School receives Input from the School Industrial Advisory Board, whose members are from a wide range of industries, government bodies, classification societies etc.

## 16 Regulation of assessment

*Pass mark*
The pass mark is 40 (Undergraduate programmes)

*Course requirements*

Progression is subject to the NU's Undergraduate Progress Regulations (http://www.ncl.ac.uk/calendar/university.regs/ugcont.pdf) and Undergraduate Examination Conventions (http://www.ncl.ac.uk/calendar/university.regs/ugexamconv.pdf). In summary, students must pass, or be deemed to have passed, 120 credits at each Stage. Limited compensation up to 40 credits and down to a mark of 35 is possible at each Stage and there are resit opportunities, with certain restrictions.Progression is subject to the University's Masters Degree Progress Regulations, Taught and Research and Examination Conventions for Taught Masters Degrees. Limited compensation up to 40 credits of the taught element and down to a mark of 40 is possible and there are reassessment opportunities, with certain restrictions.

*Weighting of stages*
The marks from Stages 2 will contribute to the final classification of the degree
The weighting of marks contributing to the degree for Stages 3 is 1:2'

*Common Marking Scheme*
The University employs a common marking scheme, which is specified in the Undergraduate Examination Conventions, namely

| | **Modules used for degree classification (DC)** | **Modules not used for degree classification** |
|---|---|---|
| <40 | Fail | Failing |
| 40-49 | Third Class | Basic |
| 50-59 | Second Class, Second Division | Good |
| 60-69 | Second Class, First Division | Very Good |
| 70+ | First Class | Excellent |

*Role of the External Examiner*
An External Examiner, a distinguished member of the subject community, is appointed by Faculty Teaching and Learning Committee, after recommendation from the Board of Studies. The External Examiner is expected to:

- See and approve examination papers
- Moderate examination and coursework marking
- Attend the Board of Examiners
- Report to the University on the standards of the programme

In addition, information relating to the programme is provided in:

The University Prospectus (see http://www.ncl.ac.uk/undergraduate/ or http://www.ncl.ac.uk/postgraduate/

The School Brochure (contact enquiries@ncl.ac.uk)

The University Regulations (see http://www.ncl.ac.uk/calendar/university.regs/)

The Degree Programme Handbook

Please note. This specification provides a concise summary of the main features of the programme and of the learning outcomes that a typical student might reasonably be expected to achieve if she/he takes full advantage of the learning opportunities provided. The accuracy of the information contained is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.

**Annex**

## Mapping of Intended Learning Outcomes onto Curriculum/Modules

| Intended Learning Outcome | Module codes (Comp/Core in Bold) |
|---|---|
| A1 | **MAR1001**-MAR1002-MAR1005-**MAR1006-**MAR1007-MAR1008-MAR2003-MAR2022- **ENG1001**-ENG1007-ENG2001-ENG2008-EEE2010-MAR8022 |
| A2 | **MAR1001-MAR1003**-MAR1005-**MAR1006**-MAR2001 MAR2002-MAR2003-MAR2006-MAR2007-MAR2008-MAR3016-MAR3017- MAR3022- MAR3008 |
| A3 | MAR1005-ENG2001- MAR3021-MAR3027-MAR2001-MAR2014-BUS3010-MAR8022-MAR8035- ENG4002-CME8012 |
| A4 | MAR2001-MAR2002-MAR2003-MAR2007-MAR2008- -MAR2011-MAR3001-MAR3002-MAR3003-MAR3004-MAR3011-MAR3012-MAR3013-MAR3014-MAR3015-MAR3017-MAR3019-MAR3020-MAR3022-MAR3023-MAR3024-MAR4003-MAR8003-MAR8017-MAR8021-MAR8098-MAR8026- MAR8024-MAR8034- MAR8038 |
| A5 | MAR2012- MAR3001-MAR3002-MAR3003-MAR3004- -MAR3015-MAR3021-MAR4099 |
| A6 | **MAR1001-MAR1003**-**MAR1006-**MAR3001-MAR3002-MAR3003-MAR3004-MAR3007-MAR8022 |
| A7 | MAR2006-MAR2007-MAR2012-MAR3001-MAR3002-MAR3003-MAR3004 -MAR3019 -MAR3098-MAR4099 |
| A8 | MAR2006-MAR2007-MAR2012-MAR3001-MAR3002-MAR3003-MAR3004-MAR3007-MAR3019-MAR3098-MAR4004-MAR4099-MAR8021-MAR8005 |
| A9 | **MAR1001-MAR1003**-**MAR1006**-MAR1008-MAR2013-MAR3001-MAR3002-MAR3003-MAR3004-MAR3007-MAR4099-MAR8004 |
| B1 | MAR3098- MAR3001-MAR3002-MAR3003-MAR3004-MAR3025- MAR2014- MAR2012-MAR4004-MAR4099 |
| B2 | EEE1007-MEC1003-EEE2010-**MAR1001-MAR1003**-MAR2001-MAR2002-MAR2003-MAR2006-MAR2007-MAR2008-MAR2010-MAR2011-MAR2014-MAR3001-MAR3002-MAR3003-MAR3004-MAR3011-MAR3012-MAR3013-MAR3014-MAR3015-MAR3016-MAR3017-MAR3019-MAR3021-MAR3022-MAR3024-MAR3025-MAR3026-MAR3027-MAR3098-MAR4003-MAR4004-MAR4099-MAR8003-MAR8026 |
| B3 | MAR2012- MAR3001-MAR3002-MAR3003-MAR3004-MAR3019-MAR3098 |
| B4 | MAR2012-MAR3001-MAR3003-MAR3098-MAR4002-MAR8003-MAR8021-MAR8026-MAR8034 |
| B5 | MAR3012- MAR3001-MAR3002-MAR3003-MAR3004-MAR3098-MAR4002-MAR4004-MAR4005-MAR4006-MAR4007 |
| B6 | MAR3001-MAR3002-MAR3003-MAR3004-MAR3098-MAR4099 |
| B7 | MAR3001-MAR3002-MAR3003-MAR3004-MAR3098-MAR4002-MAR4004-MAR4005-MAR4006-MAR4007-MAR4099 |
| C1 | **MAR1001-MAR1003**-**MAR1006**-MAR2002-MAR2003-MAR2010-MAR2011-MAR2012-MAR3017 |
| C2 | MAR2006-EEE2010-MAR2003-MAR3013 |
| C3 | MAR2014 |

| | |
|---|---|
| C4 | MAR3098-MAR3001-MAR3002-MAR3003-MAR3004-MAR2007-MAR3019-MAR4002-MAR4004-MAR4005-MAR4006-MAR4007-MAR4099 |
| C5 | MAR3098-MAR3001-MAR3003 |
| C6 | MAR3098-MAR3001-MAR3002-MAR3003-MAR3004-MAR4099 |
| C7 | MAR3098-MAR3001-MAR3002-MAR3003-MAR3004-MAR4099 |
| C8 | All modules |
| C9 | MAR1004-MAR2001-MAR2006-MAR2007-MAR2012-MAR2014-ENG4001-MAR4002-MAR4099-MAR8005-MAR8006 |
| C10 | **MAR1003**-MAR2006-MAR2007-MAR2012-MAR3001-MAR3002-MAR3003-MAR3004- MAR3019-MAR3098-MAR4004-MAR4005-MAR4006-MAR4007-MAR4099 |
| C11 | **MAR1001-MAR1003**-**MAR1006**- MAR3001-MAR3002-MAR3003-MAR3004-MAR3098-MAR4004-MAR4005-MAR4006-MAR4007-MAR4099 |
| D1 | MAR3001-MAR3002-MAR3003-MAR3004-MAR3098-MAR4004-MAR4005-MAR4006-MAR4007-MAR4099 |
| D2 | All modules |
| D3 | MAR3098-MAR3001-MAR3002-MAR3003-MAR3004-MAR4004-MAR4005-MAR4006-MAR4007-MAR4099 |
| D4 | MAR1004-MAR2014-MAR3001-MAR3002-MAR3003-MAR3004-MAR3098-MAR4099 |
| D5 | MAR3098-MAR3001-MAR3002-MAR3003-MAR3004-BUS3010-MAR4004-MAR4005-MAR4006-MAR4007-MAR4099 |
| D6 | MAR3098-MAR3001-MAR3002-MAR3003-MAR3004-MAR4099 |
| D7 | MAR3027-MAR3098-MAR4099 |