

PROGRAMME SPECIFICATION

1	Awarding Institution	Newcastle University
2	Teaching Institution	Newcastle University
3	Final Award	MSc
4	Programme Title	Quantitative Finance and Risk Management
5	UCAS/Programme Code	5173F
6	Programme Accreditation	N/A
7	QAA Subject Benchmark(s)	N/A
8	FHEQ Level	7
9	Date written/revised	Revised May 2012

10 Programme Aims

To provide learning opportunities which enable course participants to acquire the following:-

1. The capability to understand and analyse the behaviour of international financial markets with a view to employment in this area.
2. The knowledge, understanding, skills and attributes required for analysing the strategies of investors in financial markets with a view to employment in this area.
3. The knowledge, understanding, skills and attributes required to use an appropriate programming language for empirical modelling in finance and risk management.
4. The ability to apply the knowledge, skills and understanding gained on the programme to a specific empirical focus within an individual project or dissertation which will be in the area of quantitative finance and risk management.
5. The skills necessary to successfully enhance their CPD activity, self-directed learning, or pursue further postgraduate study.

To contribute to the University's objectives by increasing the number of graduate students and enhancing their key skills and employability, diversifying the teaching portfolio and developing alternative modes of delivery, and responding to the CPD agenda.

To provide a qualification which fully meets the learning outcomes at Level 7 in the national qualifications framework.

To provide a programme that conforms to University policies and QAA Codes of Practice.

11 Learning Outcomes

The programme provides students with opportunities to demonstrate disciplinary competency by developing the key principles and theories in their subject area and combines theory with the application of skills required to generate solutions within their discipline.

Knowledge and Understanding
<p>On completing the programme students should: The programme provides opportunities for the students to develop and demonstrate:</p> <p>A1 An advanced understanding of the role of finance in a modern economy.</p> <p>A2 An advanced understanding of the operation and behaviour of financial markets and investors.</p> <p>A3 An advanced understanding of current research and scholarship on finance theory.</p> <p>A4 An advanced understanding of empirical modelling techniques and the MATLAB programming language.</p> <p>A5 An ability to define the key components of countries' business environment and give examples of how environmental components differ across countries.</p> <p>A6 An ability to identify ethical problems in a case and make recommendations for appropriate courses of action.</p>
Teaching and Learning Methods
<p>The primary means of imparting knowledge and understanding is a combination of lectures (A1-6), a variety of different seminar modes (A1-6), supervision in the development of project proposals (A1-6), and tutorial supervision of a dissertation (A1-6). Each seminar mode is interactive and student-focused, including discussion of taught and read material (A1-6), individual and group projects (A1, A2, A4, A5, A6), and practical projects (A1, A2, A4, A5, A6).</p> <p>As this will be essentially a conversion programme there will be a heavy emphasis on the taught components, however throughout the taught components of the course, students are encouraged and expected to engage in independent reading and are supported in this by the provision of extensive and prioritised reading lists.</p> <p>Students are enabled to learn through their active participation in the different modes of course seminar (A1-6), group project work (A1, A2, A4, A5, A6), and through the supervision given to individual project work (A1, A2, A4, A5, A6).</p>
Assessment Strategy
<p>Knowledge and understanding are assessed by a range of approaches, chosen to accurately assess student capabilities. These comprise essays (A1, A2, A4, A5, A6), individual and group project reports (A1, A2, A4, A5, A6), a literature review and research proposal (A1, A2, A4, A5, A6), individual presentations (A1, A2), and formal seen and unseen exams (A1-6). Some, or all, of A1-6 (depending upon the topic), but especially A3, are also assessed by means of a dissertation.</p>
Intellectual Skills
<p>On completing the programme students should be able to: The programme provides opportunities for the students to develop and demonstrate:</p> <p>B1. The ability to critically engage with contemporary debates on important issues related to the operation of financial markets.</p> <p>B2. The ability to critically engage with contemporary debates on the role of empirical research on the efficiency of financial markets.</p> <p>B3. The ability to critically evaluate current research and scholarship on finance theory.</p>

B4. The ability to deal with complex issues both systematically and analytically, and to use the analysis to make sound judgements.

Teaching and Learning Methods

Cognitive skills are developed through seminar discussion groups (B1-4), short individual projects (B1, B2, B4), and group projects (B1-4).

All the cognitive skills (B1-4) are exercised significantly at an advanced level during the preparation and execution of the dissertation, supported by the module *Research Methods*, and tutorial supervision for individual students.

Assessment Strategy

Knowledge and understanding are assessed by a range of approaches, chosen to accurately assess student capabilities. These comprise essays (B1, B2, B4), individual and group project reports (B1, B2, B4), a literature review and research proposal (B1, B2, B4), individual presentations (B1, B2), and formal seen and unseen exams (B1-4). Some, or all, of B1-4 (depending upon the topic), but especially B3, are also assessed by means of a dissertation.

Practical Skills

On completing the programme students should be able to:

The programme provides opportunities for the students to develop and demonstrate:

C1. The ability to deploy the main analytical techniques in the area of finance and an advanced capability with some of these techniques.

C2. The ability to critically assess the quality of the analytical data generated by these techniques, and to synthesise and present relevant data, conclusions and recommendations to both specialist and non-specialist audiences

C3. The ability to apply advanced empirical modelling techniques and the MATLAB programming language.

C4. The ability to apply, with originality and creativity, the knowledge, skills and understanding gained on the programme to complex issues within the finance and related industries.

C5. Where relevant, numeracy by applying appropriate computational techniques to solve numerical problems in their discipline.

Teaching and Learning Methods

Subject specific and practical skills are taught through lectures and seminars (C1-5), supervision of the development of individual and group projects (C4). Apart from the lectures, all of these teaching methods are also designed to further enable student learning and to complement their independent study and group-work. Such learning is reinforced and further developed as students apply their new skills in their dissertation (C1-5) under the guidance of their supervisor.

Assessment Strategy

Subject specific and practical skills are assessed by means of short individual project reports (C1-3, C5), short group project reports (C1-5), individual audio-visual presentations with accompanying notes (C2), essays (C1, C2), exams (C1, C2, C5), and the literature review and project proposal for *Research Methods* (C2, C4, C5). Some, or all, of C1-5 (depending upon the topic) are also examined by means of a dissertation. A feature of the programme is the use of mid-term assessments to permit the students to receive early feedback on their progress.

Transferable/Key Skills

On completing the programme students should be able to:

The programme provides opportunities for the students to develop and demonstrate the following key skills:-

D1. The ability to communicate clearly and concisely to both specialist and non-specialist audiences using the appropriate written, verbal and audio-visual channels.

D2. The ability to exercise responsibility and leadership in group projects.

D3. The ability to appropriately use library and information sources, and IT resources and applications.

D4. The ability to organise and prioritise work activities and manage time effectively.

The ability to work independently with professional responsibility, creative initiative and originality and in groups contributing appropriately and effectively towards the team based activity.

Teaching and Learning Methods

A Knowledge and understanding

The primary means of imparting knowledge and understanding is a combination of lectures (A1-6), a variety of different seminar modes (A1-6), supervision in the development of project proposals (A1-6), and tutorial supervision of a dissertation (A1-6). Each seminar mode is interactive and student-focused, including discussion of taught and read material (A1-6), individual and group projects (A1, A2, A4, A5, A6), and practical projects (A1, A2, A4, A5, A6).

As this will be essentially a conversion programme there will be a heavy emphasis on the taught components, however throughout the taught components of the course, students are encouraged and expected to engage in independent reading and are supported in this by the provision of extensive and prioritised reading lists.

Students are enabled to learn through their active participation in the different modes of course seminar (A1-6), group project work (A1, A2, A4, A5, A6), and through the supervision given to individual project work (A1, A2, A4, A5, A6).

B Cognitive skills

Cognitive skills are developed through seminar discussion groups (B1-4), short individual projects (B1, B2, B4), and group projects (B1-4). All the cognitive skills (B1-4) are exercised significantly at an advanced level during the preparation and execution of the dissertation, supported by the module *Research Methods*, and tutorial supervision for individual students.

C Subject-specific/professional skills

Subject specific and practical skills are taught through lectures and seminars (C1-5), supervision of the development of individual and group projects (C4). Apart from the lectures, all of these teaching methods are also designed to further enable student learning and to complement their independent study and group-work. Such learning is reinforced and further developed as students apply their new skills in their dissertation (C1-5) under the guidance of their supervisor.

<p>D Key (transferable) skills</p> <p>Some key skills are formally taught in the specific <i>Research Methods</i> (D1-D3). They are also taught informally as an additional outcome of those teaching methods focused on group-work (D3-4), and the preparation of short Briefings (D1, D2). To promote learning, students are encouraged to acquire, develop and utilise key skills in seminars involving individual and group projects – with both audio-visual presentations and written reports (D1, D3, D4) – and individual and group projects requiring information search, analysis and interpretation (D2, D3). Planning, organisation and prioritisation and effective time management (D3) are promoted by means of a strictly enforced coursework submission timetable. Opportunities for the students to develop key skills exist in each of the components of the dissertation and associated supervision: identification of issue and construction of research plan (D4), literature review and method development (D2, D4), primary and secondary research (D1-4) and analysis and final write-up (D1-4)</p>
<p>Assessment Strategy</p>
<p>A Knowledge and understanding</p> <p>Knowledge and understanding are assessed by a range of approaches, chosen to accurately assess student capabilities. These comprise essays (A1, A2, A4, A5, A6), individual and group project reports (A1, A2, A4), a literature review and research proposal (A1, A2, A4, A5, A6), individual presentations (A1, A2), and formal seen and unseen exams (A1-6). Some, or all, of A1-6 (depending upon the topic), but especially A3, are also assessed by means of a dissertation.</p> <p>B Cognitive skills</p> <p>Cognitive skills are assessed using essays (B1, B2, B4), exams (B1-4), a literature review and research project proposal for the <i>Research Methods</i> (B1-3), individual short project reports (B1-4), short group reports (B1-4), and individual audio-visual presentations with accompanying notes (B3, B4). Some, or all, of B1-4 (depending upon the topic) are also examined by means of an extended individual project or dissertation.</p> <p>C Subject-specific/professional skills</p> <p>Subject specific and practical skills are assessed by means of short individual project reports (C1-5), short group project reports (C1-5), individual audio-visual presentations with accompanying notes (C2), essays (C1, C2), exams (C1, C2), and the literature review and project proposal for <i>Research Methods</i> (C2, C4). Some, or all, of C1-5 (depending upon the topic) are also examined by means of a dissertation. A feature of the programme is the use of mid-term assessments to permit the students to receive early feedback on their progress.</p> <p>D Key (transferable) skills</p> <p>Key skills are not independently assessed. However, all the key skills (D1-4) are indirectly assessed by the main modes of coursework utilised to assess the other learning outcomes (A-C inclusive) (essays, exams, short briefings, individual and group project reports, individual presentations, the literature review and project proposal). Some, or all, of D1-4 (depending upon the topic) are also assessed by means of a dissertation</p>

12 Programme Curriculum, Structure and Features
Basic structure of the programme
http://www.ncl.ac.uk/regulations/programme/
Key features of the programme (including what makes the programme distinctive)
<p>The Business School's MSc Quantitative Finance and Risk Management (QFARM) programme builds on the School's established strengths in economics and finance and has been created in response to the increased growth of the financial services sector. Worldwide growth in the sector has furthered the demand for students with specialist skills and competencies in finance and risk management. Closely related to the School's MSc Finance and Banking and Finance programmes, the QFARM degree features compulsory modules in Credit Risk Modelling and MATLAB for Finance. The MSc QFARM programme is particularly aimed at those interested in pursuing a career as a quantitative analyst in the investment banking and risk management sectors.</p> <p>The program has many distinctive features including a mix of compulsory and optional modules, and a supervised dissertation.</p>
Programme regulations (link to on-line version)
http://www.ncl.ac.uk/regulations/programme/

13 Criteria for admission
<p><i>Entry qualifications</i></p> <p>A first degree at upper second class honours level or above from a UK University (or equivalent from a non-UK institution). Applicants whose first language is not English will require a minimum of IELTS 6.5 or equivalent with no sub score below 6.0. Pre-sessional courses and tests in English Language are provided by the University if required and successful completion of these may be a condition of entry.</p> <p><i>Admissions policy/selection tools</i></p> <p>Offers of places are made to suitably qualified candidates following an assessment of applicants' application forms and are conditional upon applicants achieving a minimum of an upper 2nd class honours degree or overseas equivalent (if they do not hold such a degree at the time of assessment); supplying evidence of mathematical education; and satisfactory references.</p> <p><i>Non-standard Entry Requirements</i></p> <p>Applicants who hold non-standard qualifications, and/or have an appropriate level of relevant experience, will be encouraged to apply and considered on an individual basis.</p> <p><i>Additional Requirements</i></p> <p><i>Level of English Language capability</i></p> <p>Applicants for whom English is not a first language must provide evidence of a satisfactory command of English by means of a TOEFL score of 575 or greater, or by an IELTS score of 6.5 or greater with no sub score below 6.0 or equivalent.</p>

14 Support for Student Learning

The Student Services portal provides links to key services and other information and is available at: <http://www.ncl.ac.uk/students/>

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. The Business School provides formal induction sessions to all new postgraduates covering the organisation of postgraduate affairs, the research groupings in the School, research facilities in the School and University, and the rights and responsibilities of postgraduates. Induction meetings will be led by the Director of Postgraduate Studies and MSc Degree Programme Director, and will also serve to introduce the students to each other and to the idea of a multi-disciplinary learning environment.

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.

Support is provided through a range of sources including Personal Tutors in the School, a Supervisor for the individual extended project, the School Liaison Librarian, and School computing and technical services.

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.

The MSc Degree Programme Director will be responsible for the administration and management of the course. This responsibility will include ensuring coherence and continuity within the delivered modules. The Degree Programme Director will be available to all student for advice and discussion of any academic issues arising. All School module leaders will be available for advice and discussions of academic issues arising. Full specification and detail of the MSc Programme will be set out in the Degree Programme Handbook.

Under the tutor system, each student will be allocated a specific member of staff for academic advice and guidance. Formal meetings will be held each semester and students will have personal and e-mail access to a Tutor. All postgraduates are provided with the Postgraduate Handbook on entry into the School that provides information and guidance on a range of academic issues.

Each student will be assigned a Supervisor to provide personal supervision and guidance on the conduct of the individual extended project, and the resultant report.

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 e.g. 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.

Under the tutor system, each student will be allocated a specific member of staff for pastoral advice and guidance. Formal meetings will be held each semester and students will have personal and e-mail access to a Tutor. All postgraduates are provided with the Postgraduate Handbook on entry in to the School that provides information and guidance on a range of pastoral issues.

The MSc Degree Programme Director will be available to all students for advice and discussion of any pastoral issues arising.

The Business School has a recently refurbished and spacious Postgraduate Common Room on the 2nd floor of the Armstrong Building, which is well-used by both taught postgraduate students and PhD students. It has comfortable chairs, kitchen facilities for refreshments (staffed by a full time assistant), and the room can be used by the students for social, as well as self-organised academic events such as reading groups.

In addition to tutorial assistance the University also runs a Counselling Service. This service exists for students who wish to discuss and explore any personal concerns that are causing them difficulty. Counsellors are available to see students every weekday.

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.

All of the School's dedicated teaching rooms are wheelchair-accessible, as is the Postgraduate Common Room, and there is access to purpose-built toilets. Any further special needs will be accommodated by those delivering the course modules.

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.

English Language Support

INTO (a private sector partner of the University) run specific in-sessional, non-credit bearing classes specifically for Newcastle University Business School (NUBS) Postgraduate students (English for Specific Academic Purposes – ESAP). Students are grouped by programme or related programmes to allow the content of sessions to be relevant to their masters programme studies. The sessions are scheduled around programme timetables to ensure students are able to attend. When non-native English speaking students join the University, they take an English Language Assessment and are graded according to their level. All but the highest scoring level students are automatically registered onto the ESAP classes.

All students have access to the Blackboard Managed Learning Environment, and all taught modules will have a Blackboard area providing electronic access to all teaching materials, extensive further resources, communication with students on that module, and links to relevant web-sites.

The School has a shared computing facility located on the second floor of the Armstrong Building which is used for teaching purposes and by students working individually on projects and essays. The computer network runs standard word processing, spreadsheet and statistical packages as well as offering access to the Internet. Comprehensive instruction in the use of the computing facilities is given through workshops. All University Computing Service clusters are open to postgraduates.

All postgraduate students in the school can obtain a limited number of free photocopying vouchers for use in the Robinson Library. This library provides an extensive range of appropriate books and journals and the Business School has its own specialist information and library holdings relevant to the course content.

Academic Support

The Humanities and Social Sciences (HASS) Faculty of the University offer the Graduate Skills Enhancement Programme as an optional, non-credit bearing programme for students to supplement their studies and assist them with settling into a UK academic environment. The University also has the Writing Development Centre, a service available to any student for assistance in academic writing.

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.

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

N/A

Mechanisms for review and evaluation of teaching, learning, assessment, the curriculum and output standards

- Student questionnaires issued to all students on the degree programme.
- Module feedback questionnaires
- Annual monitoring and review.
- Peer observation of teaching
- Internal subject review
- External examiners reports
- Annual module review
- Annual review of progression rates, degree classes achieved, graduate employment statistics

Mechanisms for gaining student feedback on the quality of teaching and their learning experience

- Staff Student Committee
- Student representation on Board of Studies
- Student evaluation questionnaire

Committees Responsible for Monitoring and Evaluating Quality and Standards

- Board of Studies
- Staff Student Committee
- Faculty Teaching and Learning Committee
- University Teaching and Learning Committee
- Examination Boards

The output from the review and evaluation process are fed into the various committees responsible for monitoring and evaluation. The MSc DPD is a member of each committee and Board and will ensure that any issues raised are considered and appropriate action is taken.

16 Regulation of assessment

Pass mark

The pass mark is 50%

Course requirements

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.

The University employs a common marking scheme, which is specified in the Taught Postgraduate Examination Conventions, namely:

Summary description applicable to postgraduate Masters programmes

<50	Fail
50-59	Pass
60-69	Pass with Merit
70 or above	Pass with Distinction

Summary description applicable to postgraduate Certificate and Diploma programmes

<50	Fail
50 or above	Pass

Role of the External Examiner

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

- i. See and approve assessment papers
- ii. Moderate examination and coursework marking
- iii. Attend the Board of Examiners
- iv. 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/postgraduate/>)

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

The University Regulations (see <http://www.ncl.ac.uk/regulations/docs/>)

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.

MSc Quantitative Finance and Risk Management
Mapping of Intended Learning Outcomes onto Curriculum/Modules

Intended Learning Outcome	Module codes (Comp/Core in Bold)
A1	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018.
A2	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018.
A3	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018.
A4	NBS8186, NBS8187, NBS8202, NBS8185, NBS8201, NBS8020.
A5	NBS8015, NBS8202, NBS8020, NBS8200.
A6	NBS8015, NBS8020, NBS8200.
B1	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018.
B2	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018, NBS8259.
B3	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018, .
B4	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018, .
C1	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018, .
C2	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018,
C3	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200.
C4	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018.
C5	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018, NBS8259.
D1	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018, NBS8259.
D2	NBS8202, NBS8018, NBS8200, NBS8259.
D3	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018, NBS8259.
D4	NBS8015, NBS8186, NBS8187, NBS8019, NBS8185, NBS8201, NBS8202, NBS8020, NBS8200, NBS8018,, NBS8259.