## **PROGRAMME SPECIFICATION**



1	Awarding Institution	Newcastle University
2	Teaching Institution	Newcastle University
3	Final Award	BA (Hons)
4	Programme Title	Modern Languages with Management Studies
5	UCAS/Programme Code	R9N2
6	Programme Accreditation	
7	QAA Subject Benchmark(s)	Languages and related studies, area studies
8	FHEQ Level	Н
9	Date written/revised	April 2008

#### 10 Programme Aims

1 To foster intercultural awareness and understanding (an appreciation both of internal diversity and of transcultural connectedness of cultures), and an attitude of curiosity and openness towards different cultures.

2 To provide students with knowledge and skills that prepare them for further intellectual development and further independent study.

3 To provide a flexible programme of study through variety of student choice in modules in Modern Languages within an informed advisory framework.

4 To give students the opportunity to spend time studying or working in the countries in which the languages they are studying are spoken.

5 To develop proficiency in receptive (reading and listening), productive (writing and speaking), and mediating skills in two or three languages

6 To enable the study of organisations, their management and the changing external environment in which they operate.

7 To prepare students for a career in business and management

#### 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 relevant benchmark statements.

#### Knowledge and Understanding

On completing the programme students should have knowledge and understanding of:

A1 the lexis, grammatical structures, registers and usage of two or three modern languages to BA Honours degree standard, and where taken as an option, other languages to ALTE Levels 3, 4 or 5 (see Statement of Standards)

A2 aspects of the history, society, culture and linguistic development of the relevant countries in East Asia, Europe and Latin America dependent upon the languages chosen for study and according to module selection (see section 12).

A3 certain areas of specialist study, according to module selection, in cultural studies, film, history, language, linguistics, literary studies and politics of the relevant countries in East Asia, Europe and Latin America.

A4 the internal diversity and connections between cultures.

A5 (for students opting to write a dissertation), of a topic studied in-depth and independently.

A6. core business areas (finance, economics, marketing, organisational behaviour/ human resource management) as subjects of academic study and as practical activities.

A7. how to evaluate critically ideas, concepts and practices related to business and management.

A8. the business environments and the institutions including business firms, governments, international organisations and the markets in which businesses operate.

A9. through optional modules knowledge and understanding of specialist areas within Management Studies

## **Teaching and Learning Methods**

The primary means of imparting knowledge and understanding of the modern languages (A1) is via a mix of communicative, student-centred language teaching methods and formal linguistic instruction. In the case of A2-A3, knowledge and understanding are generally conveyed through lectures and seminars which guide students towards independent reading and enable students to self-assess and develop their learning through group discussion, take-home tasks; guided self-teaching activities; e-mail discussion and e-mail based group working; the preparation of presentations and/or reports. A4 is developed initially within the communicative language training framework and is further enhanced during the students' year abroad. In A5 (optional dissertation) one-to-one tutorials provide academic guidance, while the opportunity to carry out independent research allows students to apply and practise research skills. Additionally students are facilitated to read research articles, take part in student-centred projects, business games and analysis of case studies during their progression over the three stages (A6-A8).

#### Assessment Strategy

Knowledge and understanding of the modern language (A1) is assessed by written continuous assessment and class tests (evaluating student understanding and progress), and unseen written, aural and oral examinations. Outcomes A2-3 are

assessed by essay and/or unseen written examination, oral presentation & video presentation, (requiring independent, critical analysis and application of intellectual models, principles and theories). Outcome A4 is assessed during the year abroad by a personal learning record and in some cases an intercalary project. Outcome A5 is assessed by a 5-6000 word dissertation. Outcomes A1- A8 are assessed by unseen exams and various forms of coursework – essays requiring critical analysis, business reports, case studies, software development, presentations and dissertations.

## Intellectual Skills

On completing the programme students should be able to:

B1 gather, synthesise and evaluate information.

B2 undertake independent, critical analysis.

B3 organise and present ideas within the framework of a structured and reasoned argument, oral or written.

B4 apply appropriate methodologies to specialist areas of study.

B5 (for those who choose to write a dissertation), design a research project and select and employ appropriate research methodologies

B6 Solve problems within the context of business and management

## Teaching and Learning Methods

B1-4 skills are developed through seminar preparation and presentation, group discussion and written assignments. B5 is developed through one-to-one tutorials to facilitate the development of independent study and research skills through student self-evaluation. B6 skills are initially developed by encouraging students to prepare and give presentations at seminars relating to particular business problems, and later through student-centred project work and analysis of current research in seminars and tutorials.

#### **Assessment Strategy**

B1-4 are assessed by means of course work (e.g. essays, oral presentations, video presentations) and unseen written examinations. They are also assessed as part of oral examinations. They may also be assessed by dissertation. Intellectual skills relating to C6 are assessed by essays, projects and unseen examinations.

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On completing the programme students should be able to:

- C1 show receptive (reading and listening) and productive (writing and speaking) skills in two or three languages to BA Honours degree standard.
- C2 perform a range of communicative tasks.
- C3 translate non-technical texts from and into the target language, develop competent professional liaison interpreting skills.

- C4 make effective use of language reference materials, such as grammars, dictionaries and corpora.
- C5 practice independent language learning.
- C6. develop quantitative skills required for managing in a business environment
- C7. develop critical analytical skills to relate theory to practice

C8. Analyse business information and operations for management decision making

## Teaching and Learning Methods

Learning outcomes C1-2 are achieved via communicative, student-centred skills training, (e.g. developing and practising reading skills, enhancing listening skills through language laboratory work, liaison interpreting, analysing and practising different writing skills, and conducting oral discussion and presentation, both individually and as part of a team), and formal grammar instruction (e.g. guided study, drills and exercises, and use of IT resources). C1-2 skills may be further enhanced by delivery of specified modules in the target language. These skills are developed and consolidated during the year abroad. C3 is achieved by guided translation into and out of the target language, and analysis of translation techniques; liaison interpreting in and out of the target language; reading for gist exercises; summary and evaluation of texts in the modern language, working in the modern language. C4-5 are achieved in the teaching of C1-3, and further enhanced by study skills sessions as detailed in section 13 (below). Self-access language learning is also encouraged in order to further both C4 and C5. Learning outcomes C6-C8 are achieved via lectures where these skills are demonstrated and then followed up in seminar groups. These sessions are essential to enable students to practice and master the requisite quantitative and analytical skills.

## Assessment Strategy

C1-3 are assessed by written continuous assessment and class tests (evaluating student progress) and unseen written examination (reading, writing, translating and interpreting skills), aural examination (listening and writing skills) and oral examination (listening, speaking and interpreting skills). Skills C4 and C5 are not formally assessed. Management- specific skills are assessed by unseen examinations (C6), projects (C7) and case studies and presentations (C8).

## Transferable/Key Skills

On completing the programme students should be able to:

- D1 communicate clearly and effectively, both orally and in writing.
- D2 give oral presentations.
- D3 manage one's time, make plans and set priorities in order to achieve an

objective.

- D4 work creatively and flexibly with others as part of a team, and, in the case of the intercalary project, the ability to conduct an effective interview.
- D5. adapt and operate effectively within a different cultural environment.
- D6. use library and bibliographic research resources.
- D7. analyse and solve problems
- D8. use IT effectively, such as word processing, email, databases, online environments and the use of the Internet as a research and study tool.
- D9. Numeracy and computer literacy
- D10. Initiative and adaptability

## **Teaching and Learning Methods**

D1 is enhanced through seminar presentations and discussions, and through written assignments. In the case of language modules, they are developed through communicative skills training. Skills D2-3 and D6-8 are practised through seminar preparation and presentation. D3 and D6-8 are further developed through written assignments and research-based modules. D4 is developed through team presentations and projects (including the intercalary project). D5 is developed initially through communicative language training, and is later enhanced during the student's year abroad. D8 is further enhanced through the use of IT resources in language teaching and as an organisational tool for certain modules. D6 and D8 skills are also developed during induction. Students develop their time management skills through time constrained activities in class and through set work for seminars. Business games allow students to develop initiative and adaptability (D10).

#### **Assessment Strategy**

D1 is assessed by essay, dissertation and unseen written examination, (written communication), while both D1 and D2 are assessed via assessed seminar presentations and oral examinations (oral communication). D3 and D6-7 are assessed in a number of ways, including written assignments, unseen examinations, assessed seminar preparation and presentation, self-directed language coursework and preparation for language classes. D4 is assessed via team presentations and projects (including the intercalary project, which involves a transcribed interview).

D5 is assessed via the personal learning record produced during the year abroad. D8 is assessed in a number of ways including the preparation of written assignments and seminars, portfolio work at Stage 1 and systems building at Stage 2 and 3. Numeracy (D9) is assessed through project work and unseen examination. D10 is assessed as part of course work and group work.

## 12 Programme Curriculum, Structure and Features

## Basic structure of the programme

The programme is studied over four years full-time based on 30 weeks attendance per annum. Students study two of the following languages: Chinese, Japanese, French, German, Portuguese, Spanish. Stages 1, 2 and 4 of the programme are spent in residence attending the University of Newcastle; Stage 3 is an intercalary year during which students may either spend the whole year in a country where one of the languages studied is spoken, or split the year between two or even three countries where the target languages are spoken. Each year or stage requires the study of modules with a total credit value of 120. 20 credits of module study represent 200 hours of student work, including lectures and other teaching (such as seminars), private study, preparation of coursework and exam preparation and revision. Larger modules are proportionately heavier in their work content. The weighting of compulsory practical language modules varies between 20 and 40 credits depending on the target language and the Stage at which it is being studied. All other modules at Stages 1, 2 and 4 are generally 20 credits in weight. Modules undertaken during the intercalary year have a weighting of 100 credits (Personal Learning Record) and 20 credits (Intercalary Project or Study Abroad module).

In Stage 1 students are required to study 40 credits of compulsory practical language modules for Level A languages and 20 for Level B languages, and 40 credits of Management Studies modules. The language modules must be passed for the purposes of progression to Stage 2. In Stage 2 students are required to study 40 credits of compulsory language modules for Level B Chinese and Japanese and 20 credits for all other Level B languages. In Stage 4 students are required to study 40 credits for Level C Chinese and Japanese and 20 credits for all other Level B and C languages. In addition to the compulsory practical language modules, students must take further modules to bring their credit weighting up to a total of 120 credits at Stages 1, 2 and 4. In stage 2, 20 credits of compulsory Management Studies is taken, and a further 20 credits' worth chosen from a list of options. In stage 4, students choose 40 credits' worth from a list of options in Management Studies. Further language modules are chosen from the range offered at the appropriate stage in that particular year in the School of Modern Languages. For a student to have a language named on their degree certificate they must have studied a total of 80 credits in compulsory language modules and language specific optional modules across Stages 2 and 4.

The compulsory practical language modules are conducted mainly in the foreign language; optional modules are taught in a combination of the target language and English, varying from module to module and from year to year. The range of options includes those that are language specific and provided by the relevant constituent sections of the School of Modern Languages and those that are open to all students of modern languages and are provided by colleagues across the School. At Stage 1 students study two languages, at least one of which must be at Level B. Only one language may be studied *ab initio* at Level A. In the compulsory practical language modules the students develop the language skills of reading, writing, listening and speaking; these modules also provide knowledge and understanding of the target language and its cultural context as well as the foundations of subject-specific skills (outcome A1, 2, & 4, C1-5). Students choose additional credits from a range of introductory modules within the School of Modern Languages in linguistics, film, literature, society and institutions; these modules enhance knowledge and understanding of the language and of specialist areas (outcomes A2, A3) as well as providing an introduction for intellectual skills (B1-3) and effective practice in key transferable skills (especially outcomes D1-4). ). In Management Studies, the programme provides the students with a general foundation in the main disciplines of management including accounting, IT, quantitative techniques, economics, marketing, organisational behaviour.

At Stage 2 students study two languages, at least one of which must be at Level C. In addition to the compulsory practical language modules additional credits are chosen from a range of options in film, history, linguistics, literature, media, politics and visual arts. For those students studying German an *ab initio* option in Dutch language is available and for those studying Spanish an *ab initio* option in Catalan. Students continue to develop the language skills of reading, writing, listening, speaking and translation; language modules are designed to develop these skills in preparation for the forthcoming Year Abroad (outcome A1, 2, & 4, C1-5), practise cognitive skills in the target language (B1-3) as well as key transferable skills (D1, 2, 4 & 6). The optional modules are intended to be as broad-ranging as possible to allow informed choices to be made about more specialised final-year options; they develop knowledge and understanding of the language in relation to specialist areas of study (A2-3), while at the same time providing a sufficient introduction to critical skills and methodology appropriate to the area (B1-4) and further advancing key transferable skills (especially outcomes D1-2, 6-7). ). In Management Studies, Stage 2 focuses on the business operations and systems of organisations as well as human resource management. This is complemented by a more in-depth understanding of organisational behaviour. Students may select options at Stage 2 which allow them to begin to specialise in certain management areas, and develop entrepreneurial skills.

At Stage 3 students generally may *either* spend the whole year in a country where one of the target languages is spoken, working as a teaching assistant in a school or college, or studying at a university, or undertaking an approved work placement, *or* split the year between two countries where the target languages are spoken, studying at universities or undertaking approved work placements. However, students wishing to study Chinese or Japanese at Stage 4 are required to spend a complete academic year pursuing courses of study at a university or comparable institution in the relevant country. The School of Modern Languages has a number of student exchange programmes and/or formal links with Universities in France (8 institutions), Germany (7 institutions), Spain/Portugal (8 institutions), China (6 institutions) and Japan (7 institutions), as well as informal links with the British Institute in Paris and a number of institutions in Latin America.

The Year Abroad is fully accredited and assessment is by means of a personal learning record (100 credits) plus either an intercalary project (20 credits) or marks achieved at the host university (to a total of 20 credits). While all aspects of knowledge, understanding and language skills will be developed during Stage 3, there will be particular opportunities for increasing intercultural awareness and understanding (A4), for developing self-study skills for language learning (C5), for developing organisational and interpersonal skills (D3-5); students preparing a dissertation will have the opportunity to develop knowledge and cognitive skills in this area too (A5, B5).

At Stage 4 students study two languages, one of which must be at Level D. The language modules at Stage 4 are taught on the basis that students have reached a high (Level C) or very high level (Level D) of competence during their year abroad. The emphasis now is on sophisticated use of language in all skills (A1, 2 & 4, C1-5) as well as the cognitive abilities of analysis and structured argumentation (B2-3). Opportunities to practise interpreting skills are available through translation and interpreting courses (C3). A wide range of more specialised options in film, history, linguistics, literature, media, politics and visual arts takes the cognitive skills to a much higher level of development, including greater emphasis upon independent analytical skills, use of appropriate methodologies and problem-solving skills (B1-4, D1-3, 6-7). Students writing a dissertation as well as those preparing an extended essay will develop their knowledge and understanding as well as their subjectspecific, cognitive and transferable skills over a broad range of outcomes (A2, 3, & 5, C1 & 4, B1-5, D1, 3, 6 & 7). In Management Studies, students take 40 credits of options that allow further specialisation in the subjects of their choice.. Options include accounting and finance, E-business, Information systems management, advanced marketing, public sector management and critical management studies.

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

Flexibility in terms of the level of languages taken (post A level and ab initio) including East Asian Languages. Possibility of movement across degree programmes across the School depending on options taken.

#### Programme regulations (link to on-line version) http://www.ncl.ac.uk/regulations/programme/

## 13 Criteria for admission

#### Entry qualifications

ABB with A in either French, German or Spanish.

#### Scottish qualifications

AABBB/ ABBBB at Higher Grade, including at least one of French, German and Spanish. Combinations of Highers and Advanced Highers are accepted.

#### International Baccalaureate

32 points with at least one Higher Level French, German or Spanish at grade 6 or above.

## Admissions policy/selection tools

The programme welcomes applications from both A/AS level candidates and non-standard entrants (Partners Programme candidates, Mature Students, Access Courses). Students to whom offers are made are invited to an open day to meet staff and students and see the School. Attendance is not compulsory.

Admission is to the appropriate level according to qualifications at the starting point, which in turn will determine the level of outcome at the end of the degree course. Chinese, French, Japanese, German, Portuguese and Spanish may all be started *ab initio*.

## Non-standard Entry Requirements

### Access to HE courses

Candidates offering Access to HE courses are welcomed and considered on an individual basis.

Evidence of relevant language study to a suitable level is also required.

Additional Requirements

Level of English Language capability

6.5 IELTS or approved equivalent.

## 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 (see <a href="http://www.ncl.ac.uk/international/coming\_to\_newcastle/orientation.phtml">http://www.ncl.ac.uk/international/coming\_to\_newcastle/orientation.phtml</a>)

#### 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 individual modules. On-line Study Skills packages are available on the SML UG Community site on BlackBoard. Students are explicitly tutored on their approach to both group and individual projects.

#### Academic support

All students are assigned a Degree Programme Director whose responsibility is to monitor the academic performance and progress of their tutees. Issues relating to the programme may be raised with the Degree Programme Director, at the Staff-Student Committee, and/or at the Board of Studies.

#### Pastoral support

Each student is assigned a personal tutor who is responsible for pastoral support, giving help and advice on general welfare and personal problems. In addition the University offers a range of support services, including the Student Advice Centre, the Counselling and Wellbeing team, the Mature Student Support Officer, and a Childcare Support Officer, see http://www.ncl.ac.uk/undergraduate/support/welfare.phtml

#### 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. For further details see <a href="http://www.ncl.ac.uk/disability-support/">http://www.ncl.ac.uk/disability-support/</a>

#### Learning resources

The University's main learning resources are provided by the Robinson Library (for books, journals, online resources), the Open Access Centre, and Information Systems and Services (ISS), which supports campus-wide computing facilities, see <a href="http://www.ncl.ac.uk/undergraduate/support/acfacilities.phtml">http://www.ncl.ac.uk/undergraduate/support/acfacilities.phtml</a>

All new students whose first language is not English are required to take an English Language test. Where appropriate, in-sessional language training can be provided. There is a range of resources for learning other languages which may be particularly appropriate for those interested in an Erasmus exchange. See <u>http://www.ncl.ac.uk/langcen/</u>

# 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 Undergraduate 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, where there are students representatives. The Board responds to these reports through Faculty Teaching and Learning Committee

#### Student evaluations

All modules and each stage of study are subject to review by student questionnaires. 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. Further information is at <u>www.thestudentsurvey.com/</u> In addition to this Newcastle University carries out an Institutional Survey with all first year students. With reference to the outcomes of the NSS and institutional student surveys actions are taken at all appropriate levels by the institution.

Mechanisms for gaining student feedback

Module questionnaires, Stage questionnaires, 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, see http://www.ncl.ac.uk/aqss/gsh/internal\_subject\_review/index.php

Accreditation reports Additional mechanisms

#### 16 Regulation of assessment

#### Pass mark

The pass mark is 40 (Undergraduate programmes)

#### Course requirements

Progression is subject to the University's Undergraduate Progress Regulations (<u>http://www.ncl.ac.uk/calendar/university.regs/ugcont.pdf</u>) and Undergraduate Examination Conventions (<u>http://www.ncl.ac.uk/calendar/university.regs/ugexamconv.pdf</u>). 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.

#### Weighting of stages

Work undertaken at Stages 2, 3 and 4 counts towards the final award. Work completed at Stage 4 carries double the weighting of work completed at Stages 2 and 3. If the mark gained in SML3005 or SML3006 at Stage 3 (both 20 credits) is greater than the lowest mark for any 20-credit module (or the average of the two lowest 10-credit modules) taken at Stage 2, then the mark for SML3005 or SML3006 will replace that lower mark (or average of the two lowest 10-credit modules) when calculating the degree average and preponderance.

#### Common Marking Scheme

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

	Honours	Non-honours
<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/)

The School Brochure (contact <a href="mailto:enquiries@ncl.ac.uk">enquiries@ncl.ac.uk</a>)

The University Regulations (see <a href="http://www.ncl.ac.uk/calendar/university.regs/">http://www.ncl.ac.uk/calendar/university.regs/</a>)

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.

## Mapping of Intended Learning Outcomes onto Curriculum/Modules

		Intended Learning Outcomes					
Module	Туре	Α	B	C	D		
Language Modules							
CHN1003		1, 2, 4	1&3	1-5	1-5		
CHN1004							
CHN2001							
CHN2009							
CHN4001							
FRE1065		1, 2, 4	1&3	1-5	1-5		
FRE1066							
FRE1071							
FRE2061							
FRE4061							
GER1062		1, 2, 4	1&3	1-5	1-5		
GER1063							
GER1071							
GER2061							
GER2031							
GER4061							
JPN1003		1, 2, 4	1&3	1-5	1-5		
JPN1004							
JPN2001							
JPN4001							
JPN4061							
POR1065		1,2,4	1&3	1-5	1-5		
POR1066							
POR2061							
POR4061							
LAS2027							
SPA1065		1, 2, 4	1&3	1-5	1-5		
SPA1066							
SPA1071							
SPA2021							
SPA2061							
SPA4061							
Content modules							
CHN1005		2-4	1-4	1	1-8		
CHN2004							
CHN2005							
CHN2007							
CHN2009							
CHN4006							
FRE1006		2-4	1-4	1	1-8		
FRE2004							
FRE2005							
FRE2006							
FRE2043							
FRE2044							
FRE2045							
FRE4002							
FRE4003	l						
FRE4005							
FRE4006 FRE4009							
FRE4010	1						

FMS2004     2-4     1-4     1     1-8       FMS2005     2-4     1-4     1     1-8       GER1016     2-4     1-4     1     1-8       GER2005     GER2006     2-4     1-4     1     1-8       GER2006     GER2007     GER2036     2-4     1-4     1     1-8       GER2036     GER2038     GER4009     GER4009     GER4012     1     1     1-8       LAS2026     LAS2028     LAS4001     LAS4003     1-4     1     1-8       LAS4003     LAS4004     2-4     1-4     1     1-8     1       SPA2005     SPA1017     2-4     1-4     1     1-8     1       SPA2005     SPA4001     SPA4003     1     1-4     1     1-8       SML1019     SPA4003     2-4     1-4     1     1-8     1       SML1019     SML3004     2-4     1-4     1     1-8     1       SML3004     SML3004     SML3004     SML300	FRE4011				
FMS2005     FMS4099		2.4	1 4	1	1.0
FMS4099		2-4	1-4	1	1-0
GER1016 GER2005 GER2007 GER2009 GER2009 GER2036 GER2038 GER4004 GER4009 GER4009 GER4009 GER4011 GER4012     2-4     1-4     1     1-8       LAS2026 LAS2026 LAS2028 LAS4001 LAS4003 SPA2005 SPA2005 SPA2001 SPA4001 SPA4001 SPA4003 SPA4004     2-4     1-4     1     1-8       SPA2005 SPA4001 SPA4003 SPA4004     2-4     1-4     1     1-8       SML1017 SPA2005 SPA4001 SPA4003     2-4     1-4     1     1-8       SML1018 SML1019 SML2029 SML3004 SML3005 SML3006 SML3005 SML3006 SML3005 SML3006 SML3005     3,5     1-5     6     1-8					
GER2005 GER2007 GER2008 GER2008 GER2036 GER2038 GER4004 GER4007 GER4009 GER4009 GER4012     2-4     1-4     1     1-8       LAS2026 LAS2028 LAS4001 LAS4003 LAS4005     2-4     1-4     1     1-8       SPA1017 SPA2005     2-4     1-4     1     1-8       SPA2025 SPA2019 SPA2025 SPA4001 SPA4003 SPA4004     2-4     1-4     1     1-8       SPA4001 SPA4003 SPA4004     2-4     1-4     1     1-8       SML1018 SML1018 SML1022 SML2009 SML3006 SML3006 SML3006 SML3006 SML3006 SML3006 SML3006 SML3006 SML3005     3, 5     1-5     6     1-8					
GER2007 GER2008 GER2009 GER2036 GER2038 GER4007 GER4008 GER4009 GER4011 GER4012     I     I     I       LAS2026 LAS2028 LAS4001 LAS4004 LAS4004 LAS4004 LAS4005     2-4     1-4     1     1-8       SPA1017 SPA2019 SPA2019 SPA2025 SPA4001 SPA4003 SPA4004     2-4     1-4     1     1-8       SPA1017 SPA2019 SPA2025 SPA4001 SPA4003 SPA4004     2-4     1-4     1     1-8       SML1018 SML1019 SML1021 SML1022 SML2009 SML3004 SML3005 SML3005 SML3006 SML3005		2-4	1-4	1	1-8
GER2008 GER2036 GER2036 GER2038 GER4004 GER4007 GER4009 GER4011 GER4012     Image: style="text-align: center;">Image: style="text-align: center;">Image: style="text-align: center;">Image: style="text-align: style="text-align: style="text-align: center;">Image: style="text-align: style="text-alige: style="text-align: style="text-align: style="text-a	GER2005				
GER2009 GER2036 GER2038 GER4004 GER4007 GER4008 GER4011 GER4012     Image: Constraint of the system of the	GER2007				
GER2009 GER2036 GER2038 GER4004 GER4007 GER4008 GER4011 GER4012     Image: Constraint of the system of the	GER2008				
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GER2038   GER4004   GER4004   GER4007     GER4008   GER4009   GER4010   -   -     LAS2026   2-4   1-4   1   1-8     LAS4001   LAS4003   -   -   -     LAS4003   -   -   -   -     SPA1017   2-4   1-4   1   1-8     SPA2019   SPA2019   SPA2019   -   -     SPA4001   SPA4001   -   -   1   1-8     SML1018   2-4   1-4   1   1-8   -     SML3004   -   -   -   -   -   -     SML3004   -   -   -   -   -   -   -     SML3004   -   -   -   -   -   -   -   -   -   -   -   -   - </td <td></td> <td></td> <td></td> <td></td> <td></td>					
GER4004   GER4007   GER4007   GER4007   GER4009   GER4017   GER4019   GER4011   GER4012   Image: Constraint of the second secon					
GER4007   GER4008					
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GER4009 GER4011 GER4012     2-4     1-4     1     1-8       LAS2026 LAS2028 LAS4001 LAS4003 LAS4004     2-4     1-4     1     1-8       SPA1017 SPA2005 SPA2019 SPA2025 SPA4001 SPA4003 SPA4004     2-4     1-4     1     1-8       POR4002     2-4     1-4     1     1-8       SML1018 SML1021 SML1022 SML2009 SML3004 SML3006 SML3006 SML4099     2-4     1-4     1     1-8       BUS1001 ACE1026 ACE2002     3, 5     1-5     6     1-8					
GER4011 GER4012					
GER4012     Constraint     2-4     1-4     1     1-8       LAS2028     LAS4001     1.4     1     1-8     1-8       LAS4001     LAS4003     1.4     1     1-8     1-8       LAS4003     LAS4004     1     1-4     1     1-8       SPA003     LAS4005     2-4     1-4     1     1-8       SPA2019     SPA2025     SPA4001     SPA4003     2-4     1-4     1     1-8       SPA4004     2-4     1-4     1     1-8     1-8     1-8       SML1018     2-4     1-4     1     1-8     1-8     1-8       SML1019     SML1021     SML1022     2-4     1-4     1     1-8       SML2009     SML3005     SML3005     1-4     1     1-8     1-8       BUS1001     ACE1026     3, 5     1-5     6     1-8       ACE1026     ACE1028     I     I-5     6     1-8					
LAS2026   2-4   1-4   1   1-8     LAS2028   LAS4001   1   1-8   1   1-8     LAS4003   LAS4004   1   1   1   1   1     LAS4004   LAS4005   2-4   1-4   1   1   1   1     SPA1017   2-4   1-4   1 </td <td></td> <td></td> <td></td> <td></td> <td></td>					
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LAS4004     LAS4005     Image: space spac					
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