

UNIVERSITY OF
NEWCASTLE



MSc in Orthodontics
Programme Specification

DEGREE PROGRAMME SPECIFICATION
MASTER OF SCIENCE IN ORTHODONTICS

1	Awarding Institution	University of Newcastle upon Tyne
2	Teaching Institution	University of Newcastle upon Tyne
3	Final Award	MSc
4	Programme title	Master of Science in Orthodontics

5 **Programme Accredited by**

The Specialist Advisory Committee (SAC) in Orthodontics on behalf of the Joint Committee for Specialist Training in Dentistry (JCSTD) which reports to the Dental Faculties and Councils of the Royal Colleges of Surgeons

6	UCAS Code	Not applicable
7	QAA Subject Benchmarking Group	Not applicable
8	Date of production/revision	15th June 2004

9 **Programme Aims**

The MSC in Orthodontics provides the academic basis for the clinical practice of orthodontics. The course builds on the knowledge and skills the trainees have obtained during their years of general professional training and prepare them for either independent specialist practice or for further specialist training.

10(a) Programme Intended Learning Outcomes

A Knowledge and understanding

By the end of the training programme the postgraduate students will have attained the following:

- A1 An ability to diagnose anomalies of the dentition and cranio-facial structures.
- A2 An understanding of the aetiology of malocclusion.
- A3 An understanding of the clinical approach to management of patients and the timing of treatment appropriate to physical and psychological development.
- A4 An understanding of the principles and practice of orthodontic treatment, including an understanding of a variety of treatment methods.
- A5 A knowledge of the principles of cephalometry.
- A6 An ability to assess scientific literature and carry a research project through to completion.

B Subject Specific/Practical Skill Objectives

The postgraduate student must be able to:

- B1 Assess the need for orthodontic treatment, in the context of general and oral health.
- B2 Process letters of referral, to prioritise appointments, and liaise with general dental practitioners.
- B3 Formulate a treatment plan and predict its course.
- B4 Plan interceptive orthodontic measures.

C Cognitive Skills

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

- C1 The development of the critical skills necessary for scientific appraisal and enquiry.
- C2 The development of a critical attitude towards the outcome of treatment, and a willingness to participate in professional audit procedures.
- C3 An ability to recognize some of the barriers that may operate to prevent the provision of dental care.

D Key (Transferable) Skills

- D1 Exercise initiative and personal responsibility.
- D2 Communicate effectively at all levels in both the scientific and professional contexts using verbal, non-verbal and written means.
- D3 Work effectively as a member of a team.
- D4 Use information technology as a means of communication, for data collection and analysis, and for self-directed learning.
- D5 Analyse and resolve problems, and deal with uncertainty.
- D6 Manage time, set priorities and work to prescribed time limits.
- D7 Make decisions based on sound ethical, moral and scientific principles.
- D8 Manage their learning in the context of establishing a philosophy of continuing professional development.
- D9 Acquire, analyse, process and communicate information in a scientific manner to solve problems and to guide clinical decision making.
- D10 Evaluate the evidence published in refereed scientific journals and other publications for sound experimental design and statistical analysis.
- D11 Evaluate the validity of claims related to products or techniques.

10(b) Programme Intended Learning Outcomes: Teaching and Learning Methods and Strategies

	Intended Learning Outcomes	Teaching/Learning Methods and Strategies
A	Knowledge and understanding	The primary means of imparting knowledge and understanding (A1 to A6) is tutorials. This is supplemented by the use of case seminars and teaching clinics to enable students to integrate scientific knowledge with its clinical application (A1 to A5). Throughout the course students are encouraged to supplement taught material by independent reading, for which they are given extensive support and guidance on reading materials and how to use them. A6 is achieved by undertaking an independent research project and dissertation under the supervision of staff.
B	Subject Specific/Practical Skill Objectives	Subject specific and Practical skills developed by the use of case seminars (B1, B2, B3, B4) and diagnostic teaching clinics (B1-B4). In addition clinical practice of orthodontics, the diagnosis and management of patients, in the students hospital unit further develops and enhances these skills.
C	Cognitive Skills	Cognitive skills are developed through tutorials (C1), case seminars (C2, C3), research projects (C1). Students are encouraged to acquire them through solving problems arising from case seminars and diagnostic teaching clinics (C2, C3). The design of their research project and the issues arising from them (C1).
D	Key (Transferable) Skills	<p>Communication, team, time management and personal responsibility skills (D1-D7) are developed in tutorials and case seminars. These skills (D1, D2, D5, D6) are utilised in to practice during diagnostic teaching clinics, while teamwork (D3) is developed through tutorial work, case seminars and clinical practice.</p> <p>Expertise in learning and analysis of the evidence (D7-D11) is developed during tutorial and placed into practice with open book essays and the students research project.</p>

10(c) Programme Intended Learning Outcomes: Assessment Strategy and Methods

	Intended Learning Outcomes	Assessment Strategy and Methods
A	Knowledge and understanding	Knowledge and understanding of the subject is primarily assessed by the in course open book essays and the unseen written examinations (A1 to A6). This is supplemented by the case presentations and unseen cases in the viva voce examinations. The ability to assess the scientific literature A6 is assessed by the in course open book essays and successful completion of the research project and dissertation.
B	Subject Specific/Practical Skill Objectives	These skills (B1, B3, B4) are assessed by the case presentations and unseen cases in the viva voce examinations. B2 is not formally assessed
C	Cognitive Skills	Cognitive skills are assessed by unseen written examinations and in course open book essays (C1). C2 and C3 are assessed by the case presentations and unseen cases in the viva voce examinations.
D	Key (Transferable) Skills	Skill D4 is assessed by successful completion of the ECDL, by the in course essays and completion of the research project and dissertation. The viva voce examination assesses skills D2, D7 D9. Skills D6 D10 and D11 are assessed by the research project and dissertation. The other skills are not formally assessed.

11 Programme Curriculum, Structure, and Features:

(i) Programme Features

The MSc in Orthodontics is a two year course, which forms the academic part of the 3 year MOrth NHS Specialist Registrar training programme. The MSc course consists of a series of tutorials, seminars, practical classes and diagnostic exercises, time-tabled on the basis of two days per week, throughout the first two years of the three year Registrar Training Programme.

The programme does not utilise a credit system. Students are required to complete in course assignments satisfactorily and their progress is reviewed regularly via the RITA (Routine in Training Assessment) process. The students are required to present a dissertation (about 20,000 words long) based on a research project which will have been completed by the end of their second year of study.

The clinical part of the registrars' training programme is located in the Regional Hospitals which act as the registrars' Base Units. The treatment of their patients is supervised by the Consultant Orthodontists in those hospitals.

In 2004-2006 we are introducing a portfolio, to help inform student and staff of progress and assist defining learning goals during the student's course

(ii) Curriculum and Structure

The curriculum for the MSc in orthodontics complies with the recommendations by the Royal College of Surgeons' Joint Committee for Specialist Training in Dentistry. This, in turn, incorporates the features of the European Erasmus training programme in Orthodontics.

In summary, the curriculum includes:

- Basic orthodontic subjects.
- General orthodontic subjects.
- Orthodontic techniques.
- Biological sciences relevant to orthodontics.
- Multidisciplinary treatment procedures.
- Specific treatment procedures.
- Information technology.
- Management of oral health.
- The practice and business of specialist orthodontic practice.

Time Allocation

For years 1 and 2 the students work in their Hospital Units for three days of the week. The timetable for these three days consists of five treatment sessions and one diagnostic clinic. Two days each week (Thursday and Friday) is spent at the School of Dental Sciences. During University term-time the time-table for the two days in the Dental School is as follows:

Activity	Notional half days per week
1 Tutorial each week	1.0
1 Diagnostic clinic each fortnight	0.5
1 Teaching clinic each fortnight	0.5
1 Case seminar each fortnight	0.5
Research sessions	1.5

This is a total of 4 half-days at the Dental School, plus 6 in the Base Unit. During University vacations the time-table at the Dental School consists of 1 diagnostic clinic each fortnight and 3.5 research sessions each week.

Part 1 MOrth and the MSc should be completed by the end of the second academic year (October 2006). Success in the MSc written papers gives exemption from Part 1 of the MOrth examination.

During the third year of the Registrar Training Programme, there is a requirement for fewer academic and more treatment sessions, so the registrars spend only one day each week (Friday) in the Dental School:

Activity	Notional half days per week
Diagnostic clinic each fortnight	0.5
1 Teaching clinic each fortnight	0.5
1 Case seminar each fortnight	0.5
1 Research session each fortnight	0.5

4 days each week in the Base Unit (i.e. two extra treatment sessions)

Part 2 MOrth is taken at the end of the third year

12 Criteria for Admission

Dental Graduates may apply for admission to the MSc/MOrth programme, provided that they are registered with the General Dental Council. Candidates will be expected to hold an M.F.D.S. or an F.D.S. Diploma from one of the Royal Colleges of Surgeons (or an equivalent postgraduate qualification) and if accepted, are employed as NHS Registrars in fully-funded NHS posts.

13 Support for Students and their Learning:

Induction

The MSc Course in Orthodontics runs every Thursday and Friday for two years, starting in October of the first year (2004). Thursday and Friday of the first three weeks are taken up by the Induction Course. In the first week the postgraduate students are registered with the Postgraduate Office and enroll with the University Library and the Computing Service. The second two weeks a series of lectures are given to give an overview of orthodontic care and patient management. They also participate in photography and typodont courses (using a pre-adjusted edgewise appliance) which serves to teach some elementary practical skills which are needed before the student can start to treat patients.

Academic and Pastoral Support

The Degree Programme Director should be approached in the first instance with regard to any problem arising with teaching or with clinical matters. Thereafter, further reference to other members of staff, the Dean of Dentistry or Postgraduate Sub-Dean may be made if necessary.

The Consultant in administrative charge of the candidate's base unit is also an appropriate person to approach in the event of any difficulty with the MSc course or with any other aspect of the Registrars' training programme.

Each candidate is allocated to an educational supervisor who will provide help, guidance or reassurance in respect of their training. In addition they will be allocated a research supervisor who will advise and monitor their research project.

Support for Special Needs

The University has a Disability Unit which is a centre offering advice, guidance and support for students with disabilities and specific learning difficulties (Dyslexia). The unit is headed by the Disability Officer and has a Dyslexia Adviser, Coordinator for deaf students and a Technical Support Adviser. The unit has a technical resources room with specialist equipment for use of students and for assessment purposes. The Disability Unit also provides advice and guidance to all university staff to promote effective disability awareness and support for students. The government provides funds for disabled students through the Disabled Students' Allowance to assist students who, because of their disability, incur extra costs. Advice and help on all aspects of claiming Disabled Students' Allowance can be obtained from the Disability Unit.

Learning Resources

Notice Boards

Information on courses and general postgraduate notices are posted on the notice board in the Department of Child Dental Health as well as on the notice board in the Orthodontic Clinic. Course timetables are provided for individual postgraduate students and any variation on these timetables will be communicated verbally and electronically as well as being posted on the notice boards.

Lecture Theatres

The Dental and Medical School lecture theatres are situated immediately opposite the refectory on the ground floor of the Dental School. In the context of the MSc Course in Orthodontics, these lecture theatres are used mainly in the evenings for postgraduate lectures delivered as part of the programme organized by professional societies for General Dental Practitioners. Formal lectures are not a good way of communicating information to small groups of people.

Seminar Rooms

Seminar rooms in the Dental School are situated as follows:

First Floor --- Oral Surgery and Dental Radiology
Second Floor --- Child Dental Health
Third Floor --- Restorative Dentistry
Fifth Floor --- Restorative Dentistry and Oral Biology

The Seminar Room in the Department of Child Dental Health is the venue for the Thursday afternoon tutorials. Occasionally, these tutorials may be held in one of the other seminar rooms. Case Seminars are held in the Tracing Room situated off the corridor leading to the Staff Rooms in Child Dental Health. This is a room, suitable for teaching very small groups, that has been equipped with a number of back-lit screens, for viewing and tracing radiographs.

Diagnostic clinics and teaching clinics are held in the clinical area of Orthodontics.

NUC Resource days

Newcastle is part of the Northern Universities Consortium (NUC) of orthodontic courses. This group consists of Newcastle, Leeds, Liverpool, Manchester, Sheffield and Birmingham. We share resource days so students can benefit from teaching by the best and most skilled orthodontic teachers in the UK. Particular topics may only be covered by NUC resource days and these are timetabled into the programme. In addition students will be encouraged to attend certain conferences (e.g. British Orthodontic

Conference and British Society for Dental Research) and courses as appropriate during your period of studies.

Teaching Laboratories

There are teaching laboratories on the second floor and the fifth floor of the Dental School. The MSc in Orthodontics is usually accommodated in the teaching laboratory on the second floor, in the Department of Child Dental Health.

Research Laboratories

The Dental School research laboratories are situated on the first floor (Dental Materials Science) and on the fifth floor (Oral Biology). Any work carried out in these laboratories is done in close collaboration with the staff running the laboratory. Students must adhere to the safety regulations and requirements when working in laboratories.

Students will be allocated desk space (which may be shared) in the Child Dental Health Postgraduate Office, located within the department

Medical and Dental Library

The Medical and Dental Library is situated on the fifth floor of the Catherine Cookson Building of the Medical School. The library provides access to a wide range of resources such as journals, photocopiers and computer databases. The MSc induction course includes an introductory tour of the library which aims to show the main services available and to demonstrate how to use the library catalogues to find the material you need. Further guidance in using services such as computer databases is given later in the MSc course.

The Medical and Dental library is part of the University library, called the Robinson Library. The library borrower's card is valid in both libraries; the leaflet provided with the card gives information about how many books can be borrowed at any one time and gives the opening hours of each of the libraries. The Robinson Library also houses the University Bindery, which provides a binding service for dissertations.

Information Technology

IT support is provided by the University Computing Service which manages 40 clusters of computers comprising 1300 PCs plus some Unix workstations which are available for teaching. Three of these clusters (134 PCs) are within the Faculty of Medical Sciences with more planned in the immediate future. In addition, there are 7 multi-media PC's available clinical within the areas of the School of Dental Sciences together with a further cluster (12 PCs) in the 5th floor teaching laboratory.

The offices, laboratories and seminar rooms in the Department of Child Dental Health are cabled with a 10Mb/sec ethernet, in collaboration with the University Computing Service. This enables easy connection to the computerized facilities at the Robinson Library, to the Internet and the World-Wide Web. E-mail facilities are available to undergraduate and to postgraduate students.

14 Methods for evaluating and improving the quality and standards of teaching and learning

Programme reviews

The programme has just undergone a major review, moving from an intake of 6 students every 3 years to an intake of 4 students every 2 years. In addition there has been a change of Degree Programme Director.

External examiner reports

An external examiner is appointed for 3 years and oversees the written and oral examinations. The external examiner also examines the dissertations. The external examiner reports are considered at Board of Studies.

Accreditation reports

The Registrar Training Programme, including the MSc in Orthodontics, is inspected every six years by the Royal College of Surgeons' Specialist Advisory Committee in Orthodontics. In addition, the Registrars on the Training Programme are interviewed every three years by representatives of the SAC.

Student evaluations

Informal feedback on any aspect of the course is welcomed at any time. The student representative on the board of studies reports any issues arising that are of concern to the students. Students, at the end of the three year Training Programme, are invited to write to the Degree Programme Director and/or the Training Programme Director, giving their opinion on aspects of the Training Programme and suggestions on how it may be improved.

Feedback Mechanisms

The Registrars are interviewed at six, twelve, twenty-four and thirty-six months, as part of the formal RITA process used to monitor their progress through the Training Programme.

Faculty and University Review Mechanisms

The MSc Programme is reviewed by the Universities internal subject review scheme as part of all courses run in the School of Dental Sciences. This was last undertaken in 2003. In addition,

Progression

The system of assessed open essays provides a continuous assessment of the candidate's progress and helps to ensure that academic element of the training programme is spread evenly across the two years.

Academic and clinical progress is reviewed on a formal basis every six months, through consultations within the Board of Studies of the MSc in Orthodontics.

15 Regulation of Assessment

MSc Examination

The examination, which must be passed as a whole, consists of the following:

Part 1

	Effective Weighting
Written Paper 1	15
Written Paper 2	15
Clinical Presentation	25
Clinical Oral Examination	15
Oral Examination	15
In-course Assessment	15

The written papers each have four questions, to be answered in three hours. During the clinical presentation the candidate has 40 minutes in which to examine a patient, following which there is a 20 minute period with the examiners in the course of which the candidate presents his/her findings and discusses the possibilities with regard to treatment. The clinical oral examination is a discussion of cases treated by the candidate, based on the records of those cases and the oral examination is a 20 minute *viva voce* examination.

Part 2

Dissertation and Oral Examination

Dissertations must be submitted not later than 30th September in the second year of the MSc course (2006). Candidates who have attained a minimum Satisfactory grade for the Dissertation shall be exempt from the Part 2 oral examination.

The final mark assigned to each candidate will be a grade, S or M being required to pass. In addition candidates must attain a minimum grade of S in each of the two parts of the examination.

- Candidates who satisfy the examiners at the first attempt and who show special achievement in the examination may be awarded a pass

with Distinction. The score required for the award of Distinction shall be determined at the Meeting of Examiners.

- A candidate whose dissertation does not satisfy the examiners, but who has satisfied the examiners in other parts of the examination, may be permitted by the Board of the Faculty, on the recommendation of the examiners, to re-submit the dissertation in a revised form within six months from a date approved by the Board. The candidate may also be required to undergo a further oral examination.
- A candidate who submits a satisfactory dissertation, but who fails to satisfy the examiners in other part or parts of the examination, may be permitted by the Board of the Faculty, on the recommendation of the examiners, to re-sit the examination on one further occasion within six months from a date approved by the Board.
- A candidate who has failed in any part or parts of the examination may be required by the Examiners to produce evidence of further study as prescribed by the Examiners before being allowed to re-sit the examination.
- A candidate may, through the Chairman of the Board of Examiners, draw the attention of the Examiners to medical or personal problems or circumstances which may have affected the candidate's performance in the examination. The Board of Examiners will decide to what extent these circumstances should be taken into account. The Board of Examiners has the ultimate discretion to pass a candidate at any level provided that the candidate has attempted every paper or component of the examination at the relevant occasion.

Common Marking Scheme

MSc Grading system

The scheme, known colloquially as BUMS, uses the following grades and descriptors:

M	Merit
S	Satisfactory
B	Borderline
U	Unsatisfactory

Role of the External Examiner

The external examiner oversees the written, case presentation and oral examinations. They also assess the MSc Dissertation presented at the end of the second year.

16 Indicators of Quality and Standards

Professional Accreditation Reports

Internal Review Reports

Previous QAA Reports

STEVE – DO I INCLUDE ALL THE ASSOCIATED DOCUMENTATION?

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.

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

The University Prospectus

The School Prospectus

The University and Degree Programme Regulations

The Degree Programme Handbook

QAA Subject Review Report