UNIVERSITY OF PLYMOUTH

Faculty of Health

Peninsula Dental School

Programme Specification

MSc Orthodontics

2026-27 Academic Year

Date Approved From: May 2022
Date of Implementation: Jan 2023
Date of First Award: Jan 2026

Internal Programme Code	Award Title	Site	Mode of Study
7411	MSc Orthodontics	Leamington Spa	P/T

Reviewed	Amended following review (Y/N)	Sections amended
January 2025	Yes	11
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Contents Page

1. MSc Orthodontics 3
2. Awarding Institution: University of Plymouth 3
   Teaching institution(s):
3. Accrediting bodies 3
4. Distinctive Features of the Programme and the Student Experience 3
5. Relevant QAA Subject Benchmark Group(s) 6
6. Programme Structure 6
7. Programme Aims 9
8. Programme Intended Learning Outcomes 9
   - 8.1. Knowledge and understanding 10
   - 8.2. Cognitive and intellectual skills 10
   - 8.3. Key and transferable skills 11
   - 8.4. Employment related skills 11
   - 8.5. Practical skills 12
9. Admissions Criteria 13
10. Progression criteria for Final and Intermediate Awards 13
11. Non Standard Regulations 14
12. Service user engagement 14

Appendices

13. Programme Specification Mapping (PGT) 15

1. MSc Orthodontics

Final award title: MSc Orthodontics

Intermediate award titles: Postgraduate (PG) Diploma Orthodontics
Postgraduate (PG) Certificate Orthodontics

UCAS code: N/A
JACS code: A400 Clinical Dentistry

2. Awarding Institution: University of Plymouth

Teaching institution(s): University of Plymouth

3. Accrediting bodies

RCS England, as part of Accreditation of PDS PGT Dental courses.

RCS Edinburgh

4. Distinctive Features of the Programme and the Student Experience

The MSc Orthodontics delivered by the University of Plymouth is a part of the highly successful suite of postgraduate taught dental programmes. These programmes cover Restorative Dentistry, Endodontics, Periodontology and Oral Surgery and have proved both highly popular and successful. The current programmes have received recognition locally by both the NHS and Health Education England. These courses are currently the only dental degree courses that have been accredited by the Royal College of Surgeons in England.

In the UK, Orthodontics is a dental speciality recognised by the General Dental Council. The speciality of Orthodontics deals with the study of growth and development of the jaws and face and prevention and treatment of irregularities of the teeth and jaws. It involves the treatment of adults and children and often the management of the dentally anxious and medically compromised patients.

Some General Dental Practitioners (GDP's) deliver simple orthodontic treatment as part of their daily practice. Those with additional training and enhanced skills may deliver more complex services in a dental practice setting.

Data show that the provision of orthodontic teaching at undergraduate level is minimal and there is a demand from GDPs for courses to enable them to recognise orthodontic need and be able to provide enhanced treatment for their patients.

This programme is designed to address these issues and to enhance GDP's skill levels and career progression by providing knowledge about contemporary approaches to the management of orthodontics in addition to practical simulated clinical skills. Specialists in Orthodontics will provide feedback on the clinical care provided by the student practitioner for patients in both clinical placements and their own practice. This mixed approach will enable students to develop their confidence and competence in practical clinical skills as well as augmenting their theoretical knowledge. The proposed programme is potentially applicable to 95% of the 40,000 UK registered dentists.

A survey of SW dental practitioners (sample size: 400) showed that almost half (49.2%) of responders indicated that they would be interested in University credit bearing programmes. 99.1% indicated that they would like to be notified of any such opportunities that Peninsula Dental School might develop. Both closed responses and open responses/comments have indicated that practitioners are keen to see the development of postgraduate dental education within the SW. There are currently no credit-bearing dental courses in Orthodontics in England, west of Bristol.

The planned changes to the funding of services for Orthodontics are likely to make practitioners more involved in care of patients following referral for treatment, and to lead to an increase in patients requiring more complex work than that provided in "routine" dental practices, with more complex clinical care being provided outside of the Acute Hospital setting.

On successful completion of the Postgraduate Certificate stage of the programme graduates should have developed the appropriate knowledge, skills and attitudes required of a General Dental Practitioner to assess, diagnose, treatment plan and deliver safe and effective Orthodontics in a primary care setting (Level 1).

The PG Diploma in Orthodontics builds on the PG Certificate stage and delivers enhanced training so that graduates will have the appropriate knowledge, skills and attitudes required of a dentist wishing to be considered as a Dentist with Enhanced Skills (DES) in Orthodontics (Level 2).

The Orthodontics programme is designed not only to develop a GDP's knowledge and skills in Orthodontics but also to produce a clinician who is evidence based and reflective in their daily practice through taught elements in reflective practice, critical appraisal of the literature and evidence-based practice during all modules of the programme.

Completion of the Master's project component, leading to the award of a Master's degree in Orthodontics will give practitioners skills in question formulation, evidence-searching, critical appraisal and academic writing. These skills will underpin their future continuing professional development and also equip them to participate in research.

In summary:

- The programme will be led by a team of Specialists in Orthodontics and complemented by respected visiting clinicians and educators.
- The programme is structured to allow participants to continue their current working commitments while studying at an appropriate pace.
- Each module at PG Certificate and PG Diploma stages includes consultant/specialist led supervision and clinical time to facilitate the demonstration, assimilation and practice of taught clinical techniques.
- The course allows case assessment, diagnosis, treatment planning, patient management and practical clinical techniques to be learnt, underpinned by an appraisal of the evidence base, so that participants gain the skills to practice critically and effectively in their own dental practices.
- As well as seminars, tutorials and self-directed learning in context, the programme also includes practical teaching in state-of-the-art and simulated dental learning environment.

- The programme will allow enhanced skills, knowledge, and critical thinking to be developed in Orthodontics in the following areas: -

    1. Case Assessment
    2. Diagnosis
    3. Treatment planning
    4. Clinical skills
    5. Management of the medically compromised patient
    6. Integration of multi-disciplinary treatment

Clinical and Simulated Dental Learning Environment (SDLE) resources will be utilised outside of the teaching activities of current programmes; it is envisaged that the majority of this will occur in a remote clinical skills centre, in Leamington Spa.

5. Relevant QAA Subject Benchmark Group(s)

The programme has been developed with reference to the relevant policies and procedures related to University of Plymouth and external agencies such as the Quality Assurance Agency[1].

Although there is no specific QAA Subject Benchmark for Orthodontics, reference has been made to the Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2024)[2][3], using descriptors for a higher education qualification at level 7: Master's degree.

[1] https://www.qaa.ac.uk (last accessed 4/3/20)
[2] https://www.qaa.ac.uk/docs/qaa/quality-code/qualifications-frameworks.pdf (last accessed
[3]

6. Programme Structure

Students will study on a part-time basis with each stage of the programme normally completed within one year. There is a limit of 6 years for students to complete the programme. All modules are at FHEQ Level 7.

Postgraduate PG Certificate stage modules:

Module 1 - ORTH711 Foundations of Orthodontics
Module 2 – ORTH712 Orthodontics in Practice

Postgraduate PG Diploma stage modules:

Module 3 - ORTH721 Advanced Orthodontics 1
Module 4 – ORTH722 Advanced Orthodontics 2

Masters Stage

Module 5 – DIS734 Master's project

In accordance with the University of Plymouth Academic Regulations, the award of MSc requires the successful accumulation by the candidate of a minimum of 180 credits. In order to complete the MSc Orthodontics, students will need to satisfy the academic standards for the required modules as outlined in the Module Records. The modules are described below:

Module 1 - ORTH711 Foundations of Orthodontics
This module covers key concepts underpinning the delivery of Orthodontics, enabling learners to develop their understanding and knowledge of the subject including relevant basic sciences, case assessment, diagnosis, formulating problem lists, treatment planning and orthodontic fixed appliances. It also teaches essential skills in subjects essential to continuing professional development and evidence-based care, such as critical appraisal and Master's level writing.

Teaching is delivered through seminars, case-based learning, and by hands-on training in the Simulated Dental Learning Environment (SDLE), as well as through clinical observations.

Module 2 – ORTH712 Orthodontics in Practice
This module enables students to further develop their skills and case assessment, diagnosis, formulating problem lists, treatment objectives and treatment planning for

orthodontic patients, and contemporary techniques commonly used in clinical practice.

Teaching is delivered through seminars, case-based learning, and by hands-on training in the Simulated Dental Learning Environment (SDLE), as well as through clinical observations.

Module 3 - ORTH721 Advanced Orthodontics 1

This module builds on existing knowledge and newly acquired skills from modules 1 and 2 and introduces more complex orthodontic treatment options, including the management of cases with impacted canines, dental anomalies and management of deciduous and unerupted teeth.

Teaching is delivered through seminars, case-based learning, and by hands-on training in the Simulated Dental Learning Environment (SDLE), as well as through clinical observations.

Module 4 – ORTH722 Advanced Orthodontics 2

This module augments knowledge and newly acquired skills from previous modules, relating to treatment with Orthodontics. It teaches the management of multidisciplinary cases and practice management.

Teaching is delivered through seminars, case-based learning, and by hands-on training in the Simulated Dental Learning Environment (SDLE), as well as through clinical observations.

Module 5 – DIS734 Master's project

This module is designed to enable students to produce a project Master's project under supervision and to demonstrate; clinical question formulation, evidence acquisition, evidence evaluation, evidence synthesis within a clinical context, clinical decision making and critical reflection skills related to Orthodontics.

7. Programme Aims

1. Develop a deep and systematic knowledge and understanding of the key concepts and evidence base relating to the case assessment, diagnosis, treatment planning and treatment of patients requiring orthodontic intervention.

2. Develop an appropriate attitude, level of professionalism, interest and enquiry to continually develop knowledge, understanding and skills in orthodontics.

3. Critically analyse and evaluate the available evidence that supports case assessment, diagnosis, treatment planning and treatment for Orthodontics, applying it where appropriate and recognising where alternative approaches are required.

4. Using critical reflection and synthesis of knowledge gained through the course learning outcomes and previous clinical experience to safely and proficiently demonstrate effective treatment techniques relating to Orthodontics within the learners own practice setting.

5. Demonstrate the ability to design, conduct, evaluate and write up a project that is of relevance to professional practice as a GDP with enhanced skills in Orthodontics, and will result in direct benefit through improved care for patient(s). Demonstrate self-direction, originality and an ability to respond to constructive feedback and to act autonomously in the planning and implementation of project skills at an advanced professional level.

8. Programme Intended Learning Outcomes

The programme provides opportunities for participants to develop and demonstrate the general outcomes listed below. The learning outcomes are referenced to Masters level 7 descriptors in the UK Quality Assurance Agency Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2024) and the Southern England consortium for Credit accumulation and Transfer (SEEC) Credit Level descriptors for Further and Higher Education (2010). These will be contextualised within each participant's coursework.

8.1. Knowledge and understanding

On successful completion graduates should:

8.1.1 Demonstrate a **deep understanding** of the anatomy and physiology of the oral and peri-oral tissues with particular emphasis on orthodontic related tissues

8.1.2 Demonstrate an **in-depth understanding** of the aetiology and clinical presentation of developmental anomalies of the oral and peri-oral tissues

8.1.3 Have an in-depth **critical and systematic understanding** of current theoretical and methodological approaches to the management of a patient with a malocclusion, either *de novo*, or following previous treatment.

8.1.4 Demonstrate a **critical and systematic understanding** of the behavioural, clinical and technical procedures involved in the treatment of patients requiring orthodontic care

8.1.5 Show evidence of the ability to **assess** research

8.2. Cognitive and intellectual skills

On successful completion graduates should have developed the ability to:

8.2.1 Demonstrate a **broad and in depth understanding** of the evidence base in Orthodontics

8.2.2 Demonstrate the ability to **review** and **translate** evidence in significant areas of theory and/or practice in Orthodontics into practice

8.2.3 Show professional judgement to develop **critical responses** to existing theoretical discourses, methodologies or practices in response to problems, by developing an **evidence-based treatment** plan and taking a reflective and holistic approach to **solving problems** and designing treatment plans

8.2.4 Demonstrate the ability to **critically assess** scientific papers and available evidence such as guidelines using a variety of information sources

8.2.5 Evaluate **critically the scope and limitations** of the various techniques used in Orthodontics balancing the risks and cost benefits of treatment demonstrating self-direction and autonomy

8.2.6 **Appraise systematically** current evidence in Orthodontics including complex, incomplete or contradictory evidence/data and judge the appropriateness of the enquiry methodologies used and conclusions made

8.2.7 Demonstrate the ability to **sustain a critical argument** in writing and through oral presentations using critical reflection and appraisal of the evidence in relation to Orthodontics

8.2.8 **Evaluate critically and systematically** complex, incomplete or contradictory evidence/data and judge the appropriateness of the enquiry methodologies used and conclusions made. Recognise and argue for alternative approaches

using critical reflection and appraisal of the evidence in relation to Orthodontics.

8.2.9 **Flexibly** and **creatively apply knowledge in unfamiliar contexts**, synthesise ideas or information in innovative ways, and generate transformative solutions demonstrating evidence acquisition, evaluation and synthesis within the clinical context.

8.3. Key and transferable skills

On successful completion graduates should have developed the ability to:

8.3.1 **Autonomously** perform all appropriate clinical examinations proficiently, collecting biological, psychological and social information needed to evaluate the oral and related medical conditions for all patients

8.3.2 Demonstrate **initiative** and personal responsibility by autonomously **implementing and evaluating** the planning and delivery of preventive and interventional care as part of a holistic, comprehensive treatment plan.

8.3.3 **Autonomously adapt** their performance to multiple contexts providing clinical care to the highest ethical and technical standards in line with current knowledge and with the full and valid consent of patients.

8.3.4 **Clarify tasks** and make appropriate use of the wider team, co-ordinating overall treatment and care of patients and **initiating,** when appropriate, referral to a specialist in another area or a dental care professional

8.3.5 Incorporate a **critical ethical dimension** to their practice, managing the implications of ethical dilemmas in accordance with regulatory requirements.

8.3.6 Use personal **reflection to analyse self** and own actions.

8.3.7 Make connections between known and unknown areas, to allow for **adaptation** and change.

8.3.8 **Learn independently** in a spirit of critical enquiry and apply this to continuing professional development.

8.4. Employment related skills

On successful completion graduates should have developed:

8.4.1 After completion of the first 2 modules (PG Certificate level) the learner will have acquired the appropriate knowledge, skills and attitudes required of a General Dental Practitioner to deliver safe and effective Orthodontics in a primary care setting.

8.4.2 After completion of the first 4 modules (PG Diploma level) the learner will have acquired appropriate knowledge, skills and attitudes required of a

Dentist wishing to be considered as a Dentist with enhanced skills (DES) in Orthodontics (Level 2 commissioning document).

8.4.3 Completion of the Master's project module demonstrates a student's ability to formulate a clinical question, critically reflect and produce a Master's project on an area within the field of Orthodontics, evidencing skills in knowledge acquisition, evaluation and synthesis.

8.5. Practical skills

On successful completion graduates should have developed:

8.5.1 After completion of the first 2 modules (PG Certificate level), the ability to case assess, diagnose, treatment plan and appropriately manage patients requiring orthodontic care in the primary care setting. In addition, preliminary skills to acquire, evaluate and critically appraise evidence and develop clinical decision making and critical reflection skills will be developed.

8.5.2 After completion of the first 4 modules (PG Diploma level), the ability to case assess, diagnose, treatment plan and appropriately manage patients requiring more complex and multidisciplinary treatments. Skills in assessing and managing patients with orthodontic problems due to trauma or resorption. The assessment and management of orthodontic problems in children/ adolescents. Further skills in acquiring, evaluating and critically appraising evidence and developing clinical decision making and critical reflection skills.

8.5.3 At Master's project level; the ability to produce a project Master's project under supervision demonstrating clinical question formulation, evidence acquisition, evaluation and synthesis within a clinical context and an ability in decision making and critical reflection skills in relation to a patient requiring Orthodontics.

9. Admissions Criteria

All applicants must have GCSE (or equivalent) Maths and English at Grade C or above.

Entry Requirements for MSc Orthodontics	
BDS	Graduates should be practicing dentistry whilst undertaking the programme and hold full GDC (or equivalent) registration as a dental practitioner, they should also have full professional indemnity and normally at least 2 years of clinical experience (full time equivalent). Places will then be allocated to successful candidates on a first come first served basis.
Language Requirements	Candidates will be required to be competent in English. Candidates whose first language is not English require IELTS 6.5 (with a minimum of 5.5 in each element) or equivalent in a secure English language test.

There are no progression routes from other postgraduate programmes. Claims for Accreditation of Prior Learning (APL) may be considered in line with the Plymouth University policy https://www.plymouth.ac.uk/student-life/your-studies/essential-information/regulations The School welcomes applications from students with disability and support is discussed extensively during the admissions process, normally with the help of Disability Services (DS) and Occupational Health and Well-Being. Dialogue continues between tutors, academic staff, DS and Occupational Health practitioners throughout all stages of study and the Health and Conduct Group monitors any ongoing issues as engagement with patients and the ability to maintain the health and safety of self and others is an important area of major concern.

10. Progression criteria for Final and Intermediate Awards

For further information, please refer to the Academic Regulations, available at:
https://www.plymouth.ac.uk/student-life/academic-regulations

11. Non-standard Regulations

The following are exceptions to the normal University regulations and apply to the MSc Orthodontics programme:

1. Stages 1 and 2 only: Students are required to pass all elements of a module assessment at 40% and achieve an overall module mark of 50% in order to pass the module.
2. Any student who refers in the first module in stages 1 or 2 will be permitted an instant resit

12. Service user engagement

Students will be required to feedback about the course organisation and the teaching and learning in order to receive the certification necessary to provide evidence of CPD for their Regulator. This feedback is then passed to the module and Programme Lead and considered and responded to in subsequent meetings.

Students are also invited to feedback through the Staff-Student liaison committees.

13. Mapping and Appendices: Programme Specification Mapping (PGT): module contribution to the meeting of Award Learning Outcomes.

Module		ORTH711	ORTH712	Learning outcomes 60 credits	ORTH721	ORTH722	Learning outcomes 120 credits	DIS734	Learning outcomes 180 credits
Credits		30	30		30	30		60	
Core/elective		C	C		C	C		C	
	Programme LO								
Knowledge & understanding	8.1.1	x	x		x	x			
	8.1.2	x	x		x	x			
	8.1.3	x	x		x	x			
	8.1.4	x	x		x	x			
	8.1.5					x		X	
Cognitive & intellectual skills	8.2.1				x	x		X	
	8.2.2				x	x		X	
	8.2.3				x	x		X	
	8.2.4							X	
	8.2.5	x	x		x	x		X	
	8.2.6				x	x		X	
	8.2.7				x	x		X	

	8.2.8				x	x		X	
	8.2.9				x	x		X	
Key & transferable skills	8.3.1				X	X			
	8.3.2					X			
	8.3.3					X			
	8.3.4					X			
	8.3.5							x	
	8.3.6					X			
	8.3.7	x	X		X	X		x	
	8.3.8					X		x	
Employment related skills	8.4.1	x	x		x	x			
	8.4.2				x	x			
	8.4.3							x	
Practical skills	8.5.1	x	x						
	8.5.2				x	x			
	8.5.3							X	
Compensation (Y/N)		N	N		N	N		N	
Assessment elements and weightings		P1(100%)	C1 (50%), P1(50%)		P1 (100%)	P1 (100%)		C1 (100%)	