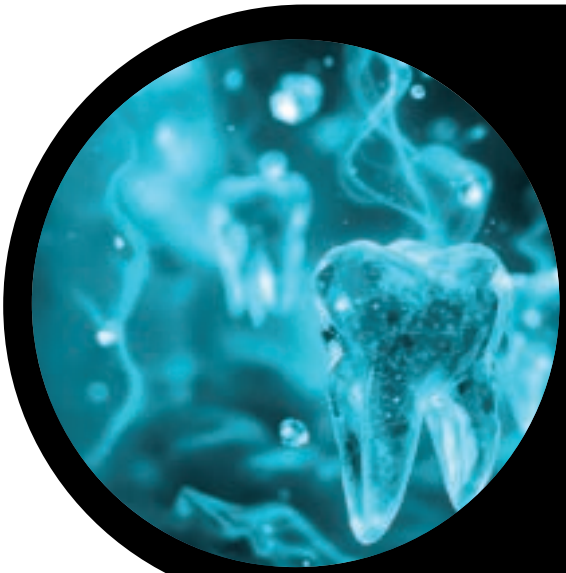
University of Greater Manchester

MSc Specialist Practice of Digital Dentistry

Course Brochure

Digital technology is reshaping dentistry, improving everything from diagnosis to treatment planning, and prosthesis fabrication.

This MSc teaches you to integrate digital workflows into restorative, implant, and orthodontic practice for greater precision, consistency, and patient care.



2026

SYNTRAIN INTERNATIONAL ACADEMY

DDA

Duration:
2 years part-time

Campus:
SynTrain International Academy

Attendance:
Part Time Entry

Entry Requirement:
Postgraduate BDS or Equivalent

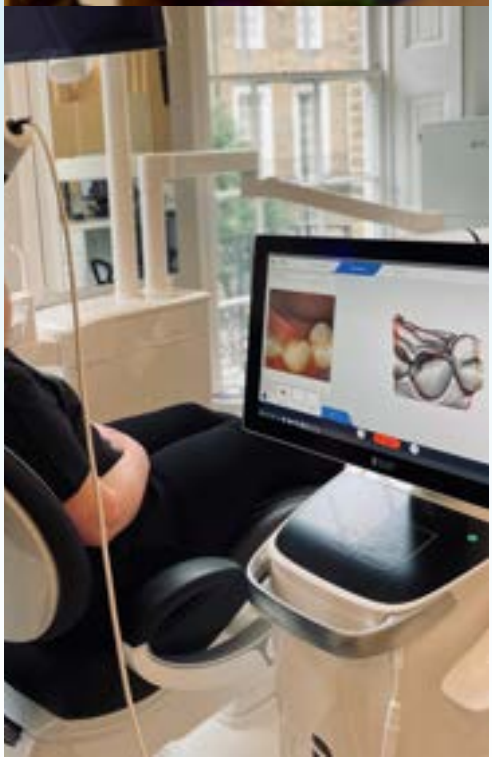
Fees:
Please refer to the back of the brochure

Credits:
180

About the Course

Digital technology is transforming the way dentistry is delivered, from diagnosis and treatment planning to prosthesis fabrication.

This MSc shows you how to seamlessly integrate digital workflows into your clinical practice, whether in restorative, implant, or orthodontic dentistry. Gain the skills to deliver greater precision, consistency, and an exceptional patient experience.



Structure

- Year 1 - 12 hands on days
- Year 2 - 1 day a month to include:
  - Understanding Research & Critical Appraisal (URECA)
  - Tutorials with Dissertation Supervisor
  - Dissertation Writing

Clinical Practice Rota

As part of your part-time MSc programme, this course aims to instil the core competencies essential for modern dental practice, combining the use of innovative digital technologies with a strong commitment to lifelong learning and professional development.

The objective is to equip students with the foundational knowledge and clinical expertise required to deliver competent, high-quality dental care in alignment with GDC-recognised guidelines.

Additionally, the programme promotes a deep understanding of the principles necessary for providing ethical, predictable, and evidence-based preventative, orthodontic, restorative, and cosmetic dentistry using the latest digital advancements.

You will complete a Clinical Portfolio as part of your assessment.

Teaching

As part of your MSc programme, you'll benefit from a blended learning approach, combining face-to-face teaching with online sessions for maximum flexibility, allowing you to study without taking time away from work.

Teaching within the programme is structured around the following core areas, each designed to develop confident, evidence-based digital clinicians:

End-to-end Digital Workflow Integration
Delegates learn how to confidently integrate digital dentistry into everyday clinical practice; from diagnosis and treatment planning through to fabrication- across restorative, implant, orthodontic and aesthetic cases.

Advanced Digital Diagnostics & Treatment Planning
Practical competence in digital radiography, CBCT interpretation, risk assessment and digitally driven treatment planning, including digital smile design and multidisciplinary case planning.

Digital Design, CAD/CAM & 3D Printing Skills
Hands on skills in CAD workflows, STL management, tooth libraries, smile mock ups, virtual extractions and clinical 3D printing for models, guides, orthodontics and restorations.

Enhanced Patient Communication & Aesthetic Planning
Delegates develop strong skills in digital photography, smile design, mock ups and visual communication tools to improve patient understanding, consent and acceptance of treatment plans.

Evidence-based Practice, Research & Critical Appraisal
The MSc builds the ability to critically appraise literature, apply evidence based dentistry, manage risk ethically and undertake a Master's level research project and dissertation relevant to digital clinical practice.

Clinical Skills Development

As part of your part-time MSc programme, you will have the opportunity to be taught in a high-tech skills lab.

The modules are integrated within each of the separate course units. The course is designed in 8 modules to advance the learning of each delegate through the programme.

The MSc programme is divided into separate modules. This ensures that you complete the requirements of the MSc Learning Outcomes.

Clinical Skills Development Table	
Month 1	Foundation Knowledge of Digital Dentistry
Month 2	Foundation Knowledge of Digital Dentistry
Month 3	Digital Impression Scanners & Digital Photography
Month 4	Digital Impression Scanners & Digital Photography
Month 5	Digital Radiography & CBCT
Month 6	Digital Radiography & CBCT
Month 7	3D Printing
Month 8	3D Printing
Month 9	Digital Treatment Planning & Digital Smile Design
Month 10	Digital Treatment Planning & Digital Smile Design
Month 11	Digital Orthodontics
Month 12	Digital Orthodontics
Month 13-24	URECA & Dissertation

Unit 1 - Foundation Knowledge of Digital Dentistry

- The History Of Digital Dentistry
- What technology is available?
- Digital Technology - How does it work?
- DIOS Scanning Technology and Techniques
- Terminology and the Science Behind the Architecture
- What is a point cloud and how does that relate to scanners?
- What is an STL Mesh, an OBJ/PLY Colour File and how scanners record colour?
- Exporting a Scan
- STL Files to Download
- IDDA Scan Training Tool
- Exporting an STL from Inlab
- Point Cloud to STL Conversion
- Comprehensive Dentistry
- Digital dental planning by Federica Antonellini
- Fail to Plan, ImPlant to Fail - By Martin Attariani

Unit 2 - Digital Impression Scanners & Digital Photography

- Tissue management
- Common Errors & Maintenance
- Patient & Lab Communication with Scanners & Photography
- Which 3D Scanner to use - By Ash Parmar
- How to do a full arch scan?
- Latest DIOS Features
- Advantages and Functions of IOS
- Literature Evidence for DIOS
- Getting Into Digital on a Shoe String - Sandy Limerick
- Minimally invasive Aesthetic Dentistry
- Dental Pro Master - By Milos Miladinov
- Social Media and Dentistry - By Nilesh Parmar
- Emotion in Dentistry
- Creating Videos for Social Media

Unit 3 - Digital Radiography & CBCT

- Fundamentals of 3D Radiology - By Hossam Dawa
- An Introduction to CBCT Scans & Equipment
- Responsibilities, Principles and Benefits of CBCT
- Data Protection, Storage & CBCT Anatomy
- Introduction to CBCT Viewing software
- CBCT Reporting
- 3D Guided Endodontics - By Niraj Kinariwala
- How Does CBCT Work
- CBCT Justification
- Principles of Radiation Dose and Risk
- Radiography - Dose Optimisation
- Image aquisition and CBCT planning software

Unit 4 - 3D Printing

- 3D Printing Technologies
- 3D Printing and its use in Dentistry
- One Hour 3D Printed PERMANENT Crowns
- Exporting an STL
- Meshmixer Basics
- Meshmixer Tools
- CEREC STL into Meshmixer and Hollow Models by August de Oliveira
- Virtual Extractions in Meshmixer
- Making a model in Meshmixer - Hollow and Solid Models
- Alternative Virtual Extractions, Alternative Model Making & Smooth Boundary Functions
- Installing and Using Tooth Libraries
- Adam Nulty Tooth Library
- Anteriores Library Sample Set by Jan Hajto
- Meshmixer Errors & Exporting from Meshmixer
- Using Form labs Prefom
- Using Chitubox
- 3D Printing with CEREC by August de Oliveira
- Printing in Colour Tutorial

Unit 5 - Digital Treatment Planning & Digital Smile Design

- Digital Dentistry - Improving patient Communication
- Basic Smile design principles and software
- Intro to Smile Designer Pro
- Ivosmile Virtual Integrated Augmented Reality
- Creating ExoCAD Smile Mockups with 3D Printed Models
- Photography Equipment and Standardised Views
- Photography in Practice
- How to manage your photos and data files in practice and online
- Mock-ups in Meshmixer - Single Tooth
- Creating Meshmixer Smile Mockups with 3D Printed Models
- Meshmixer Maryland bridges
- Meshmixer Basics & Virtual Tooth Extraction Tutorial
- Meshmixer Mockups & DSD Tutorial
- How to go from 2D to 3D
- DSD Photo Video protocol iPhone by DSD
- DSD App Training - By Ralph Georg
- 2D PowerPoint/Keynote Files

Unit 6 - Digital Orthodontics

- Introduction to Digital Orthodontics
- Restoratively Driven Orthodontic Treatment
- Augmented Reality in Orthodontics with Ivosmile
- Using Blue Sky Bio for orthodontic setups
- Dental monitoring for orthodontics and more
- Clinical Workflow for DDA Aligners
- Case Selection and Troubleshooting
- Chairside 3D Printing for Orthodontics
- Multidisciplinary Treatment for Ortho using CBCT

Module Outline

Patient Assessment & Risk Management

This module is designed to develop evidence-based knowledge regarding patient selection as well to instil the practical skills required to recognise and provide advanced level treatment modalities and risk assessment. The aim of this module is also to highlight potential complications in oral surgery and for students to be able to develop risk assessment strategies to avoid and minimise complications. Realistically it is not possible to prevent all complications, so management strategies are essential. As a natural progression from these issues the module will explore the ethical issues of informed consent and management of patient expectations. The module develops communication skills, organisation and planning, problem solving, treatment planning, risk assessment, ethical responsibility, and consent.

Computer Assisted Design and Fabrication of Restorations

This technical module is designed to deliver practical training in the selection and application of dental digital technology to the practice of dentistry and includes classroom and laboratory work.

Students will attend formal lectures incorporating discussion and interactive group learning activities and problem-based learning. Individual software learning will be delivered through online tutorials and exercises designed to develop competency and familiarity with the various applications. Laboratory sessions at the school's digital laboratory will introduce students to the hardware and various manufacturing processes used to fabricate components and appliances.

Management of Aesthetics and Digital Smile Design

The module aims to introduce the concept of digital smile design and the aesthetic management of dentition through understanding the application of three-dimensional imaging systems and supporting software. Through this module, you will learn various restorative protocols used in aesthetic makeovers with both their advantages and their limitations. Patient case studies will be critically analysed and treatment planned to use the technologies taught within the module.

Occlusal Diagnosis and Analysis

Patient aesthetic awareness coupled with the development of new orthodontic techniques, Implant, and restorative rehabilitation have increased the number of adults seeking advanced dental treatment.

This has increased the likelihood of dentists having to diagnose and treat the occlusion as part of a larger treatment plan. This multidisciplinary module considers the anatomy, aetiology, and management of occlusion from an orthodontic and restorative perspective.

The aim of this module is to enable the dentist to effectively diagnose and formulate a treatment plan so that the patient can be treated with a comprehensive multidisciplinary approach.

Understanding Research and Critical Appraisal (URECA)

This module is designed to help you develop the research skills necessary to identify your dissertation topic, create a detailed proposal, and plan your research effectively. It will equip you with the academic skills required for Master's level study.

The module encompasses key areas such as clinical statistics, evidence-based practice, critical appraisal, measurement, and research design, with a focus on their specific applications in medical research and treatment.

You will learn how to formulate realistic research objectives and establish an appropriate conceptual and analytical framework for your study. Additionally, you will acquire skills in identifying, collating, and critically reviewing relevant literature, enabling you to make informed decisions regarding the research philosophies, strategies, and methods best suited to your project.

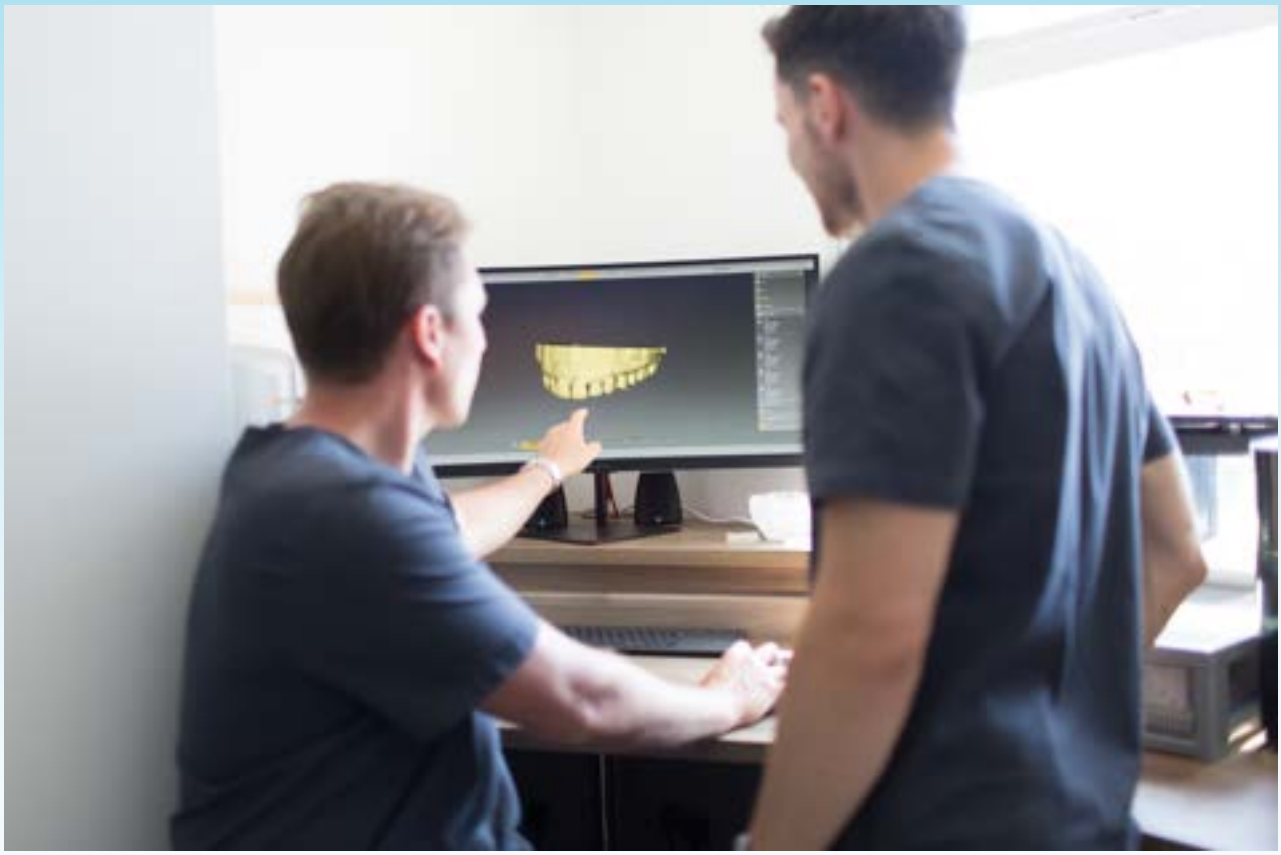
Dissertation

This taught module offers the opportunity to conduct an extended and significant research project. It enables you to synthesie the academic knowledge gained from your previous postgraduate studies and practical experiences to create an evaluative and critical discussion on a specialist dental topic directly related to your program.

The module aims to enhance your skills in identifying a problem, determining its significance, formulating a hypothesis or proposition, designing a method for testing the hypothesis, and evaluating the results.

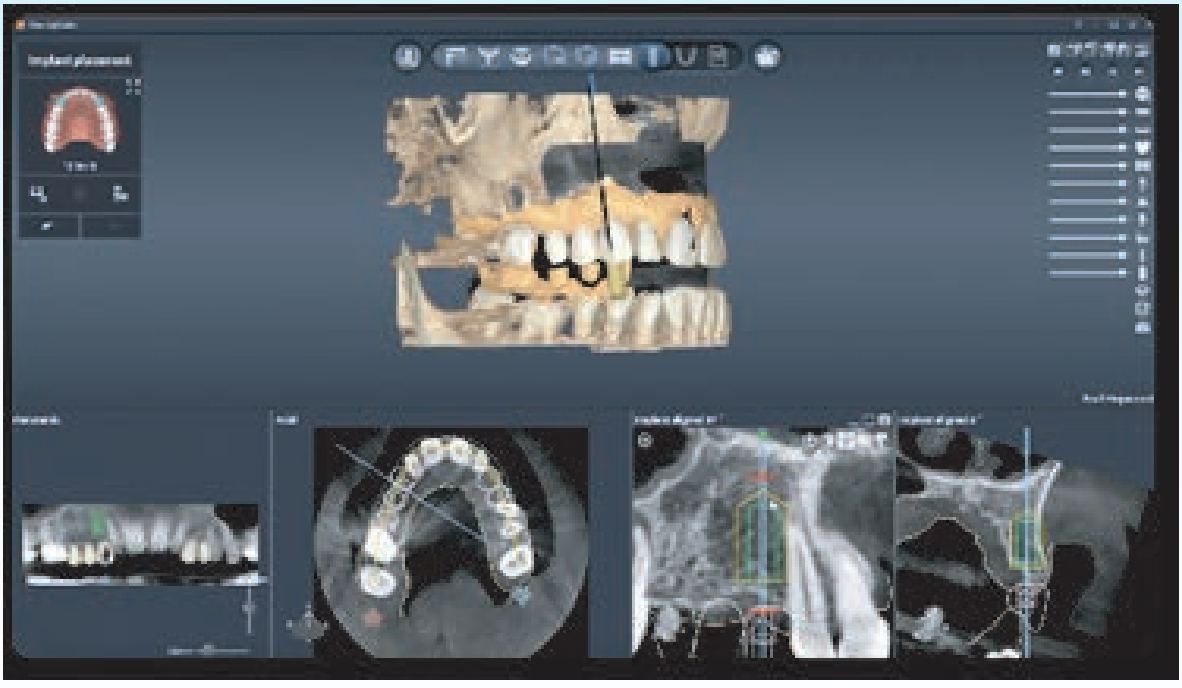
Advance Prior Learning

- The Advanced Prior Learning Delegate Pathway is a tailored program for professionals with advanced prior learning in Digital Dentistry.
- The APL programme offers an accelerated curriculum that builds upon your existing qualifications and experience, with a duration customised to your current knowledge and skills. Through this pathway, you will deepen your expertise.
- This pathway enables you to fast-track your MSc Specialist Practice of Digital Dentistry by leveraging your previous qualifications and focusing on advanced topics that will enhance your specialist practice.



What's Included In The MSc?

	Postgraduate Diploma of Digital Dentistry COMPREHENSIVE	Postgraduate Diploma of Digital Dentistry DIGITAL ONLY	MSc Specialist Practice of Digital Dentistry COMPREHENSIVE	MSc Specialist Practice of Digital Dentistry DIGITAL ONLY
Unit 1: Foundation Knowledge of Digital Dentistry	Included With Hands-On	Included	Included With Hands-On	Included
Unit 2: Digital Impression Scanners & Digital Photography	Included With Hands-On	Included	Included With Hands-On	Included
Unit 3: Digital Radiography & CBCT	Included With Hands-On	Included	Included With Hands-On	Included
Unit 4: 3D Printing	Included With Hands-On	Included	Included With Hands-On	Included
Unit 5 - Digital Treatment Planning & Digital Smile Design	Included With Hands-On	Included	Included With Hands-On	Included
Unit 6 - Digital Orthodontics	Included With Hands-On	Included	Included With Hands-On	Included
Understanding Research & Critical Appraisal			Included	Included
Dissertation			Included	Included



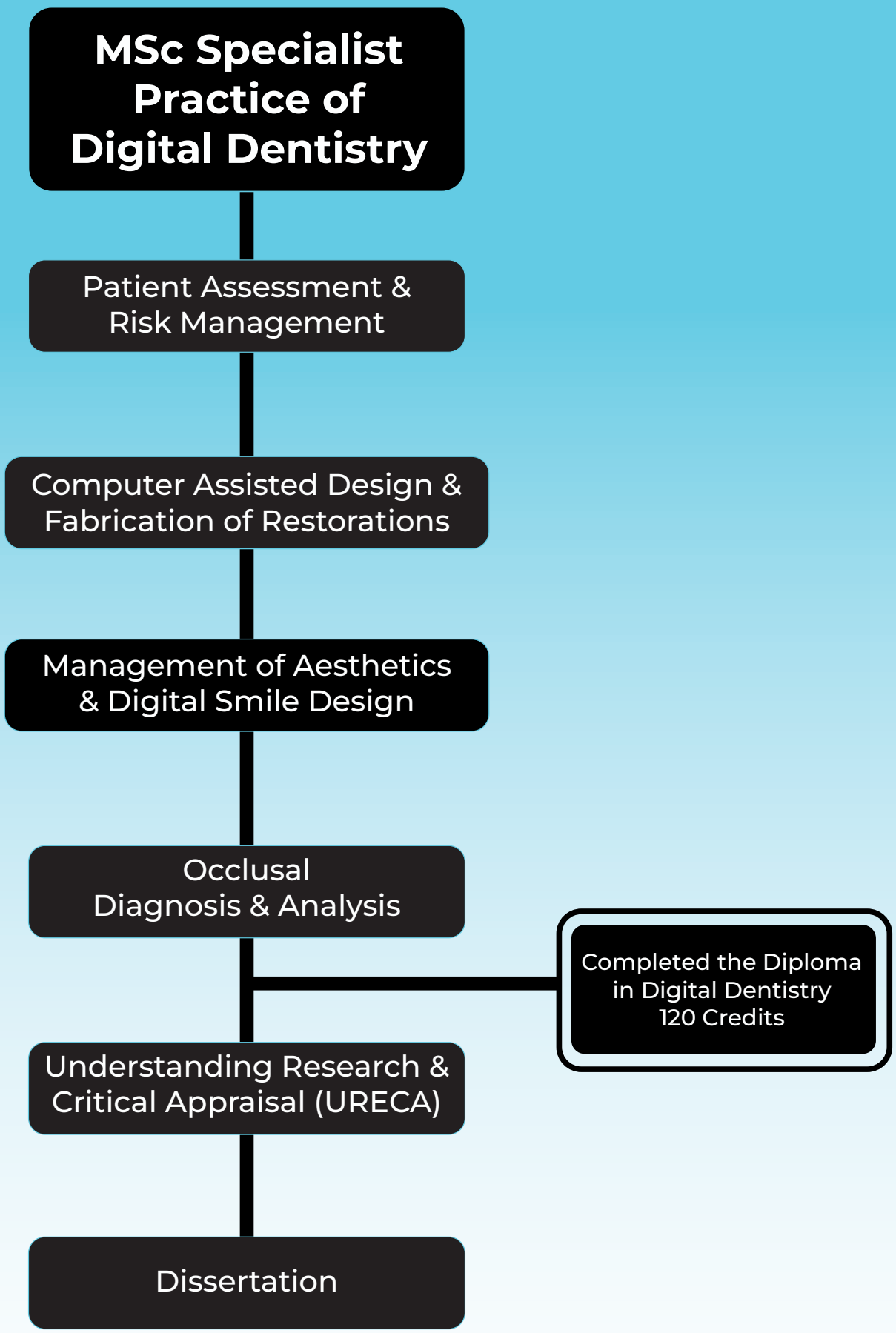
Course Fees

	Fees (Incl VAT)	Advance to MSc (Incl VAT)	Total Fees Paid (Incl VAT)
Postgraduate Diploma of Digital Dentistry COMPREHENSIVE	£16,200	£12,200	£28,400
Postgraduate Diploma of Digital Dentistry DIGITAL ONLY	£9,000	£9,620	£18,620
MSc Specialist Practice of Digital Dentistry COMPREHENSIVE	£28,400		£28,400
MSc Specialist Practice of Digital Dentistry DIGITAL ONLY	£18,620		£18,620

Payment Terms

Payments can be made upfront/finance options available

Enquire Now - Call or WhatsApp on **+44 (0) 7849 697695**


MSc Specialist Practice of Digital Dentistry
Patient Assessment & Risk Management
Computer Assisted Design & Fabrication of Restorations
Management of Aesthetics & Digital Smile Design
Occlusal Diagnosis & Analysis
Completed the Diploma in Digital Dentistry 120 Credits
Understanding Research & Critical Appraisal (URECA)
Dissertation

Admission Criteria

Entrants must satisfy the following entry requirements:
Normally at least two years' demonstrable postgraduate clinical experience in clinical practice as a:

- Qualified dental practitioner
- Current registration with the UK General Dental Council (GDC) or equivalent in another country
- Evidence of appropriate professional liability insurance/Medico-legal indemnity insurance as may be required for the designated clinical setting at an appropriate level
- Access to clinical practice setting that gives enough exposure to the relevant area of clinical specialism

Apply for a Student Scholarship

At The University of Greater Manchester, we understand that pursuing education can come with financial challenges. To support individuals in need, we've introduced a scholarship scheme specifically for clinicians. This program is designed to provide financial assistance and help make education more accessible.

Scholarship Specifications

Each year, a limited number of scholarships are available through our student scholarship scheme. These scholarships provide up to £5,500 towards the cost of Postgraduate education.

Eligibility Criteria:

- Students enrolled in a Postgraduate program.
- Students who have completed an accredited Postgraduate Diploma course are also eligible to apply.
- Students must have a current registration with the UK General Dental Council (GDC) or equivalent in another country.

Terms & Conditions

- Validity Period: If successful, the scholarship is valid for a limited period to allow other candidates the opportunity to apply. Each scholarship offer is valid for 3 months from the date of award.
- Program Eligibility: Scholarships are available exclusively for selected MSc & Postgraduate Diploma Programs.