



CAMBRIDGE ACADEMY OF  
DENTAL IMPLANTOLOGY

# Postgraduate Certificate in Dental Implantology

PGCert (Dent Imp)

Module specification with Learning Outcomes

Accredited by EduQual



# Entry requirements

1. Candidates must have a recognised degree in dentistry.
2. Candidates must have a minimum of 1 year postgraduate experience in dental practice or hospital.
3. Candidates must be of good standing and registered with the GDC

# QAA Subject Benchmark Statement

- Dentistry

## Academic and professional benchmarks

1. Training Standards in Implant Dentistry (2016) - Faculty of General Dental Practice (UK)
2. Training Standards in Implant Dentistry (2012) – Association of Dental Implantology
3. QAA UK Quality Code for Higher Education, Part A, Setting and Maintaining Threshold Academic Standards (2011:12)
4. QAA Subject Benchmark Dentistry (2002) – especially sections 3.8; 3.9; 3.10; 3.14; 3.15; 3.16; 3.17; 3.20; 3.21; 3.23 and 3.24

# Program aims

1. To provide a structured, competency assessed postgraduate training program in dental implantology
2. To allow dentists to enhance their academic and scientific skills for the safe practice of dental implantology
3. To develop the analytic and critical skills of dental professionals, as required for lifelong continuing professional education
4. To develop skills in the assessment, diagnosis, treatment planning and consenting of a patient requesting dental implant treatment
5. To understand the principles of research methodology and its applications in implant dentistry
6. To critically evaluate research for its application in patient care and to understand the role of Evidence Based Dentistry.
7. To understand the legal and ethical requirements of clinical practice, for the protection of patients
8. To understand that as dental professional our main purpose is to improve the oral health of our patients

# Program Learning Outcomes (Level 7)

## **Knowledge and understanding**

- K1** Demonstrate an understanding of the basic sciences relevant to implant dentistry
- K2** Understand the basic methods of accessing, analyzing and utilizing research findings in clinical care and patient management
- K3** Critically analyze all treatment alternatives for a patient presenting with partial or full tooth loss.
- K4** Understand how medical, social and demographic factors affect general and implant dentistry.
- K5** Develop a detailed knowledge of immediate and long term complications in dental implantology and show an ability to evaluate management options.
- K6** Understand the scientific rational behind treatment alternatives in dental implantology
- K7** Understand the scientific rationale behind advanced surgical and prosthetic treatments relevant to dental implantology

## **Intellectual and practical skills**

- S1** Demonstrate an ability to investigate, evaluate, analyze and disseminate basic research findings.
- S2** Demonstrate use of the scientific literature relevant to implant dentistry
- S3** Critically assess a patient's suitability for implant treatment and carry out a comparative risk analysis of all treatment alternatives
- S4** Show knowledge and skills in prosthetic assessment and regenerative procedures complimentary to implant dentistry
- S5** Able to act autonomously as a practitioner in the provisional of straightforward implant dentistry, using an understanding of Evidence Based Dentistry
- S6** Able to integrate all aspects of clinical dentistry into the discipline of implant dentistry and show competence in the diagnostic process, treatment planning and restoration of the dentition.
- S7** Communicate effectively to meet the needs of patients, ancillary members of the treatment team and other practitioners.
- S8** Able to define own strengths and weaknesses for targeted and continual development of clinical knowledge and skills

# 1 Year Program

## **Module 1 - Basic sciences related to surgical implant dentistry**

Level:	7
Hours:	50
Credits:	15
Delivery:	Blended learning – online and practical contact classes
Educational aims:	<ul style="list-style-type: none"><li>- Understanding of the scientific rationale behind surgical implantology</li><li>- Practical training in surgical techniques</li></ul>
Formative assessment:	Mini portfolio of posts Mock OSCE
Summative assessment:	Portfolio of posts and reflective statement (20%) Essay assignment of 3,000 words (50%) Objective Structured Clinical Examination - OSCE (30%)
Syllabus:	<ul style="list-style-type: none"><li>- Historical development of implantology</li><li>- Discovery of osseointegration</li><li>- Bone biology and physiology</li><li>- Bone biochemistry</li><li>- Pathology of bone</li><li>- Bone healing around titanium implants</li><li>- Soft tissue healing around titanium abutments</li><li>- Implant surface technology</li><li>- Dentoalveolar anatomy</li><li>- Neural and vascular supply to the dentoalveolar region</li><li>- Practical implant placement techniques</li><li>- Practical mucoperiosteal flap raising techniques</li><li>- Practical suturing techniques</li><li>- Infection control and surgical asepsis</li><li>- Implant loading protocols</li><li>- Pharmacology in implant dentistry</li></ul>
Learning objectives:	K1 K2 S1 S2 S5 S8



## **Year 1**

### **Module 2 - Patient assessment, diagnosis, treatment planning and long term maintenance**

Level:	7
Hours:	50
Credits:	15
Delivery:	Online distance learning and practical contact classes, including treatment planning and diagnosis workshops
Educational aims:	<ul style="list-style-type: none"><li>- Understanding of the patient assessment process</li><li>- Practical training in patient assessment, treatment planning and maintenance protocols</li><li>- Practical training in CBCT interpretation</li></ul>
Formative assessment:	Mini portfolio of posts Mock OSCE
Summative assessment:	Portfolio of posts and reflective statement (20%) Essay assignment of 3,000 words (50%) Objective Structured Clinical Examination - OSCE (30%)
Syllabus:	<ul style="list-style-type: none"><li>- Patient history taking</li><li>- Clinical assessment</li><li>- Evaluating patient expectations</li><li>- Dental photography</li><li>- Clinical record keeping</li><li>- Imaging techniques</li><li>- Cone Beam Computed Tomography (CBCT) interpretation</li><li>- Medical considerations</li><li>- Operative risks and complications</li><li>- Long term risks and complications</li><li>- Evaluating treatment options</li></ul>
Learning objectives:	K3 K4 K5 K6 S1 S2 S3 S5 S6 S7 S8

### **Module 3 – Prosthetic implant dentistry**

Level:	7
Hours:	50
Credits:	15
Delivery:	Blended learning – online and practical contact classes
Educational aims:	Understanding of the prosthetic and laboratory processes
Formative assessment:	Mini portfolio of posts Mock OSCE
Summative assessment:	Portfolio of posts and reflective statement (20%) Essay assignment of 3,000 words (50%) Objective Structured Clinical Examination - OSCE (30%)
Syllabus:	<ul style="list-style-type: none"><li>- Prosthetic protocols</li><li>- Impression techniques</li><li>- Impression materials</li><li>- Basic occlusion</li><li>- Prosthetic planning for surgery</li><li>- Prosthetic wax-ups and radiographic stents</li><li>- Biomechanical prosthodontic theories</li><li>- Abutment materials</li><li>- Laboratory fabrication methods</li><li>- Veneering materials</li><li>- Prosthesis attachment methods</li><li>- Evaluation of cement and screw retention</li></ul>
Learning objectives:	K1 K2 K3 K5 K6 S1 S2 S3 S4 S5 S6 S7 S8

## **Module 4 – Applied clinical occlusion**

Level:	7
Hours:	50
Credits:	15
Delivery:	Blended learning – online and practical contact classes
Educational aims:	Understanding of the human occlusal mechanism
Formative assessment:	Mini portfolio of posts Continual assessment of surgical skills progression
Summative assessment:	Portfolio of posts and reflective statement (20%) Essay assignment of 3,000 words (50%) Objective Structured Clinical Examination - OSCE (30%)
Syllabus:	<ul style="list-style-type: none"><li>- Anatomy and physiology of the TMJ</li><li>- Anatomy and physiology of the muscles of mastication</li><li>- TMJ dysfunction syndrome</li><li>- Occlusal terminology</li><li>- Current theories of occlusion</li><li>- Recording occlusal parameters</li><li>- Use and theory of facebow</li><li>- Toothwear: aetiology and treatment</li><li>- Parafunctional activity relevant to dental implantology</li><li>- Disorders of the TMJ</li></ul>
Learning objectives:	K7 S1 S2 S3 S4 S5 S8

# Timetable

## Overview

- The theory element of each module is taught online over 5 weeks
- 2 modules are taught during Term 1
- 2 modules are taught during Term 2

Modules are delivered as a combination of the Online Theory Program, a pre-clinical Practical Skills Week and a Clinical Training Week with provided patients.

Term 1 - Online (10 weeks total)

Term 2 - Online (10 weeks total)

Term 3 - 5 day Practical Skills Week

Clinical Training Week – students are organized into groups of 3. The date of the Clinical Training Week is dependent on the group. The Clinical Training Week takes place following completion of the Online Theory Program and the Practical Skills Week.

For dates see **[pgcert-implantology.com](http://pgcert-implantology.com)**

# Learning Delivery

## 1. Online Theory Program (Terms 1 &2)

### Rational:

- Designed to allow good accessibility to interactive theory training
- Ensures that students have sufficient theoretical knowledge before training on live patients
- No live Webinars
- Access is on-demand
- Training is tutor lead

### Delivery:

- Each module is split into 5 weekly sessions accessed from the VLE (Canvas)
- Weekly sessions delivered using combinations of:
  - i. Reading from course textbooks
  - ii. Recorded webinar lectures
  - iii. Online videos
  - iv. Online 'pages'
  - v. Tutor guidance

### Assessment:

- Students must submit a Discussion Post (maximum 500 words) for each weekly session
- Students have a 2 week time limit to submit each Discussion Post
- Discussion Post submissions are marked at the end of each module (usually making up 20% of total module mark)
- Students will be given an essay assignment at the end of most modules
- Students have 4 weeks to complete the essays assignments

## 2. Practical Skills Week (Term 3)

### Rational:

- Designed to allow hands-on practical skills training, minimizing travel frequency
- Provides competency assessed pre-clinical training using simulation models
- Ensures that students are competent in practical skills prior to commencing clinical training on patients

### Delivery:

- 5 day Study Week (Monday – Friday) in Cambridge (Churchill College)
- Hands-on practical skills training using bone models and pig jaws
- CBCT analysis training using provided laptops
- Treatment planning group workshops

### Assessment:

- Objective Structured Clinical Examinations (OSCEs)

### Practical training topics covered:

- Patient assessment
- Treatment planning workshops
- Gowning & gloving
- CBCT analysis
- Suturing
- Implant placement (single & multiple)
- Implant impression techniques
- Flap raising using pig heads
- Simple bone augmentation techniques
- Soft tissue management

### 3. Clinical Training Week

To ensure patient safety, a minimum grade of 'PASS' must be achieved in the Online Theory and Practical Skills elements before students are permitted to progress to treating live patients during the Clinical Training Week.

#### Rational:

- To develop the skills required for the safe treatment of dental implant patients in the provision of straightforward dental implant treatment

#### Delivery:

- 5 day Clinical Training Week (Monday – Friday)
- Students are divided into small groups of 3
- Tutor supervised
- Patients provided
- Minimum of 10 implants guaranteed
- Clinical training provided by Dentale at Stafford training centre

#### Assessment:

- Assessment of competency by tutor
- Assessments are marked as 'pass' or 'fail' for the Clinical Training Week
- Opportunity for retaking the Clinical Training Week if pass grade of competency not met