

ECAS Unit Title: Patient assessment, diagnosis, treatment planning and long-term maintenance

ECAS Unit Summary	
Customised Course title	MSc Advanced Dental Implantology Year 1 of the pathway (90 credits)
EduQual level	Level 7 (RQF)
Unit length	150 notional hours 15 credits
Unit aim	<ul style="list-style-type: none"> • Understanding of the patient assessment process • Interpretation and justification of dental CBCT • Application of patient assessment to treatment planning
Delivery and assessment	Online learning using the Canvas VLE Written assignments
Essential resources	<ul style="list-style-type: none"> • Canvas VLE with access to tutors • Online library facilities • Access to a Windows based PC • Provision of CBCT viewing software and anonymised CBCT cases

Learning Outcomes:

Learning Outcome 1: Demonstrate an ability to conduct and analyse a patient assessment for the provision of implant dentistry			
Assessment criteria <i>On completion of this unit, the learner can</i>	Indicative content	Delivery	Assessment
<p>1.1 Critically analyze all data derived from a thorough patient assessment</p> <p>1.2 Understand how medical, social and demographic factors affect general and implant dentistry.</p> <p>1.3 Develop a detailed knowledge of immediate and long term complications in dental implantology and show an ability to evaluate management options.</p> <p>1.4 Critically assess a patient’s suitability for implant treatment and carry out a comparative risk analysis of all treatment alternatives</p>	<ul style="list-style-type: none"> - Patient history taking - Clinical assessment - Evaluating patient expectations - Dental photography - Clinical record keeping - Imaging techniques - Medical considerations - Operative risks and complications - Long term risks and complications - Evaluating treatment options 	<ul style="list-style-type: none"> - Online program using Canvas VLE - Weekly online sessions with learner participation and interaction - Tutor lead formative feedback 	<p>Formative assessment:</p> <ul style="list-style-type: none"> - Tutor feedback on learners’ discussion posts <p>Summative assessment:</p> <ul style="list-style-type: none"> - Weekly discussion posts (30%) - CBCT reporting assignment (20%) - Essay assignment of 2,000 words (50%)

<p>1.5 Develop a detailed knowledge of immediate and long term complications in dental implantology and show an ability to evaluate management options.</p>			
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Learning Outcome 2: Demonstrate an understanding of the factors involved in CBCT justification and interpretation

Assessment criteria <i>On completion of this unit, the learner can:</i>	Indicative content	Delivery	Assessment
2.1 Appreciate the rationale for CBCT scans and understand the limitations of CBCT imaging	<ul style="list-style-type: none"> - Development of CT and CBCT - CBCT physics - Radiation doses relevant to CBCT examinations 	<ul style="list-style-type: none"> - Online program using Canvas VLE - Weekly online sessions with learner participation and interaction 	Formative assessment: <ul style="list-style-type: none"> - Tutor feedback on learners' discussion posts
2.2 Demonstrate an understanding of the physics and principals involved with CBCT imaging	<ul style="list-style-type: none"> - Radiation protection and CBCT dose optimization - CBCT diagnosis and reporting 	<ul style="list-style-type: none"> - Tutor lead formative feedback 	Summative assessment: <ul style="list-style-type: none"> - Weekly discussion posts (30%) - Essay assignment of 2,000 words (50%)
2.3 Explain the risks of CBCT and undertake a risk to benefit analysis in order to determine the suitability of a patient for a CBCT examination	<ul style="list-style-type: none"> - Biological effects of CBCT radiation - Selection criteria - CBCT quality assurance 		
2.4 Explain radiation protection and optimisation procedures relevant to CBCT	<ul style="list-style-type: none"> - CBCT artifacts - CBCT regulations and guidelines in the UK 		
2.5 Understand the professional team roles involved in CBCT imaging			
2.6 Assess the comparative differences between CBCT and 2D imaging			

2.7 Identify common CBCT artefacts and explain their causes and limitations			
2.8 Identify normal and abnormal anatomy on CBCT scans of the dentoalveolar region	<ul style="list-style-type: none"> - Using CBCT viewing software - CBCT anatomy and pathology - Radiological terminology - Reporting on CBCT scans 	<ul style="list-style-type: none"> - Synchronous online CBCT Level 2 meeting - Provision of 30 anonymized cases 	<ul style="list-style-type: none"> - CBCT reporting assignment (20%)
2.9 Demonstrate competence in writing a formal CBCT report			

List of Learner Resources

Recommended Textbooks
<ul style="list-style-type: none">• Interpretation Basics of Cone Beam Computed Tomography: 2013. Gonzalez S• Atlas of Cone Beam Imaging for Dental Applications, 2nd Edition: 2013. Miles DA• Misch's Contemporary Implant Dentistry, 4th Edition: 2020. Resnik R• Practical Implant Dentistry – The Science and Art, 2nd Edition: 2014. Sethi A and Kaus T• Essentials in Dental Photography: 2019. Ahmad I
Journals
<ul style="list-style-type: none">• Learners will search for relevant journal publications via self-directed research
Recommended Websites
<ul style="list-style-type: none">• The Dental Library (dental-library.com)
Other
<ul style="list-style-type: none">• Cambridge Academy of Dental Implantology - Canvas VLE

ECAS Unit Title: Implant Prosthodontics and Occlusion

ECAS Unit Summary	
Customised Course title	MSc Advanced Dental Implantology Year 1 of the pathway (90 credits)
EduQual level	Level 7 (RQF)
Unit length	150 notional hours 15 credits
Unit aim	<ul style="list-style-type: none"> • Understanding of the prosthetic and laboratory processes • Ability to apply occlusal principles to dental implantology
Delivery and assessment	Online learning using the Canvas VLE Written assignments
Essential resources	<ul style="list-style-type: none"> • Canvas VLE with access to tutors • Online library facilities

Learning Outcomes

Learning Outcome 1: Demonstrate an ability to evaluate and apply prosthodontic requirements in implant dentistry			
Assessment criteria <i>On completion of this unit, the learner can</i>	Indicative content	Delivery	Assessment
1.1 Understand the scientific rationale behind the prosthodontic aspects relevant to dental implantology	<ul style="list-style-type: none"> - Prosthodontic protocols - Impression techniques - Impression materials - Prosthodontic planning for surgery - Digital wax-ups - Biomechanical prosthodontic theories - Abutment materials - Laboratory fabrication methods - Veneering materials - Prosthodontic attachment methods - Evaluation of cement and screw retention - Shade taking 	<ul style="list-style-type: none"> - Online program using Canvas VLE - Weekly online sessions with learner participation and interaction - Tutor lead formative feedback 	Formative assessment: <ul style="list-style-type: none"> - Tutor feedback on learners' discussion posts Summative assessment: <ul style="list-style-type: none"> - Weekly discussion posts (30%) - Essay assignment of 3,000 words (70%)
1.2 Demonstrate an ability to investigate, evaluate, analyze and disseminate basic research findings related to implant prosthodontics			
1.3 Demonstrate use of the scientific literature relevant to implant prosthodontics			
1.4 Critically assess a patient's prosthodontic suitability for implant treatment and carry out a comparative risk analysis of all treatment alternatives			
1.5 Develop a detailed knowledge of immediate and long-term prosthodontic complications in			

dental implantology and show an ability to evaluate management options.			
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Learning Outcome 2: Understand and apply theoretical and practical knowledge of occlusion in dental implantology			
Assessment criteria <i>On completion of this unit, the learner can:</i>	Indicative content	Delivery	Assessment
2.1 Describe the anatomical structures of the human masticatory system	<ul style="list-style-type: none"> - Anatomy and physiology of the TMJ - Anatomy and physiology of the muscles of mastication - TMJ dysfunction syndrome - Occlusal terminology - Comparative analysis of theories in occlusion - Recording occlusal parameters - Use and theory of facebow - Toothwear: aetiology and treatment - Parafunctional activity and its relevance to dental implantology - Disorders of the TMJ 	<ul style="list-style-type: none"> - Online program using Canvas VLE - Weekly online sessions with learner participation and interaction - Tutor lead formative feedback 	Formative assessment: <ul style="list-style-type: none"> - Tutor feedback on learners' discussion posts Summative assessment: <ul style="list-style-type: none"> - Weekly discussion posts (30%) - Essay assignment of 2,000 words (50%)
2.2 Describe common occlusal terminology			
2.3 Explain the normal physiology and common pathology of the human masticatory system			
2.4 Discuss and critically appraise theories of dental occlusion and their clinical implications			
2.5 Describe the management of toothwear and parafunctional activity			
2.6 Understand the rationale and functioning of dental articulators			

List of Learner Resources

Recommended Textbooks
<ul style="list-style-type: none">• Applied Occlusion (2nd Edition) Edited by: Wassell R <i>et al</i>• Misch's Contemporary Implant Dentistry, 4th Edition: 2020. Resnik R• Practical Implant Dentistry – The Science and Art, 2nd Edition: 2014. Sethi A and Kaus T
Journals
<ul style="list-style-type: none">• Learners will search for relevant journal publications via self-directed research
Recommended Websites
<ul style="list-style-type: none">• The Dental Library (dental-library.com)
Other
<ul style="list-style-type: none">• Cambridge Academy of Dental Implantology - Canvas VLE

ECAS Unit Title: Basic sciences related to implant dentistry

ECAS Unit Summary	
Customised Course title	MSc Advanced Dental Implantology Year 1 of the pathway (90 credits)
EduQual level	Level 7 (RQF)
Unit length	150 notional hours 15 credits
Unit aim	<ul style="list-style-type: none"> • Understanding of the scientific rationale behind surgical implantology • Development of skills in critical appraisal • Understanding the importance of a team approach to implant dentistry • Appreciate the importance of reflective practice
Delivery and assessment	Online learning using the Canvas VLE Written assignments
Essential resources	<ul style="list-style-type: none"> • Canvas VLE with access to tutors • Online library facilities

Learning Outcomes

Learning Outcome 1: Understanding of the scientific rationale behind surgical implantology			
Assessment criteria <i>On completion of this unit, the learner can</i>	Indicative content	Delivery	Assessment
1.1 Demonstrate an understanding of the basic sciences relevant to implant dentistry	<ul style="list-style-type: none"> - Historical development of implantology - Discovery of osseointegration - Bone biology and physiology - Bone biochemistry - Pathology of bone - Bone healing around titanium implants - Soft tissue healing around titanium abutments - Implant surface technology - Dentoalveolar anatomy - Neural and vascular supply to the dentoalveolar region - Pharmacology in implant dentistry - Implant loading protocols 	<ul style="list-style-type: none"> - Online program using Canvas VLE - Weekly online sessions with learner participation and interaction - Tutor lead formative feedback 	Formative assessment: <ul style="list-style-type: none"> - Tutor feedback on learners' discussion posts Summative assessment: <ul style="list-style-type: none"> - Weekly discussion posts (30%) - Essay assignment of 3,000 words (70%)
1.2 Understand the basic methods of accessing, analyzing and utilizing research findings in clinical care and patient management			
1.3 Demonstrate an ability to investigate, evaluate, analyze and disseminate basic research findings.			
1.4 Demonstrate use of the scientific literature relevant to implant dentistry			

Learning Outcome 2: Understanding of self-reflection and continued professional development			
Assessment criteria <i>On completion of this unit, the learner can:</i>	Indicative content	Delivery	Assessment
2.1 Able to define own strengths and weaknesses for targeted and continual development of clinical knowledge and skills	<ul style="list-style-type: none"> - Management of the surgical team - Application of research findings to clinical practice - Retrospective and prospective reflective practice 	<ul style="list-style-type: none"> - Online program using Canvas VLE - Weekly online sessions with learner participation and interaction - Tutor lead formative feedback 	Formative assessment: <ul style="list-style-type: none"> - Tutor feedback on learners' discussion posts Summative assessment: <ul style="list-style-type: none"> - Weekly discussion posts (30%) - Essay assignment of 3,000 words (70%)

List of Learner Resources

Recommended Textbooks
<ul style="list-style-type: none">• Misch's Contemporary Implant Dentistry, 4th Edition: 2020. Resnik R• Practical Implant Dentistry – The Science and Art, 2nd Edition: 2014. Sethi A and Kaus T
Journals
<ul style="list-style-type: none">• Learners will search for relevant journal publications via self-directed research
Recommended Websites
<ul style="list-style-type: none">• The Dental Library (dental-library.com)
Other
<ul style="list-style-type: none">• Cambridge Academy of Dental Implantology - Canvas VLE

ECAS Unit Title: Evidence Based Dentistry

ECAS Unit Summary	
Customised Course title	MSc Advanced Dental Implantology Year 1 of the pathway (90 credits)
EduQual level	Level 7
Unit length	150 hours 15 credits
Unit aim	Understanding of the research process and its limitations
Delivery and assessment	Online tutor lead, interactive distance learning
Essential resources	<ul style="list-style-type: none"> • PubMed • Access to Broadband • Access to Mac or PC • Canvas VLE • Course books

Learning Outcomes

Learning Outcome 1: Demonstrate an understanding of Evidence Based Dentistry			
Assessment criteria <i>On completion of this unit, the learner can</i>	Indicative content	Delivery	Assessment
1.1 Develop a detailed knowledge of different study designs and evaluate their applications	- Research design		- End of module essay (50%)
1.2 Understand how bias may affect research validity	- Research bias and its implications		- Graded weekly discussion posts (50%)
1.3 Describe different statistical methods used to analyse quantitative and qualitative data	- Data acquisition		
1.4 Explain the ethical requirements for healthcare research	- Statistical analysis		
1.5 Undertake a comparative analysis of qualitative and quantitative research	- Critical evaluation of methodology		
1.6 Develop a detailed knowledge of critical appraisal skills required to analyse systematic reviews and meta-analyses	- The research hypothesis		
	- Ethical considerations in research		
	- Planning a research protocol		
	- Research approval		
	- Systematic reviews		
	- Meta-analyses		

Learning Outcome 2: Apply the principles of Evidence Based Dentistry to the practice of implant dentistry

Assessment criteria <i>On completion of this unit, the learner can:</i>	Indicative content	Delivery	Assessment
2.1 Able to act autonomously as a practitioner in the provisional of straightforward implant dentistry, using an understanding of Evidence Based Dentistry	<ul style="list-style-type: none"> - critical reading in dentistry - professional guidelines - database research - sensitivity analysis - applying research to clinical practice with Evidence Based Dentistry 	<ul style="list-style-type: none"> - online webinars - textbook reading - tutor lead discussions (online) - online learning via Canvas platform 	<ul style="list-style-type: none"> - End of module essay (50%) - Graded weekly discussion posts (50%)
2.2 Apply Evidence Based Healthcare principles to clinical practice			
2.3 Understand how to assess research validity			
2.4 Describe the limitations of sample populations and their application to clinical practice			

List of Learner Resources

Recommended Textbooks
<ul style="list-style-type: none">• Greenhalgh, Trisha. How to Read a Paper : The Basics of Evidence-Based Medicine and Healthcare, John Wiley & Sons, Incorporated, 2019.
Journals
<ul style="list-style-type: none">• Selected relevant journals using Pubmed
Recommended Websites
<ul style="list-style-type: none">• PubMed• Centre for Evidence Based Medicine (CEBM)
Other
<ul style="list-style-type: none">• Cambridge Academy of Dental Implantology Canvas VLE

ECAS Unit Title: Clinical Cases

ECAS Unit Summary	
Customised Course title	MSc Advanced Dental Implantology Year 1 of the pathway (90 credits)
EduQual level	Level 7
Unit length	150 hours 15 credits
Unit aim	Competency in the clinical planning and treatment of 6 dental implant cases
Delivery and assessment	Clinic based patient treatment Submission of 6 Case Reports
Essential resources	<ul style="list-style-type: none"> • Suitably equipped dental clinic • Suitably trained clinical and administrative support staff • Patients • Access to appropriate radiography

Learning Outcomes

Learning Outcome 1:			
Assessment criteria <i>On completion of this unit, the learner can</i>	Indicative content	Delivery	Assessment
<p>1.1 - Able to act autonomously as a practitioner in the provisional of straightforward implant dentistry, using an understanding of Evidence Based Dentistry</p> <p>1.2 - 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 dental implants.</p> <p>1.3 - Communicate effectively to meet the needs of patients, ancillary members of the treatment team and other practitioners.</p> <p>1.4 - Able to define own strengths and weaknesses for targeted and continual development of clinical knowledge and skills</p>	<ul style="list-style-type: none"> - Knowledge of basic principles of dental implantology - Complete patient assessment - Formulation of treatment options - Application of the consent process - Competency in devising the treatment plan - Surgical and prosthetic competency - Management of complications - Planning and instigation of long-term maintenance program 	<p>This is an entirely practical unit. Delegates treat their own patients and present Case Reports of 6 cases (experienced implant dentists only).</p>	<ul style="list-style-type: none"> - Summative assessment of clinical competency using a grading rubric (100%)

List of Learner Resources

Recommended Textbooks
<ul style="list-style-type: none">• Interpretation Basics of Cone Beam Computed Tomography: 2013. Gonzalez S• Atlas of Cone Beam Imaging for Dental Applications, 2nd Edition: 2013. Miles DA• Misch's Contemporary Implant Dentistry, 4th Edition: 2020. Resnik R• Practical Implant Dentistry – The Science and Art, 2nd Edition: 2014. Sethi A and Kaus T
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