

# **Cosmetic Dentistry & Aesthetic Restorative Dentistry**

**comprehensive one-year course**

**Since 2003, over 2000 dentists have completed this programme.**

**Hope you can be a future ADS ALUMNI!**

## **Curriculum summary**

Cosmetic & Aesthetic Dentistry has changed completely over the last 15 years. And following these changes, our programme has evolved in that time to continue to make sure it is still the best programme in the UK.

***This course is all about treating a whole mouth, building aesthetics and function into the treatment plan - regardless of whether it's a veneer, crown, inlay-onlay, composite bonding or orthodontic case. By the end of the year, you will be able to make a comprehensive assessment of all the potential risks for your cases - be they dental, periodontal, occlusal, or aesthetic - and develop full mouth treatment plans.***

Using our tried and tested system, you will develop your clinical skills and confidence during the year. The first half of the programme will re-examine many of the techniques you will carry out on a day-to-day basis, to give a foundational skill set that is built upon in the second half of the year as we consider the comprehensive treatment of the whole mouth as a functional and aesthetic entity.

### **Here is a summary of the topics covered...**

Aesthetic treatment planning	Soft tissue management & cosmetic periodontics
Smile design	Ovate pontic site creation
Facially-driven treatment planning	Use of pink porcelain/composite
Colour in dentistry	Implant aesthetics
Shade matching	Aesthetic bridge design
Colour mapping	Aesthetic denture design
Clinical photography	Tooth wear: diagnosis & treatment
Digital tools for treatment planning	Occlusion
Case assessment	Occlusal case complexity assessment
Comprehensive case management	Occlusal management
Functional treatment planning	Appliance therapy in general practice
Tooth whitening	TMD management in general practice
Tooth preparation design	Case presentation skills
Minimal intervention techniques	Medico-legal aspects
Microabrasion	Patient communication
Resin infiltration	Consent & expectation management
Caries risk management	Fee setting
Periodontal disease risk management	Aesthetic practice development
Veneers, Crowns, Bridges	Internal & external marketing
Inlays & onlays	Interdisciplinary case management
Post & core restorations	Working with specialist colleagues
Adhesion to tooth tissue	Modern metal-ceramic restorations
Bonding to dentine - all the 'generations'	Full Mouth rehabilitations Maintenance
Immediate dentine sealing	
Anterior & posterior composite restorations	Aftercare & repairs
Composite resin layering techniques	Failures and how to avoid them
Bulk fill composite techniques	
Internal colour effects with composite resin	
All-ceramic restorations	
Laboratory communication	
Use of diagnostic waxups & preparation guides	
Provisionalisation	

# Detailed Course Programme

## Overall learning objectives

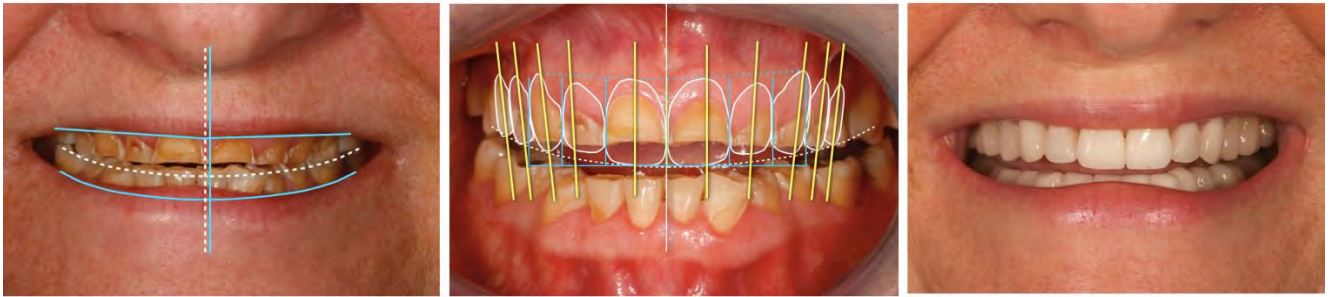
After completion of the whole course, participants should have gained knowledge & understanding of following:

- current concepts and techniques in dentistry;
- current materials and techniques for contemporary restorations, with an emphasis on minimising invasiveness in the provision of these restorations;
- a structured approach to the diagnosis, planning and execution of aesthetically driven treatment plans;
- the role of orthodontics, periodontics and other specialties in developing and delivering the treatment plan;
- a structured approach to patient communication to maximise patient involvement and minimise risk in planning and delivering treatment;
- the use of digital smile design concept as a way of planning and communicating treatment plan

This knowledge is built through the year, with the structured programme.

**This is not a modular programme** – there are many recurring themes throughout the year, so the material covered in the middle of the year builds on what was covered at the start. In the same way the material at the end of the year builds on what was covered before.

## Day 1: Aesthetic & functional treatment planning



### Smile design; Occlusal foundations; Evidence-based dentistry

#### **Lectures & Literature discussions:**

Aesthetic treatment planning: facial aesthetics facial landmarks in aesthetic treatment planning  
smile analysis & visualisation of the aesthetic outcome of treatment  
"smile design": aesthetic dental treatment planning why  
smile design is not just about veneer cases traditional  
and digital tools for smile design

Functional treatment planning: occlusal foundations for restorative dentistry and aesthetic orthodontics  
assessment of the occlusal system assessing the impact of the  
treatment plan on the patient's occlusion rules for occlusal  
management in everyday dentistry  
occlusal case complexity assessment: conformative vs. reorganised approaches

Overview of different approaches to aesthetic & functional treatment planning: FGTP (EFSB), Dawson, Swiss 3-step

Evidence-based dentistry: separating scientific journals from clinical newspapers  
Implementing research findings into daily practice

**Practical:** Smile design exercises

#### **Learning objectives**

After the Day 1 programme, participants should have gained the following:

1. An appreciation of the changes in dental care in the US and the UK over the last 20 years, and the impact this will have on the future of care in this country;
2. An overview of the process of comprehensive dental treatment planning;
3. An understanding of the art and science of facial and dental aesthetics and to learn a structured, logical approach to aesthetic dental treatment planning ("smile design").
4. An understanding of how some of the rigid classical concepts of treatment planning have given way to modern, more flexible approaches;
5. An understanding of the interplay between the different factors in smile design;
6. An understanding of traditional and digital tools used in the smile design process;
7. An understanding of the foundational functional concepts in the healthy occlusal system;
8. A system of assessing case complexity based on the impact of the treatment plan on the patient's occlusion;

## Day 2: The consultation & diagnostic process



**Consultation skills: Patient assessment, Photography, Consent, Fee setting, Treatment presentation**

### **Lectures & Literature discussions**

Internal vs external marketing to identify interested patients

Structured consultations for new & existing patients

Consultation technique: communication skills

Comprehensive patient assessment:

what an NHS exam covers and what it does not

risk management via a comprehensive exam

aesthetic consultation structure: 1 visit vs 2 visit essential

vs. case-specific information

Discussing elective treatment with your patients – making a ‘problem list’

Co-diagnosis for enhanced communication in the consultation

Developing the treatment plan

Fee setting

Case presentation

Consent to treatment / other medico-legal aspects

Clinical photography: record-keeping and beyond choosing the right camera for

you photographic technique for quality, reproducible images standardised

photographic views for records and treatment planning

which additional views to take for DSD, orthodontic cases or for shade matching

### **Hands-on**

Photography practical: all participants to be photographer/assistant/patient view and critically evaluate each other’s results at end of session

### **Learning objectives**

After the Day 2 programme, participants should have gained the following:

1. A systematic way to record clinical information prior to aesthetic treatment planning;
2. Information on using a structured approach to aesthetic consultations to ensure good communication between dentist and patient;
3. An appreciation of the different kinds of interpersonal communication and how they affect the message we try to get across;
4. An understanding of the source of common medico-legal complications of aesthetic and cosmetic treatment;
5. Introduction to a reproducible scheme for clinical photography to aid record keeping and self-evaluation of treatment outcomes;
6. An appreciation of how to ensure valid consent is given;
7. An understanding of different strategies for fee setting for small and larger courses of treatment;
8. Knowledge of how to discuss treatment plans with patients, present treatment and discuss fees.

## Day 3: Minimal intervention aesthetics



**Adhesion / Bonding; Micro-abrasion; Resin infiltration; Bleaching**

### **Lectures & Literature discussions**

Adhesion to tooth tissue: understanding the bonding “systems”  
historical approaches vs. current practice: total etch, self-etch & selective etch  
immediate dentine sealing  
adhesion to porcelain and composite

Resin infiltration for smooth-surface caries and white spot discolouration

Microabrasion & Mega-abrasion

Cosmetic (re)contouring

Bleaching: home, in-surgery, “assisted”, non-vital methods  
complex bleaching: single dark teeth, tetracycline staining, fluorosis  
tray fabrication  
over-the-counter products  
legal update on bleaching  
marketing whitening within the practice  
“therapeutic aesthetics”: anti-caries use of bleaching products  
Micro-abrasion

### **Hands on:**

Resin infiltration

### **Learning objectives**

After the Day 3 programme, participants should have gained the following:

1. An understanding of current products available for adhesion (“bonding”) to tooth tissue and other substrates;
2. Knowledge of appropriate product selection for different scenarios to optimise adhesion;
3. An appreciation of the importance of substrate control;
4. An understanding of non-invasive and minimally invasive techniques for management of anterior aesthetic problems;
5. Knowledge of current concepts of resin infiltration and micro-abrasion;
6. An understanding of when to use cosmetic contouring to achieve a more ideal embrasure form;
7. An overview of different systems for tooth whitening and an appreciation of when to use which one;
8. An introduction to the skills of patient expectation management using bleaching as the treatment.



## Day 4: Single anterior veneers & crowns; the restorative workflow



**Shade matching; Prep & Temp guides; Tooth preparations; Impressions; Temporaries**

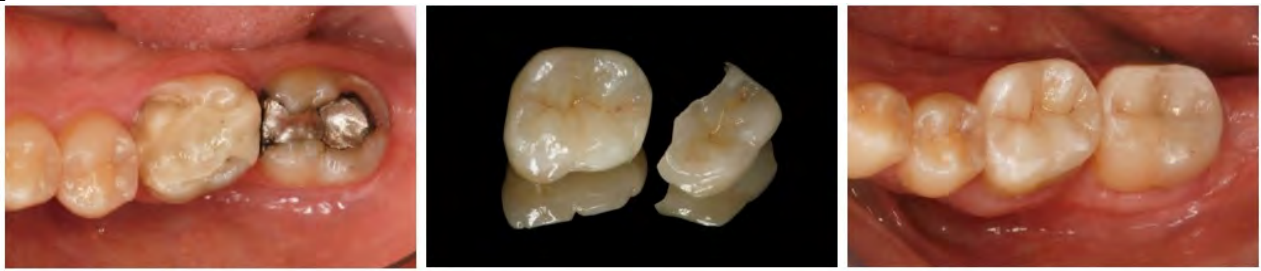
### Lectures & Literature discussions

Case workflow:	integrating the aesthetically driven workflow into routine anterior cases step-by-step execution of the treatment plan use of diagnostic wax-ups, matrices and preparation stents minimising intervention for veneer cases using the bonded mockup (APR/APT "Gurel") technique luting / cementation & finishing; post treatment review & maintenance
Impressions:	impression taking: comparison of different methods digital data capture for restorative dentistry
Temporary restorations:	role of chairside provisionals; provisionalisation techniques
Colour in dentistry:	the dimensions of colour visual perception of colour dental tissues and colour perception
Shade matching:	the scientific basis of colour measurement the problem of matching single restorations better use of shade guides impact of lighting conditions on shade matching seeing & mapping internal colour effects computer-assisted shade matching laboratory communication of colour information
Ceramics:	overview of available products; comparison of clinical & aesthetic properties tooth preparations for veneer & all-ceramic/traditional crowns
<b><u>Hands on:</u></b>	Colour mapping & shade taking exercises Veneer preparation using APR-APT technique to minimise preparations Chairside temporisation techniques

### **Learning objectives**

1. Knowledge of a visit-by-visit clinical workflow for indirect restorations, from initial appointment to final review;
2. A working knowledge of the inter-relationship of hue, value, chroma and other factors in colour matching for restorative dentistry;
3. An understanding of the importance of correct lighting for accurate shade selection and colour mapping;
4. A system for evaluating, recording, and communicating internal colour effects in the natural dentition;
5. A reliable method for shade selection;
6. An appreciation of the differences in physical, aesthetic, and biomechanical properties of current all-ceramic restorations;
7. Knowledge of different preparation techniques for veneer cases and an understanding of how tooth preparations can be influenced by the desired outcome and the material chosen;
8. Knowledge of chairside direct temporisation techniques;
9. Understanding of cementation techniques.

## Day 5: Posterior aesthetic restorations



**Posterior composite; Layering vs. Bulk-fill; inlays, onlays**

### **Lectures & Literature discussions**

Modern approaches to caries diagnosis, risk assessment & control

The range of posterior restorations: direct restorations, inlays, onlays, endo crowns, onlay crowns, full crowns

Caries management: current concepts of diagnosis & risk assessment  
minimising intervention in caries treatment: prevention of extension

Posterior direct restorations: repeat interventions – caries vs electively-driven  
the amalgam debate: what to say to patients  
layering vs. bulk fill techniques  
creating internal colour effects: fissure stains & hypoplastic areas  
finishing, polishing & texturing  
Restoration of endodontically treated teeth: aesthetic posts  
current concepts of structure & function for post-retained crowns  
ferrule effect  
discoloured teeth: ditch preps & localised opaquing  
decision-making on endodontic re-treatment before post placement

Indirect restorations: ceramic vs. composite  
partial coverage vs. full coverage  
onlays as a conservative alternative to crowns core  
buildups: why & when?  
restoration of the endodontically treated posterior tooth

**Hands on:** Posterior direct composite – layering & bulk fill  
Onlay preparations

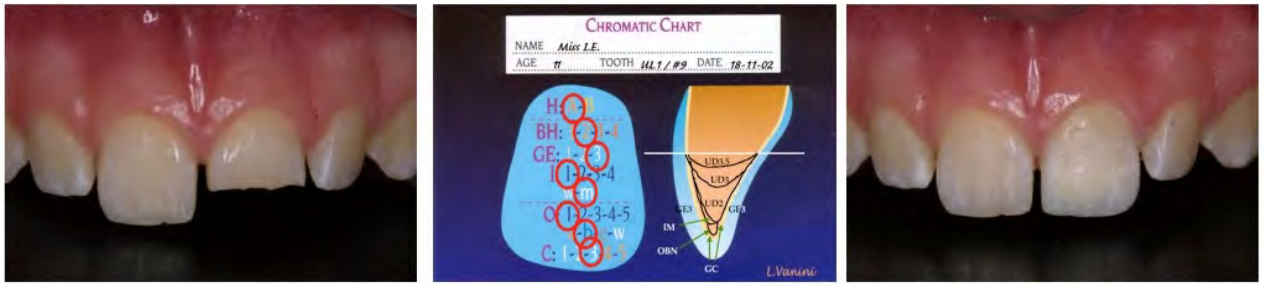
### **Learning objectives**

After the Day 5 programme, participants should have gained the following:

1. An appreciation of the range of posterior restorations possible with modern restorative materials;
2. Knowledge of current approaches to caries diagnosis and management based on risk assessment;
3. An understanding of the differences between treating primary caries and replacement of old restorations with these materials;
4. A better understanding of the potential problems that can arise in the placement of direct restorations in class I & II cavities and how to limit these problems;
5. To learn when direct posterior restorations are inappropriate and to understand appropriate alternative treatments;
6. An understanding of the different preparations and materials for indirect posterior restorations and the strengths and weaknesses thereof;
7. A working knowledge of how adhesive dentistry can allow for more conservative approaches to treatment with both direct and indirect restorations;
8. Understanding of when to use aesthetic posts and core build-ups on posterior teeth.



## Day 6: Advanced anterior composite restorations



### Anterior composite layering, class IVs, diastema closure, peg laterals

#### Lectures & Literature discussions

Composite resins:	physical vs. optical properties concepts of shading: Vita vs. non-Vita
Class III & V restorations	material selection for different cavity configurations marginal bevels
Class IV restorations & direct resin veneers:	layering techniques for anterior direct restorations marginal bevels colour mapping for large composite restorations minimal intervention with direct composite use of wax-ups and layering matrices creating internal effects: mamelons, incisal translucency & white spots finishing, polishing & texturing using indices for large composite resin buildups

#### Hands on:

Colour mapping for composite restorations  
Anterior direct composite – building the colour map,  
Finishing, texturing, polishing  
Diastema closure  
Class IV restoration

#### Learning objectives

After the Day 6 programme, participants should have gained the following:

1. An introduction to the materials science behind modern composite resins and how their physical and optical properties affect clinical usage;
2. To learn current approaches to anterior composite layering techniques;
3. To appreciate the importance of relative translucency and opacity in building restorations that mimic nature;
4. To practice polishing and finishing techniques that will enhance the aesthetic appearance of a direct restoration;
5. To recognise the limitations inherent to composite resin;
6. To learn when direct anterior restorations are inappropriate and appropriate alternative treatments.

## Day 7: Advanced anterior veneer cases



**Complex veneer cases; Preparation design; Minimising invasiveness**

### **Lectures & Literature discussions**

Treatment planning:	aesthetic and functional planning for larger anterior veneer cases
Complex cosmetic cases:	dark teeth, diastemas, disguising gingival recession minimally-invasive restorative treatment spacing and recession advanced use of APR-APT technique
Ceramics:	the ceramic marketplace: feldspathic, eMax, zirconia, Suprinity, Enamic & the others variations in material selection & preparation based on the clinical scenario rationale for material selection for different situations managing dark teeth / metal posts under ceramic restorations

**Hands on:** preparation of a complex case for diastema closure

### **Learning objectives**

After the Day 7 programme, participants should have gained the following:

1. Further understanding of how preparation design affects the final shape of the restorations, building on material covered in day 4;
2. Knowledge of when to extend preparations interproximally, and how much preparation is appropriate;
3. A more detailed understanding of techniques available to minimise tooth preparation;
4. A more detailed understanding of ceramic material selection for challenging clinical situations
5. An understanding of different impression materials and techniques and when each of them is appropriate.

## Day 8: Aesthetics & function: tooth wear, occlusal management of larger cases



**Occlusion; Tooth wear; Dahl concept; Facebows, articulators**

### **Lectures & Literature discussions**

- Tooth wear: effective diagnosis & aetiologically-driven treatment current guidelines for erosion screening & management use of the “Dahl concept” to simplify treatment of wear cases minimising intervention in wear cases current concepts of bruxism management
- Occlusion II: philosophies of occlusion articulators & facebows: why, which and when? the importance of anterior guidance occlusal risk management for more complex cases reorganisation for predictable dentistry – what, when, why and how to do it CR Bite records assessment of aesthetics, phonetics and function via long term provisionalisation TMJ
- assessment: TMD screening examination  
Load testing
- Opening vertical dimension: when, why & how  
to Dahl or not to Dahl?

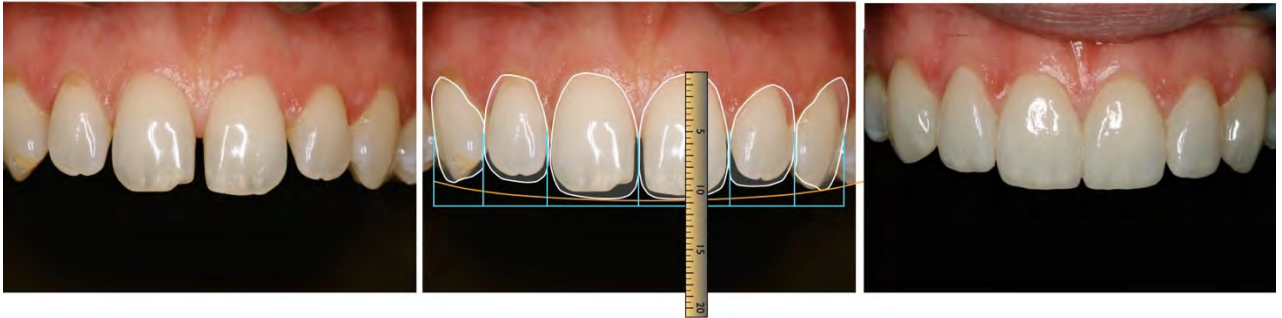
- Hands on:** facebow practical  
leaf gauge practical

### **Learning objectives**

After the Day 8 programme, participants should have gained the following:

1. Understanding of how to diagnose and plan treatment for tooth wear cases;
2. Understanding of risk management for tooth wear cases.
3. A deeper understanding of the interaction between the aesthetic and functional aspects of a treatment plan;
4. An understanding of how to avoid unplanned alterations to the patient’s anterior guidance;
5. Knowledge of the clinical stages in treating complex aesthetic cases;
6. An understanding of the different articulators available, and which to use for most cases;
7. Knowledge of facebow transfer systems and how the information is transferred to the articulator in the laboratory;
8. An understanding of the difference between conformative and re-organised approaches to occlusion;
9. Knowledge of when a re-organised approach is appropriate and the bite records that are needed;

## Day 9: Specialist interfaces in restorative dentistry; Digital planning & communication within the aesthetic team



### Interdisciplinary cases, digital treatment planning

#### **Lectures & Literature discussions**

Interdisciplinary treatment: the role of orthodontist, periodontist, maxillofacial surgeon, endodontist, implant surgeon and non-surgical facial aesthetics practitioner

Management of periodontal disease in general practice: screening examination (BPE)

detailed examination & treatment guided by the BPE examination

primary vs. secondary care: what to treat, what to refer

“prognostication” of periodontally questionable teeth

Aesthetic soft tissue management: cosmetic aspects of periodontics

gingival biotypes & the dento-gingival complex

periodontal plastic surgery: gingivectomy, crown lengthening, root coverage

when to perform a gingivectomy vs. osseous crown lengthening

working with a periodontist for the procedures you do not wish to perform

how orthodontics can help with aesthetic soft tissue management

prosthetic approaches: pink composite, pink porcelain, gingival masks

The orthodontic-restorative interface

Gummy smiles: diagnosis & interdisciplinary management

Digital treatment planning for team communication

2-dimensional digital treatment planning

Introduction to 3-D digital smile design

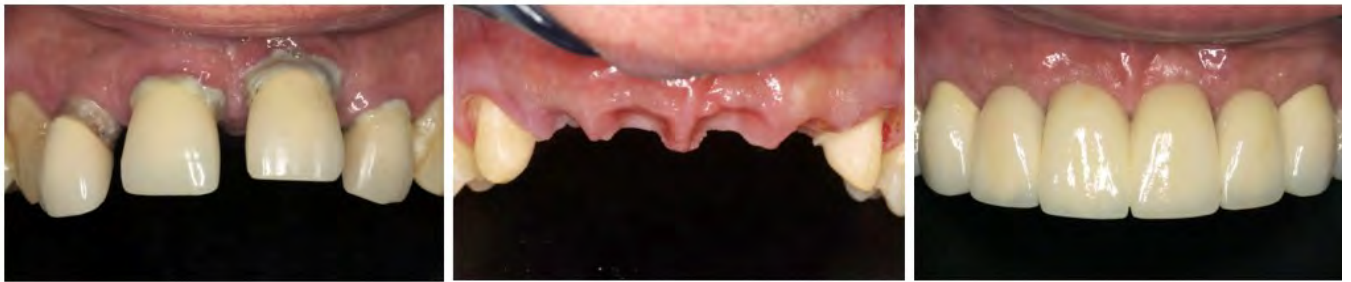
**Lecture & practical:** 2-dimensional digital treatment planning: demonstration & practical

#### **Learning objectives**

After the Day 9 programme, participants should have gained the following:

1. An understanding of gingival architecture and its normal variants;
2. An update on current concepts of periodontal disease screening and management within general practice;
3. An understanding of the concept of biologic width and its importance in soft tissue management;
4. An understanding of the consequences of violating the normal gingival architecture with restorations;
5. Knowledge of different techniques to enhance soft tissue aesthetics, both surgical and prosthodontic.
6. An understanding of the options for diagnosis and interdisciplinary management of gummy smile cases;
7. A working knowledge of the DSD digital and clinical tools and their role in the consent and communication process;
8. To introduce Apple Keynote as a means of providing images generated by the 2D Digital treatment planning process;
9. To introduce 3-dimensional Digital Smile Design concepts & workflows.

## Day 10: Aesthetic tooth replacement



### Bridges; Implants; Dentures; Treatment planning

#### **Lectures & Literature discussions**

The decision process for replacement of missing teeth

Evidence-based bridge design: the pros and cons of fixed-fixed, fixed-moveable, cantilever, adhesive designs  
common design flaws

strategies for bridges involving compromised teeth

aesthetic aspects: all-ceramic bridges vs. traditional PFM

Demystifying implants:

overview of the treatment workflow, surgical and restorative

patient selection & assessment

communication with the implant surgeon to ensure optimal implant positioning

aesthetic considerations for anterior and posterior implants

soft tissue management around dental implants

Aesthetic soft tissue management for tooth replacement:

ovate pontic site creation papillary management

around replacement teeth peri-implant soft

tissue aesthetics

Aesthetic dentures:

aesthetic improvements for denture bases aesthetic denture teeth:

customised setups for natural aesthetics design enhancements to partial

dentures to improve aesthetic and longevity strategies for 'clasplless'

dentures: workflow to combine crowns with dentures

historical concepts (milled crowns, stable-base dentures), precision attachments,

Konus/telescopic crowns, overdentures on teeth & implants

#### **Learning objectives**

After today's programme, participants should have gained the following:

1. A systematic approach to treatment planning for replacement of missing teeth;
2. Understanding of the importance of short, medium, and long-term planning when replacing missing teeth;
3. A working knowledge of the balance between aesthetics and conservation when planning tooth replacement;
4. An overview of current materials and techniques for bridges, dentures, and implant-supported restorations;
5. An understanding of the clinical workflow for the placement of bridges, dentures, and implant-supported restorations;
6. An understanding of how aesthetic considerations can affect these processes;
7. Understanding of the various periodontal and prosthodontic approaches to soft tissue management in relation to the replacement of missing teeth;
8. Knowledge of when to apply the various techniques for the optimum result.

## Day 11: Planning and delivering comprehensive dentistry



### Full mouth rehabilitations; Treatment planning

#### **Lectures & Literature discussion**

The comprehensive approach to treatment: occlusal re-organisation as part of a larger treatment plan

Simplifying diagnosis and treatment planning for full mouth cases

TMD symptoms: differential diagnosis and management

the role of appliance therapy in restorative dentistry

Questionable teeth: discussing the options and involving the patient in decision-making

Workflow for full-mouth cases: long-term provisionalisation

optimising aesthetics, function and phonetics

clinical & laboratory sequence for transition to final restorations

Psychologically challenging patients: recognising and managing "difficult" patients

Interdisciplinary aspects of comprehensive care: building your interdisciplinary team

interdisciplinary team diagnosis & treatment planning

managing communication within the team

transitioning patients within the team during treatment

**Practical:** Treatment planning, sequencing & fee setting

#### **Learning objectives**

After the Day 11 programme, participants should have gained the following:

1. When a full-mouth approach to treatment is appropriate
2. Knowledge of when and how to reorganise the occlusion;
3. Understanding when appliance therapy is appropriate within the treatment plan;
4. Understanding of the components of the occlusion that should be incorporated into treatment planning for large cases;
5. An understanding of the stages of treatment and time involved for each stage, so that patient expectations can be managed, and appropriate fees set.
6. An understanding of the roles of different specialties in the treatment process;
7. An understanding of how complex interdisciplinary cases should be sequenced and delivered;
8. Understanding of an effective strategy to manage psychologically challenging patients;



## Day 12: Aftercare, Repairs & Maintenance

### Failures: diagnosis, management and prevention



**Recognising & Managing failures; Treatment planning**

#### **Lectures & Literature discussions**

Aftercare & Maintenance

Repairing restorations to extend their clinical longevity

Failures: diagnosis, prevention & management

Troubleshooting / repairs

Learning from failures

#### **Practical:**

Quickfire treatment planning & fee calculation

Presentation of your cases

#### **Learning objectives**

After the Day 12 programme, participants should have gained the following:

1. Knowledge of maintenance procedures and the role of the hygienist in the aesthetic practice.
2. Understanding of the causes of failure in aesthetic treatments;
3. Knowledge of the reported success and survival rates for different treatments from the literature;
4. Knowledge of useful solutions to common problems;
5. An understanding of the techniques available to repair existing restorations;
6. Knowledge of different personality traits and how these can affect dentist-patient interactions;
7. An understanding of how to manage difficult situations and resolving them to everyone's satisfaction.

# advanced dental seminars

