

Graduate Diploma of Dental Implantology Information Brochure



ADA NSW Centre for
Professional Development

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Graduate Diploma of Dental Implantology

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Program Forward

Welcome to the Graduate Diploma of Dental Implantology. The course is run by Charles Sturt University in collaboration with the ADA NSW Centre for Professional Development.

The use of dental implants has revolutionised dentistry and dental implants are becoming increasingly used in general dental practice. Much of the postgraduate education in the field of implant dentistry is organised and run by dental companies. ADA NSW Centre for Professional Development in conjunction with Charles Sturt University has identified a need to have a formal training programme in implant dentistry leading to a post graduate degree.

An eighteen month course has been created which will allow delegates to learn the art and science of implant dentistry. There is equal weight placed on the surgical and prosthetic aspects of implant dentistry. The programme will involve didactic and clinical sessions with participants having to complete several cases on their own patients under the guidance of mentors.

The diploma aims to train the participants to be able to place and restore dental implants from single teeth to full arch cases. High standards have been established and participants will be expected to carry out reading and research outside of course hours. We aim to provide our graduates with the knowledge required to include implant dentistry as an integral element of their practice.

Program Details

Entry criteria and application process:

- Entry to the Graduate Diploma of Dental Implantology will be through an expression of interest, written application and interview.
- The following selection criteria will be used to assess applicants via the written application and interview:
 1. Registered as a Dental Surgeon in an Australian State or Territory
 2. Have at least two (2) years post graduation clinical experience
 3. Demonstrate an interest in the use of dental implants
 4. Discussion of previous restorative case experience

Post nominal award: GradDipDentImplantology

Assessment: Participants will be assessed throughout the course through a series of assignments, case presentations and subject examinations. Each module will include an assignment in the form of literature review and essays to be completed outside of course hours. Four case presentations ranging from simple to advanced will be submitted by each participant during the course. An examination will be held at the end of each subject.

Patient Treatment and Mentoring Program: An integral part of the course will be the practical component. Participants will be required to treat four cases under the supervision of appointed mentors. The suitability of the cases to be treated will be assessed by the course lecturers.

Participants will be expected to perform a wide range of treatment and display appropriate skill in both the surgical and restorative phases of treatment. The cases will range from single tooth supported implants to more complex cases involving multiple implants and grafting procedures. All steps in the treatment will need to be fully documented. The completion of all four cases will be necessary to obtain the diploma.



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Module 1: Fundamentals of Dental Implants

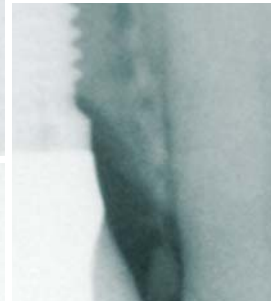
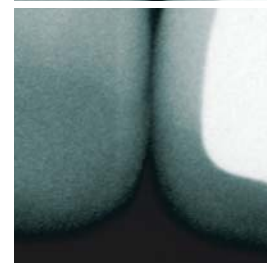
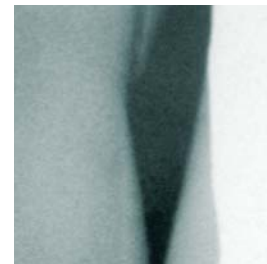
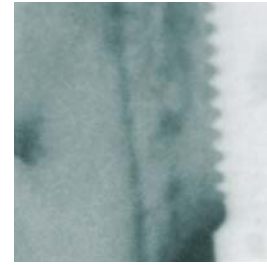
The module will introduce participants to the concepts of implant dentistry.

The history and development of implant dentistry will be covered. The scientific basis of osseointegration will be examined. The components and nomenclature used in implant dentistry will be introduced.

Participants will become familiar with the anatomical structures involved in implant dentistry. This will include hard and soft tissues.

Participants will be introduced to the various radiographic techniques used in treatment planning for the provision of implant supported prostheses.

Limitations in the use of dental implants will be discussed. Implications of various medical conditions in the provision of implant dentistry will be covered. Practical sessions will include the fabrication of surgical guides.



Module 2: Patient Education and Consultation

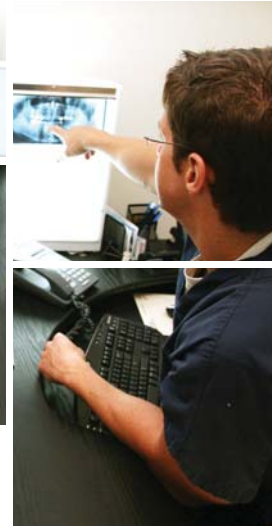
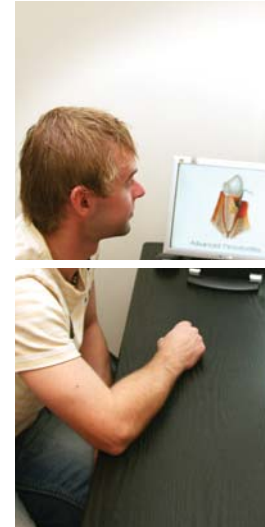
Effective communication between practitioner and patient is vital in order to enable both parties to be satisfied with treatment. This module will introduce participants to the concepts of patient education and treatment planning.

The participants will become familiar with the success rates of implant supported/retained prostheses compared with other restorative options. Complications and their management in the provision of implant supported prosthesis will be discussed.

Participants will be advised on how to interpret dental literature in terms of success and survival rates in implant dentistry. Participants will be instructed on how to answer questions with regards to limitations of treatment. The use of informed consent forms will be introduced. The need for maintaining implant supported prostheses will be examined.

The use of models in communicating the steps in treatment will be introduced. Participants will become familiar in the steps of treatment planning for the provision of implant supported restorations. The participants will be advised on how to formulate a quotation when presenting treatment plans.

Participants will become familiar with the inclusion of dental and medical specialists in the treatment planning for the provision of implant supported restorations. Limitations of and contra-indications to the placement of implant supported prosthesis will be analysed.



Module 3: Fundamentals of Implant Supported Restorations for the Partially Edentulous Patient

The module will introduce participants to the concepts of restoring dental implants.

Participants will be introduced to the concepts of treatment planning for the placement of implant supported prostheses from a restorative perspective.

The implications of different implant designs will be discussed.

The use of implants with internal and external connections will be discussed.

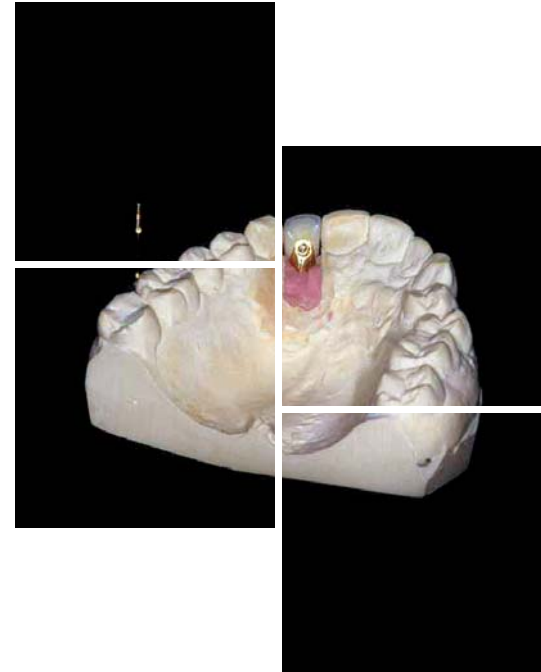
Limitations and complications involved in the fabrication of implant supported prosthesis will be discussed. The management of these complications will be covered.

Impression techniques used in implant dentistry will be covered.

Abutment design, abutment selection and the design of final prosthesis will be discussed. Participants will become familiar with designing final prostheses and communicating with dental laboratories regarding these designs.

Practical sessions will include the taking of impressions on models.

The participants will pour models from the impressions. Temporary restorations will be fabricated on models.



Module 4: Fundamentals of Implant Supported Restorations for the Fully Edentulous Patient

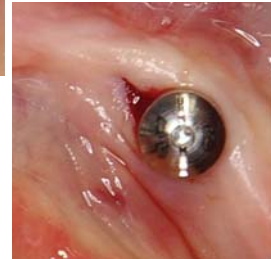
The module will introduce the participants to the concepts of placing implant supported prostheses in the edentulous mandible.

The problems of being edentulous will be examined. The process of atrophy of the mandible following tooth loss will be covered. Treatment options for the edentulous mandible will be considered. The McGill consensus on the restoration of the edentulous mandible will be discussed.

The use of implants to aid in the stabilisation and retention of a lower full denture will be discussed. Different retention units will be examined and displayed. Maintenance of the full lower implant retained denture will be covered.

Surgical principles for the placement of dental implants will be discussed. Limitations in the use of dental implants in the retention of a full lower denture will be covered.

The practical component will consist of laboratory exercises involving the conversion of a lower full denture to an implant retained denture.





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Module 5: Fundamentals of Implant Surgery

Participants will be introduced to the steps involved in the placement of dental implants.

Principles of surgery will be introduced. This will include standards of sterility and asepsis. Discussion of how these concepts can be incorporated into general dental practice will be presented. Surgical complications and their management will be analysed. This will include the management of implants which fail to integrate.

Surgical anatomy will be covered.

The hardware required to place implants will be introduced. The steps and surgical sequence in the placement of dental implants will be covered. The fabrication and use of a surgical stent will be discussed. Correct implant positioning and angulation will be considered.

Variations in surgical techniques for different anatomical situations and implant designs will be covered. One and two stage implant surgery will be discussed. The various loading protocols of dental implants will be examined.

Practical sessions will involve the placement of dental implants in models and animal jaws.



Module 6: Advanced Topics in Implant Surgery I

The module will introduce the participants to the concepts of the placement of dental implants in difficult cases.

The use of implants designed for specific circumstances will be discussed. The principles of "platform switching" will be covered.

The science and practicalities of maintaining bone after tooth extraction will be considered. This will include materials and techniques used in "socket preservation".

The techniques involved in the placement of implants using an immediate protocol will be introduced. The limitations and advantages in this technique will be covered. Interpretation of the success and survival rates for this technique will be analysed.

The treatment stages and timing for the extraction of teeth and provision of temporary restorations will be presented. The advantages and logistics for this treatment alternative will be considered.

The need for and techniques of grafting hard and soft tissues at the time of implant placement will be presented. The principles of implant placement using flapless surgery will be appraised. The advantages and disadvantages of this technique will be scrutinised.





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Module 7: Advanced Restorative Procedures for the Partially Edentulous Patient

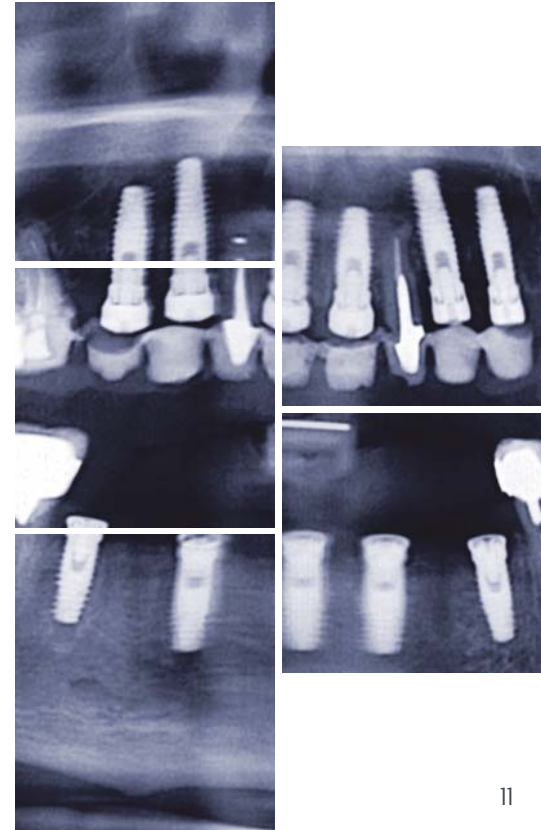
The module will introduce the participants to advanced restorative procedures for the partially edentulous patient.

Participants will be exposed to treatment planning for multi-unit prostheses in the rehabilitation of partially edentulous patients. This will include both fixed and removable appliances. The advantages and disadvantages of different treatment modalities and prosthesis design will be discussed.

Stages in the treatment sequence will be scrutinised. This will include all stages from the initial examination through to the placement of final prosthetic devices.

The stages in the conversion of a partial prosthesis into a full arch prosthesis will also be covered. The participants will be exposed to the latest technology including computer designed and manufactured prosthetic devices (CAD/CAM).

Practical exercises will include impression techniques for multi-unit cases and the manufacture of diagnostic wax ups.



Module 8: Advanced Restorative Procedures for the Fully Edentulous Patient

The module will introduce the participants to advanced restorative procedures for the fully edentulous patient.

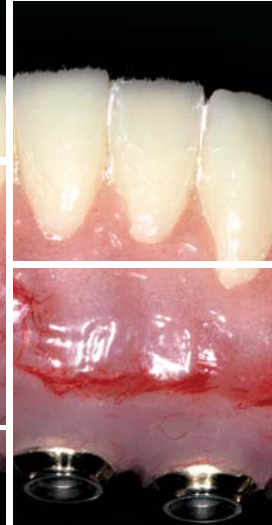
This module builds on the knowledge gained in the previous modules. The selection of patients suitable for the placement of full arch implant supported restorations will be discussed.

The stages in the treatment planning for these challenging cases will be considered. The need for restoring soft tissue contour to improve aesthetics and function will be examined.

The design of different prosthetic devices will be scrutinised. The choice of materials used in the manufacture of the prosthetic devices will be analysed.

The design of prosthetic devices as it relates to the ability of the patient to perform adequate oral hygiene will be evaluated and the professional maintenance requirements will be discussed.

The cost of providing this treatment modality will also be covered. Practical exercises will involve impression techniques used for full arch cases.



Module 9: Implant Restorative Therapy in the Aesthetic Zone

The module will introduce the participants to the concepts of the restoring implants placed in the aesthetic zone.

The requirements for obtaining a good aesthetic result will be analysed. The influence of the surrounding anatomical structures on aesthetic outcome will be evaluated. This discussion will include the influence of adjacent teeth and soft tissue contours on aesthetic outcomes. Difficulties in obtaining good aesthetic outcomes will be discussed. Techniques for communication with patients about the limitations in obtaining ideal aesthetics will be presented.

The influence that implant size and shape has on aesthetic outcomes will be scrutinised. Abutment design and selection will be discussed. Techniques for the prosthetic replacement of lost soft tissue will be introduced. Different restorative materials available to aid in obtaining good aesthetic results will be covered.

Practical sessions will enable participants to view and handle different abutments and materials. The fabrication of temporary crowns on models will be carried out.





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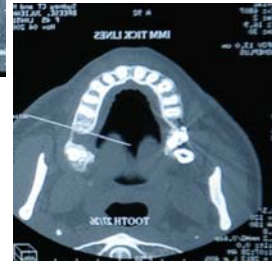
Module 10: Advanced Topics in Implant Surgery II

The module will introduce participants to the concepts involved in the placement of dental implants in difficult cases.

The placement of implants in areas with limited or deficient hard tissue is a challenging clinical situation. The principles of hard tissue (bone) grafting will be introduced. Different techniques and materials will be evaluated. Techniques for the harvesting of autogenous bone will be presented. The use of grafting techniques with simultaneous implant placement will be discussed.

Topics and techniques covered will include guided bone regeneration, sinus lifting and "ridge splitting".

Practical exercises will include the placement of implants in animal jaws with simultaneous bone grafting. Sinus augmentation techniques will be performed on animal models. Participants will handle and place barrier membranes used in bone augmentation procedures.



Module 11: Surgical Implant Therapy in the Aesthetic Zone

The module will introduce participants to the concepts and difficulties of the placement of dental implants in aesthetically challenging cases.

The participants will be introduced to the difficulties in obtaining an aesthetic result in the provision of implant supported prostheses. The anatomical variations (tissue biotype) and its influence on aesthetic results will be discussed.

The interdental papilla and the implications of papilla loss will be discussed in terms of aesthetic outcomes. Surgical techniques to reduce the risks of papilla loss will be discussed. Implant positioning and angulation and their influence on aesthetics will be discussed.

Changes in hard tissue contours following tooth extraction will be covered. Surgical techniques such as socket preservation and implant designs including those that allow "platform switching" and their potential influence on aesthetic outcomes will be evaluated.

Practical exercises will include surgical and suturing techniques developed for improved aesthetic results. Implant placement using minimally invasive surgical techniques will be carried out.



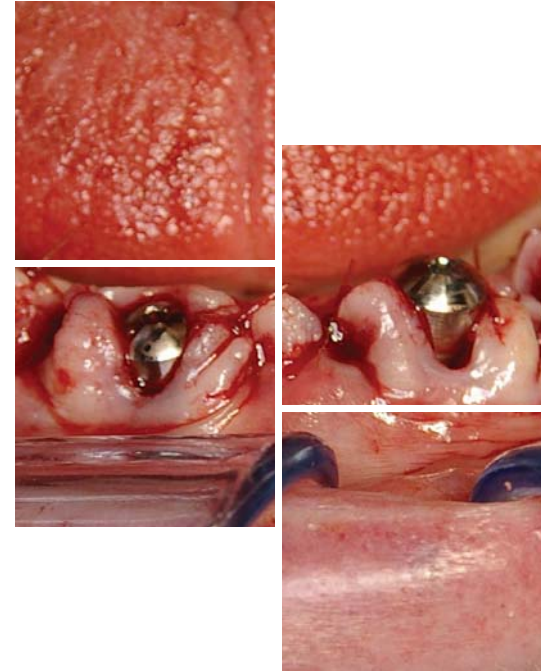
Module 12: Immediate Implant Placement, Loading and Provisionalisation of the Edentulous Mandible

The module will introduce the participants to the concepts of the immediate placement, immediate loading and immediate provisionalisation of dental implants.

The module builds on previous surgical modules. Participants will be instructed in techniques suitable for immediate placement and restoration of dental implants.

Participants will become familiar with the current literature on the techniques and guidelines for this challenging treatment modality.

The use and fabrication of surgical guides will be discussed. Treatment planning steps for a patient requiring immediate replacement of teeth with implant supported prostheses will be discussed.



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