

**COURSE SPECIFICATIONS
PROGRAMME
(B.D.S)**

FACULTY OF DENTISTRY

UNIVERSITY OF TRIPOLI

B.D.S Programme Specification

University	Tripoli
Faculty	Dentistry

A- Administrative Information

1. Programme Title:	Bachelor of Dental Medicine and Surgery (B.D.S)
2. Award/degree:	B.D.S
3. Department(s) responsible:	• Dental Anatomy (Dental Morphology). • Dental Materials. • Oral Histology. • Oral Pathology. • Conservative Dentistry & Endodontics. • Fixed Prosthodontics. • Removable Prosthodontics. • Orthodontics. • Oral Medicine, Oral Diagnosis & Radiology. • Periodontology. • Paedodontics. • Oral Health & Preventive Dentistry. • Oral & Maxillofacial Surgery. • Chemistry Physics, Statistics, Zoology, Arabic, English & Medical Language. • General Anatomy, Head & Neck, General Histology, Physiology, Biochemistry, Microbiology, General Pathology, Pharmacology, Internal Medicine, and Dermatology, General surgery, Otolaryngology & ophthalmology.

B- Professional Information

1) Programme Aims:

The aim of the dental program is to produce a caring, knowledgeable, competent and skilful dentist who is able, on graduation, to accept professional responsibility for the effective and safe care of patients, who appreciates the need and value of lifelong learning, who is able to utilize advances in relevant knowledge and techniques and who understands the role of patients in decision making.

2) Academic standards

a. External references selected to confirm the appropriateness of academic standards:

National Academic Reference Standards (NARS) for Dentistry used as external reference

b. Comparison of provision to selected external references:

National Academic Reference Standards (NARS) for Dentistry	Program ILOs
3) Knowledge and understanding <i>Upon completion of an undergraduate dental program, the graduate must know and understand the biomedical, dental and behavioural sciences that form the basis of human health and disease including:</i>	
3.1.1 The interrelationship between different systems of the human body.	Interdependence between the various systems of the human body.
3.1.2 The principles of pathogenic mechanisms and manifestations of human diseases which are of dental significance.	The principles of pathogenic mechanisms and manifestations of human diseases, which are important in dentistry.
3.1.3 Basis and significance of oral health promotion, nutritional education and prevention of oral diseases in population based approaches.	The principles and importance of health promotion, health education and prevention in relation to dental disease and how these principles are applied in the context of individuals and communities.
3.1.4 Prevention and management of the medical emergencies.	Diagnosis of the medical emergencies and knowing how to deal with them.
3.1.5 Maintenance of infection control and a safe working environment.	The scientific principles of sterilisation, disinfection and antisepsis to prevent cross-infection in clinical practice.
3.1.6 Basis of practice management.	Principles of dental practice management.
3.1.7 Principles of evidence-based dentistry and its relation to scientific research.	Principles of evidence based decision making in dental practice.
3.1.8 Ethical and medico-legal aspects relevant to the practice of dentistry and research.	Dental ethical and medico-legal aspects in dental practice.
3.1.9 Social and psychological issues relevant to dental care with emphasis on behavioural management.	The importance of psychological and social factors in the delivery and acceptance of dental care by patients.
3.2 Intellectual Skills <i>The dental graduate must be able to:</i>	
3.2.1 Integrate basic biomedical, behavioural and dental sciences with signs, symptoms and physical findings of the disease.	Incorporate the basic, dental and medical sciences with the signs, physical, symptoms and the outcome of the diseases.
3.2.2 Differentiate between normal and abnormal features that are particularly relevant to dental practice.	Differentiate between the normal and abnormal characteristics, which are of particular importance to the practice of dentistry.
3.2.3 Identify, prioritize and generate a list of potential problems patient's clinical.	Identify and prioritize the list of potential patient's clinical problems.
3.2.4 Analyze, interpret and integrate collected diagnostic data to solve clinical problems bases on current	Analyze clinical findings to make a diagnosis and treatment plan.

evidence.	
3.2.5 Design appropriate treatment plan for different dental problems.	Formulate appropriate treatment plan for common oral disorders.
3.2.6 Assess and evaluate the effects of medications taken by the patient on dental management.	Assess drugs commonly used in oral medicine and their side effects and interactions.
3.2.7 Reason deductively in clinical problem solving.	Identify and prioritize the list of potential patient's clinical problems.
3.3 Practical and clinical skills <i>The dental graduate must be able to:</i>	
3.3.1 Establish a comprehensive patient's history, perform clinical examination, request and evaluate appropriate investigations.	Obtain a history of the present complaint and medical history and maintain an accurate record of patient treatment.
3.3.2 Review the body systems and consult with other health care professionals, when required.	Determine the dental relevance of common disorders of the major organ systems.
3.3.3 Detect abnormal and pathological conditions, as well as etiological and/or risk factors that may contribute to disease process.	Recognise abnormalities in dental or periodontal anatomical form that compromise periodontal health, function or aesthetics and identifying conditions, which require management.
3.3.4 Perform a range of clinical procedures which are within the scope of general dentistry, including:	
a) Applications of preventive procedures.	Provide oral hygiene instruction, topical fluoride therapy and fissure sealing.
b) Application of different local anesthetic techniques.	Administer infiltration and block local anaesthesia in the oral cavity for restorative and surgical procedures.
c) Extraction of teeth and removal of roots when necessary.	Treat and managing conditions requiring minor surgical procedures of the hard and soft tissues and to apply and/or prescribe appropriate pharmaceutical agents to support treatment.
d) Diagnosis of commonly encountered oral lesions.	Recognise the clinical features of oral mucosal diseases or disorders, including oral neoplasia and identify conditions that require management.
e) Performance of the necessary radiographs.	Take radiographs of relevance to dental practice, interpreting the images, including managing and avoiding the hazards of ionising radiation.
f) Performance of non-surgical periodontal treatment and monitor treatment outcomes.	Undertake supra-gingival and sub-gingival scaling and root debridement including stain removal and prophylaxis.
g) Restoration of carious and non-carious tooth defects with emphasis on basic concepts of aesthetics.	Restore defective and/or missing teeth to acceptable form, function and aesthetics.
h) Basic endodontic procedures.	Perform endodontic treatment on single and

	uncomplicated multi-rooted teeth.
i) Rehabilitation of partially and completely edentulous patients.	Design effective complete and partial dentures.
j) Diagnosis and prevention of developing malocclusions.	Identify inappropriate oral habits that may exacerbate malocclusion and prevent their consequences through patient education and training and appliance therapy, as needed.
k) Basic pedodontic treatment.	Manage patients from different age groups, bearing in mind the different needs of young children, adolescents, adults and the ageing population/elderly.
3.3.5 Apply current infection control guidelines.	Prevent cross-infection in clinical practice.
3.3.6 Control different levels of patient's anxiety and apprehension in different age groups.	Identify abnormal and anxiety related patient behaviour, and respond appropriately.
3.3.7 Manage dental and medical emergencies which may occur in dental practice and perform basic life support measures.	Identify and manage dental emergencies including those of pulpal, periodontal or traumatic origin.
3.3.8 Prescribe and monitor the effects of appropriate pharmaceutical agents taking into consideration drug and patient factors.	Prescribe and monitor the effects of appropriate pharmaceutical agents, including the chemical control of dental plaque.
3.4 General and transferable skills <i>The graduate must be able to:</i>	
3.4.1 Work in collaboration as a member of an interdisciplinary team.	Work with other members of the dental team.
3.4.2 Communicate effectively in multicultural work environment using verbal and non-verbal means.	Share information and professional knowledge with both the patient and other professionals, verbally and in writing, including being able to negotiate and give and receive constructive criticism.
3.4.3 Recognize and effectively utilize all sources for continuing professional development and life-long learning.	Use all resources effectively to continuing professional development and life-long learning.
3.4.4 Adopt a creative attitude in an ethical and scientific approach.	
3.4.5 Self evaluate professional abilities, performance and progress.	Displaying appropriate professional behaviour recognition of professional qualities act in a professional manner self assess professional capacity, performance and progress.
3.4.6 Recognize professional responsibility towards the surrounding community.	Improve the oral health of individuals, families and groups in the community.
3.4.7 Use information technologies to enrich diversity and professional experience.	Use contemporary information technology for communication, management of information and applications related to health care.

3.4.8 Recognize the basic concepts of quality assurance and practice management.	Recognize the quality assurance in dental practice.
3.4.9 Prioritize workload and manage personal stress in the frame work of proper performance and management.	Take control of his/her workload and establish priorities to accomplish stress management in the workplace.

4) Intended learning outcomes (ILOs) for programme:

a. Knowledge and understanding:

On graduation, the student should have knowledge of:

1. The fundamental principles in chemistry as the groundwork of medical (pharmacology) and dental (dental biomaterials) science.
2. The core courses in physics (properties of matter and heat) and biostatistics.
3. The principles of different types of tissues with fundamentals of gene expression and the study of physiology at the organ and systems level.
4. The structure and function of the molecules, cells, tissues, organs and systems of the human body relevant to the practice of dentistry.
5. The form and function of teeth and associated tissues in health and diseases.
6. The potential and limitations (risks and benefits) of dental technological procedures and the handling of dental materials in restoring the dentition.
7. The basic terminology related to dentistry.
8. The foundation of computer science.
9. The embryology of the face and oral cavity, the normal structure and function of the dental and parodontal tissues.
10. The principles of pathogenic mechanisms and manifestations of human diseases, which are important in dentistry.
11. The concepts of normal body metabolism and metabolic basis of diseases.
12. The interdependence between the various systems of the human body.
13. The complex interactions between oral health, nutrition, general health, drugs and diseases that can have an impact on dental care and disease.
14. The science of dental biomaterials, including their limitations and the environmental issues relevant to their use.
15. The scientific principles of sterilisation, disinfection and antisepsis to prevent cross-infection in clinical practice.
16. Disease processes such as infection, inflammation, disorders of the immune system, degeneration, neoplasia, metabolic disturbances and genetic disorders.
17. The design and laboratory procedures used in the production of crowns and bridges.
18. The design and choice of materials used in the production of partial and complete dentures, along with knowledge of laboratory procedures.
19. The pharmacological properties of drugs used in dental practice including their interactions and side effects.
20. The main medical disorders and aspects of general medicine and surgery that may impinge on dental treatment.
21. The pathogenesis of common oral medical disorders and their treatment.
22. The diagnosis of oral cancer and the principles of tumour management.
23. The principles of orthodontic treatment (preventive, interceptive and corrective) and the limitations of orthodontic treatment.
24. Diseases and disorders of the oral cavity and associated structures, their causes and sequelae, so as to inform diagnosis, prevention and management.

25. The principles that underlie dental radiographic techniques.
26. The prevalence of oral disease in the adult and child populations.
27. Basic statistical concepts, methods and appreciate their relevance to dental research and dental practice.
28. The principles and importance of health promotion, health education and prevention in related to dental disease.
29. The importance of psychological and social factors in the delivery and acceptance of dental care by patients.
30. The basic principles of oral and maxillofacial surgery.
31. The medical emergencies and knowing how to deal with them.
32. Inhalational and intravenous conscious sedation techniques in clinical practice.
33. Basic principles of evaluation, diagnosis and treatment of pulpal and periradicular disease.
34. Basic principles in the management of dental emergencies arising from pulpal and periodontal disease, trauma and treatment failures.
35. The endodontic management of healthy, diseased or injured pulp and periradicular tissues in the primary and permanent dentitions.
36. The biocompatible, functional and aesthetic fixed dental prostheses.
37. Principles of evidence based decision making in dental practice.
38. Principles of dental practice management.
39. Dental ethics and medico-legal aspects in dental practice.

b. Intellectual skills

1. Incorporate the basic, dental and medical sciences with the signs and physical symptoms and the outcome of the diseases.
2. Analyse clinical findings to make a diagnosis and treatment plan.
3. Formulate appropriate treatment plan for common oral disorders.
4. Identify and prioritize the list of potential patient's clinical problem.
5. Differentiate between the normal and abnormal characteristics, which are of particular importance to the practice of dentistry.
6. Use contemporary information technology for communication, management of information and applications related to health care.
7. Develop strategies to predict, prevent and correct deficiencies in patient's oral hygiene regimens.
8. Recognise their clinical limitations and knowing when to refer appropriately.
9. Apply experience, scientific knowledge and methods to the management of problems of oral health care.
10. Educate patients concerning the aetiology and prevention of oral disease and encourage them to assume responsibility for their oral health.
11. Assess patient risk for caries and implementing caries prevention strategies.
12. Design the laboratory procedures used in the production of crowns, bridges, partial and complete dentures and make appropriate chair side adjustment to these restorations.
13. Evaluate preventive and restorative procedures that preserve tooth structure prevent hard tissue disease and promote soft tissue health.
14. Assess drugs commonly used in oral medicine and their side effects and interactions.

c. Professional and practical skills

1. Carry out laboratory steps resulting in satisfactory cavities of all classes, successful root treatment and single units of crowns.

2. Develop laboratory work-up of partial and complete dentures.
3. Obtain a history of the present complaint and medical history and maintain an accurate record of patient treatment and perform an extra-oral and intraoral examination appropriate to the patient, including assessment of vital signs and the recording of those findings.
4. Complete and chart a comprehensive dental, periodontal and mucosal examination and recognise the presence of systemic disease and knowing how the disease and its treatment, including present medication, affect the delivery of dental care.
5. Carry out an orthodontic assessment.
6. Determine when, how and where to refer a patient for sedation and/or general anaesthesia and in making other appropriate referrals based on clinical assessment.
7. Evaluate the periodontium, establishing a diagnosis and prognosis and formulating a treatment plan.
8. Manage acute oral infections, including patient referral and prescription of appropriate drugs
9. Design, insert and adjust space maintainers and active removal appliances to move a single tooth.
10. Provide the management of trauma in deciduous and permanent dentitions.
11. Determine the dental relevance of common disorders of the major organ systems.
12. Recognise abnormalities in dental or periodontal anatomical form that compromise periodontal health, function or aesthetics and identifying conditions, which require management.
13. Provide oral hygiene instruction, topical fluoride therapy and fissure sealing.
14. Administer infiltration and block anaesthesia in the oral cavity for restorative, extraction and surgical procedures.
15. Treat and managing conditions requiring minor surgical procedures of the hard and soft tissues and to apply and/or prescribe appropriate pharmaceutical agents to support treatment.
16. Recognise the clinical features of oral mucosal diseases or disorders, including oral neoplasia and identify conditions that require management.
17. Take radiographs of relevance to dental practice, interpreting the images, including managing and avoiding hazards of ionising radiation.
18. Undertake supra-gingival and sub-gingival scaling and root debridement including stain removal and prophylaxis.
19. Restore defective and/or missing teeth to acceptable form, function and aesthetics.
20. Perform endodontic treatment on single and uncomplicated multi-rooted teeth.
21. Design effective complete and partial dentures.
22. Identify inappropriate oral habits that may exacerbate malocclusion and prevent their consequences through patient education and training and appliance therapy, as needed.
23. Manage patients from different age groups, bearing in mind the different needs of young children, adolescents, adults and the ageing population/elderly.
24. Prevent cross-infection in clinical practice.
25. Identify abnormal and anxiety related patient behaviour and respond appropriately.
26. Identify and manage dental emergencies including those of pulpal, periodontal or traumatic origin.
27. Prescribe and monitor the effects of appropriate pharmaceutical agents, including the chemical control of dental plaque.

d. General and transferable skills

1. Establish a patient-dentist relationship that allows the effective delivery of dental treatment.
2. Identify patient expectations, desires and attitudes (needs and demands) when considering treatment planning and during treatment.
3. Work with other members of the dental team.
4. Share information and professional knowledge with both the patient and other professionals, verbally and in writing, including being able to negotiate, give and receive constructive criticism.
5. Use all resources effectively to continuing professional development and lifelong learning.
6. Displaying appropriate professional behaviour.
7. Improve the oral health of individuals, families and groups in the community.
8. Use contemporary information technology for communication, management of information and applications related to health care.
9. Take control of his/her workload and establish priorities to accomplish stress management in the workplace.
10. Recognize the quality assurance in dental practice.

e. Attitude

1. Maintain respect and confidence of patients through sincere and honest service and respect patient's cultural practice.
2. Demonstrate ethical relationship with staff.
3. Deliver care to patients with professionalism, self confidence and communication.
4. Be committed to lifelong learning in dental disciplines.
5. Introduce the concept of evidence based dentistry into his/her scientific knowledge and attitude.
6. Develop life skills and attitudes that will maximize his/her educational experiences as undergraduates.
7. Become reliable dental practitioners, committed to the health care delivery; secure in their ability to assess and accept their own strengths and weaknesses.

5) Curriculum Structure and Contents

- a. Bearing in mind that a study hour is made up of sixty minutes and the study week is made up of 6 days.
- b. Programme duration: 5 years plus one year internship
- c. Programme structure:
 1. First Stage: Pre-dental (Preparatory) (one year).
 2. Second Stage: Pre-clinical (two years).
 3. Third Stage: Clinical (two years)
 4. Fourth Stage: Internship (one year)
- d. No. of hours per week:
 1. Lectures: 15 – 22 hours per week.
 2. Lab, clinical/small group teaching: 15 – 30 hours per week.
 3. Total: 36 – 48 Hours per week.

6) Courses contributing to the programme
3.1 Year programme:

a. Compulsory

Pre-dental Year (Pre-dental Stage)

Code No.	Course Title	No. of hours/week		Total Hours
		Lectures	Practical	
Che. Pre	Chemistry	3	2	4
Zoo. Pre	Zoology	4	2	5
Phs. Pre	Physics	2	2	3
Sta. Pre	Statistics	2	2	3
E.L. Pre	English language	2	--	2
M.T. Pre	Medical Terminology	2	2	3
A.L. Pre	Arabic language	2	--	2

First Year (Pre-clinical Stage)

Code No.	Course Title	No. of hours/week		Total Hours
		Lectures	Practical	
D.A. I	Dental Anatomy	2	2	3
D.M. I	Dental Materials	2	2	3
B.C. I	Biochemistry	4	2	5
G.A. I	General Anatomy	4	2	5
G.H. I	General Histology	2	2	3
Phy. I	physiology	4	2	5

Second Year (Pre-clinical Stage)

Code No.	Course Title	No. of hours/week		Total Hours
		Lectures	Practical	
C.D. II	Conservative Dentistry	3	4	5
F.P. II	Fixed Prosthodontics	2	4	4
R.P. II	Removable Prosthodontics	2	4	4
O.H. II	Oral Histology	2	2	3
G.P. II	General Pathology	2	2	3
M.B. II	Microbiology	2	2	3
Pha. II	Pharmacology	2	2	3

Third Year (Clinical Stage)

Code No.	Course Title	No. of hours/week		Total Hours
		Lectures	Practical	
O.M.F.S. III	Oral & Maxillofacial Surgery	2	2	3
O.M.D.R. III	Oral Medicine, Oral Diagnosis & Radiology	2	2	3
P.C.D. III	Preventive & Community Dentistry	1	2	2
C.D. & En. III	Conservative Dentistry & Endodontics	2	2	3
Or. III	Orthodontics	1	2	2
R.P. III	Removable Prosthodontics	1	2	2
F.P. III	Fixed Prosthodontics	1	2	2
P.E. III	Periodontology	1	2	2
Pa. III	Paedodontics	1	2	2
G.S. III	General Surgery	2	2	3
G.M. III	General Medicine	2	2	3
O.P. III	Oral Pathology	2	2	3

Fourth Year (Clinical Stage)

Code No.	Course Title	No. of hours/week		Total Hours
		Lectures	Practical	
O.M.F.S. IV	Oral & maxillofacial surgery	2	4	4
O.M.D.R. IV	Oral Medicine, Oral Diagnosis & Radiology	2	2	3
P.C.D. IV	Preventive & Community Dentistry	1	2	2
C.D. & En. IV	Conservative Dentistry & Endodontics	1	4	3
Or. IV	Orthodontics	1	2	2
R.P. IV	Removable Prosthodontic	2	4	4
F.P. IV	Fixed Prosthodontics	1	2	2
P.E. IV	Periodontology	1	4	3
Pa. IV	Paedodontics	1	4	3

Internship year

Course Title	Duration
Oral & maxillofacial surgery	One and half month
Oral Medicine, Oral Diagnosis & Radiology	One and half month
Preventive & Community Dentistry	One month only
Conservative Dentistry & Endodontics	One and half month
Orthodontics	One month only
Removable Prosthodontic	One and half month
Fixed Prosthodontics	One and half month
Periodontology	One and half month
Paedodontics	One month only

Programme –Course ILO Matrix (see appendix)

7) **Programme admission requirements.**

8) **Registration:** See internal regulation of studies and examination.

9) **Regulation for progression and programme completion:** See internal regulation of studies and examination.

10) **We certify that all the information required to deliver this programme is contained in the above specification and will be implemented**

Title	Signature
Department of Study and Examination Faculty of Dentistry, University of Tripoli	
Dean of Faculty of Dentistry University of Tripoli	