



Mansoura University

Faculty of Dentistry

**Program Specification of
Bachelor Degree**

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Program Specification

A-Basic Information

1. **Program title:** Bachelor of Dentistry
2. **Program type:** Single.
3. **Departments:** the Faculty of Dentistry, Mansoura University, includes nine scientific departments: Oral and Dental Biology, Dental Biomaterials, Oral Pathology, Orthodontics, Oral and Maxillofacial Surgery, Removable Prosthodontics, Pediatric dentistry and dental public health, Oral Medicine, Operative Dentistry .
 - **There are several courses taught in other faculties / departments.**
These include:
 - Faculty of Science:** four departments: Chemistry, Physics and statistics, Botany, Zoology
 - Faculty of Medicine:** eleven departments; Anatomy, Physiology, Medical Biochemistry, Histology, Microbiology, Pathology, Pharmacology, General Medicine and General Surgery , ENT, ophthalmology, dermatology.
 - Faculty of law:** human rights.
 - Faculty of Education:** English Language.
4. **Coordinator:** Vice Dean of student's affairs.
5. **External evaluator:** Jylan El Guindy .

B- Professional Information

1. Program aims:

The Faculty of Dentistry, Undergraduate Program aims to enabling students to:

1. Provide socio-economic dental services and oral health care in a safe and infection controlled environment.
2. Develop effective clinical, communications and practical management skills for patient assessments, as well as responsible, ethical, professional and medico legal conduct.
3. Acquire knowledge and skills regarding basic sciences; related to dentistry, normal growth and abnormal behaviors of oro-facial tissues as well as accurate patient records.
4. Develop self-directed dentists who are critical thinkers, lifelong learners and problem solvers.
5. Acquire knowledge about diagnosis of different oro-facial and systemic diseases and their management considering limitation of clinical abilities and realize the need for proper referral.
6. Acquire skills in collection, evaluation and presentation of evidence, as well as response to ongoing dental technology.

2. Intended Learning outcomes (ILOs):

A . Knowledge and understanding:

Graduates who successfully complete the undergraduate program in the Faculty of Dentistry should be able to:

- a.1.** Identify the interrelationship between different systems of the human body.

- a.2.** Define dental terminology, tooth anatomy, physiology, histology, function of teeth and associated structures, in health and disease.
- a.3.** Discuss the development and growth of the face and occlusion, the extent of variations in the form and function of both hard and soft tissues of both the face and mouth which may cause variation in occlusion.
- a.4.** List the different principles involved in the pathological conditions such as infections, metabolic disturbances, neoplasia, immune system , hormonal and genetic disorders that may affect oral health.
- a.5.** Identify the microbial ecology of the oral flora and the microbiological aspects of caries, pulpal and periodontal disease.
- a.6.** Discuss the basis of pediatric dentistry.
- a.7.** Identify different oral lesions and differentiate between different red , white and ulcerated lesions .
- a.8.** Identify the prevalence of common oral and dental conditions and oral health needs of different sectors of the community.
- a.9.** Recognize the basis and significance of oral health promotion, nutritional education and prevention of oral diseases in population based approach.
- a.10.** Recognize principles of diagnosis, prevention, management and prognosis of different oral diseases.
- a.11.** List the methods of preventing and management of medical emergencies.
- a.12.** Describe the scientific principles of sterilization and disinfection in the dental clinic and lab, to prevent cross infection and provide personal and environmental safety.
- a.13.** Identify dental biomaterials regarding the properties, limitations and parameters by which performance are assessed.

- a.14.** Outline basis for long term stable treatment and dental practice management.
- a.15.** Review a proper systematic and standardized clinical examination.
- a.16.** Describe materials and techniques used in dentistry .
- a.17.** Describe the basic principles in chemistry that may be required by the dentist in the selection of the relevant pharmacological agents.
- a.18.** Describe the basic concepts of animal, plant, statistics, human physiology, anatomy, histology, pharmacology, general medicine and general surgery, ophthalmology, dermatology, ENT, English and human rights.
- a.19.** Describe the different physical phenomena and instruments used to measure some physical parameters and their applications in the medical field.
- a.20.** Describe the broad principles of biostatistics, research design and methodology.
- a.21.** List the principles of evidence based dentistry.
- a.22.** Discuss the ethical and medico legal aspects relevant to the practice of dentistry for healthy and special needs as well as for researches
- a.23.** Discuss the influence of psychology background on the effective management of patients particularly children.

b. Intellectual skills:

Graduates should be able to:

- b.1.** Correlate the findings from the patient's history, clinical and radiographic examination and other diagnostic investigations to formulate a differential or definitive diagnosis and design a potential treatment plan tailored according to his/her needs, or carry out appropriate referral if beyond their competence.
- b.2.** Assess patient risk for dental caries and periodontal diseases.

- b.3.** Correlate the knowledge of basic and medical science with other dental science.
- b.4.** Modify dental biomaterials to improve their properties.
- b.5.** Differentiate between normal and abnormal features that is particularly relevant to dental practice.
- b.6.** Relate oral and dental anatomy and histopathological findings to clinical situations.
- b.7.** Analyze the effective solution in clinical problems.
- b.8.** Formulate pathological report and interpret laboratory findings.
- b.9.** Interpret dental radiographic investigation competently, and apply differential diagnosis to abnormal appearances, and be able to write an accurate radiographic report.
- b.10.** Design modified treatment plans for the medically, compromised patient.
- b.11.** Distinguish the psychological aspects of anxious or apprehensive patient, particularly among children, in order to apply the appropriate behavioral management technique.
- b.12.** Design a proper treatment plan, predict the prognosis and assess the treatment modality .
- b.13.** Evaluate the effects of medications taken by the patient for dental management.

C. Professional and practical skills:

Graduates should be able to:

- C.1.** Perform an appropriate clinical examination (intra-oral and extra-oral) , recognizing disease status and abnormalities including oral habits, and consultation with other health care professional when required.
- C.2.** Display skills in using bed side techniques commonly used in clinical practice such as examination of the pulse rate and blood pressure.
- C.3.** Obtain a history of the present complaint, medical history and perform extraoral, intraoral examinations appropriate of patient then maintain an accurate record of the patient's treatment.
- C.4.** Perform a standard way for handling and use of light microscope for diagnosis of different diseases.
- C.5.** Display the morphology, function of human teeth and associated tissues in health and disease.
- C.6.** Evaluate the oral health status, establishing a diagnosis , prognosis, formulate a treatment plan.
- C.7.** Apply the principles of dental material science which allow safe and effective selection of the relevant dental material.
- C.8.** Perform suitable testing methods for different biomaterials.
- C.9.** Diagnose and plan preventive non-operative care for the individual patient such as: education concerning nutrition, etiology and prevention of oral lesions, oral hygiene instructions, topical fluoride therapy, fissure sealants application, and encourage them to assume self-responsibility for oral health.
- C.10.** Display competency at the administration of infiltration and block local anesthesia in the oral cavity for dental procedures, and be trained in the management of the complications which may arise in the application of such methods.

- C.11.** Display competency in those procedures commonly undertaken in the general dental practice such as access cavity preparation and uncomplicated extraction of teeth.
- C.12.** Perform diagnosis, treatment and prognosis of oral tumors and cysts.
- C.13.** Apply the principles underlying dental radiographic techniques, the equipments, avoiding hazards of ionizing radiation and its safety measures and its interpretation.
- C.14.** Display competency at supragingival and subgingival scaling and root planning, using manual instrumentation and in stain removal and prophylaxis.
- C.15.** Display competency at completing a range of procedures in restorative dentistry, using techniques that maintain pulp vitality and restore teeth to form, function and aesthetics with proper materials.
- C.16.** Display competency at the diagnosis and management of patients requiring endodontic treatment of single rooted and multiple rooted teeth.
- C.17.** Conduct proper preparation of root canal space with proper sealing of root canal systems.
- C.18.** Construct casts, working models and other records that are required for use in the laboratory fabrication of dental prosthesis and appliances.
- C.19.** Design effectively complete and partial dentures, crowns and simple bridges.
- C.20.** Manage those problems of the mixed dentition where interceptive treatment is indicated, including simple removable appliances, space maintenance as well as the preventive and operative management of the primary and permanent teeth.
- C.21.** Perform diagnosis and prevention of developing malocclusion.
- C.22.** Apply current infection control guidelines.
- C.23.** Display competency in patient's behavior management.

C.24. Manage patients of all ages seeking emergency dental care, and appropriately refer those that are beyond the scope of management by a primary care dentist.

C.25. Manage medical emergencies which may occur in dental practice and perform basic life support measures.

C.26. Prescribe appropriately pharmacotherapeutic agents, and monitor their effectiveness and safety.

d. General and transferable skills:

The graduate must be able to:

d.1. Display appropriate professional communication skills with patients, colleagues, the rest of the dental team, and other relevant person or groups.

d.2. Communicate effectively with technicians and nurses respecting their complementary role for the success of the treatment plan.

d.3. Utilize effectively how to update basic information through interpreting new books and websites.

d.4. Make decisions based on sound ethical and scientific principles.

d.5. Self-evaluate regarding professional skills and limitations.

d.6. Recognize responsibility of dentists towards dental patients regarding proper oral hygiene measures, different dental treatment plans and risk factors.

d.7. Use information technology for upgrading information and skills, communication with experts and checking for continuing education.

d.8. Recognize the basic concepts of quality assurance and practice management of new treatment plans.

d.9. Manage time and different tasks with work persons regarding their skills and capabilities.

3 – Academic standards

Academic standards are adopted from the National Academic Reference Standards (NARS) of Egypt (2008) developed by Authority for Quality Assurance and Accreditation of Education (NAQAAE).

4. Comparison between NARS and program's ILOs

The following tables show a comparison of the academic standards and the NARS adopted by the Faculty of Dentistry, Mansoura University:

knowledge and understanding	
NARS	Program ILOs
Graduates should demonstrate knowledge and understanding in:	
2.1. The interrelationship between different systems of the human body.	a.1, a.2, a.3
2.2. The principles of pathogenic mechanisms and manifestations of human diseases which are of dental significance.	a.2, a.3, a.4, a.5, a.6, a.7
2.3. Basis and significance of oral health promotion, nutritional education and prevention of oral diseases in population based approaches.	a.8, a.9, a.10
2.4. Prevention and management of medical emergencies.	a.10, a.11
2.5. Maintenance of infection control and a safe working environment.	a.12
2.6. Basis of practice management.	a.13, a.14, a.15, a.16
2.7. Principles of evidence-based dentistry and its relation to scientific research.	a.17, a.18, a.19, a.20, a.21
2.8. Ethical and medico-legal aspects relevant to the practice of dentistry and research.	a.22
2.9. Social and psychological issues relevant to dental care with emphasis on behavioral management.	a.23

Intellectual skills	
<u>NARS</u>	Program ILOs
Graduates should have the ability to:	
4.1. Integrate basic biomedical, behavioral and dental sciences with signs, symptoms and physical findings of the disease.	b.1, b.2, b.3, b.4
4.2. Differentiate between normal and abnormal features that are particularly relevant to dental practice.	b.5, b.6
4.3. Identify, prioritize and generate a list of potential patient's clinical problems.	b.7
4.4. Analyze, interpret, and integrate collected diagnostic data to solve clinical problems based on current evidence.	b.7,b.8, b.9,
4.5. Design appropriate treatment plans for different dental problems.	b.1, b.10, b.11, b.12
4.6. Assess and evaluate the effects of medications taken by the patient on dental management.	b.10, b.13
4.7. Reason deductively in clinical problem solving.	b.7
Practical and clinical skills	
The graduate must be able to:	
3.1. Establish a comprehensive patient's history, perform clinical examination, request and evaluate appropriate investigations.	c.1, c.2, c.3
3.2. Review the body systems and consult with other health care professionals, when required.	c.1
3.3. Detect abnormal and pathological conditions, as well as etiological and/or risk factors that may contribute to disease process.	c.4, c.5, c.6
3.4. Perform a range of clinical procedures which are within the scope of general dentistry, including:	c.7, c.8

3.4.1. Applications of preventive procedures.	c.9
3.4.2. Application of different local anesthetic techniques.	c.10
3.4.3. Extraction of teeth and removal of roots when necessary.	c.11
3.4.4. Diagnosis of commonly encountered oral lesions.	c.6,c.12
3.4.5. Performance of the necessary radiographs.	c.13
3.4.6. Performance of non-surgical periodontal treatment and monitor treatment outcomes.	c.14
3.4.7. Restoration of carious and non-carious tooth defects with emphasis on basic concepts of esthetics.	c.7, c.11, c.15,
3.4.8. Basic endodontic procedures.	c.16, c.17
3.4.9. Rehabilitation of partially and completely edentulous patients.	c.18, c.19
3.4.10. Diagnosis and prevention of developing malocclusions.	c.20, c.21
3.4.11. Basic endodontic treatment.	c.16, c.17
3.5. Apply current infection control guidelines.	c.22
3.6. Control different levels of patient's anxiety and apprehension in different age groups.	c.23
3.7. Manage dental and medical emergencies which may occur in dental practice and perform basic life support measures.	c.24, c.25
3.8. Prescribe and monitor the effects of appropriate pharmaceutical agents taking into consideration drug and patient factors.	c.26

General and transferable skills:

The graduate must be able to:

5.1. Work in collaboration as a member of an interdisciplinary team.	d.1
5.2. Communicate effectively in multicultural work environment using verbal and non-verbal means.	d.1, d.2
5.3. Recognize and effectively utilize all sources for continuing professional development and life-long learning.	d.3
5.4. Adopt a creative attitude in an ethical and scientific approach.	d.4
5.5. Self-evaluate professional abilities, performance, and progress.	d.5
5.6. Recognize professional responsibility towards the surrounding community.	d.6
5.7. Use information technologies to enrich and diversify professional experience.	d.7
5.8. Recognize the basic concepts of quality assurance and practice management.	d.8
5.9. Prioritize workload and manage personal stress in the framework of proper performance and management.	d.9

5 – Curriculum Structure : 5 years ; preparatory year + four years

6 – Program admission requirements

- It is determined solely on the bases of scores obtained in Secondary school degree and other equivalent degrees from other countries.

7 – Regulations for progression and program completion

- Students must attend at least 75% of practical/ clinical sessions. Students who fail to meet this minimal percent of attendance may be prevented from attending exam in this specific course based on department council recommendation and decision of the dean. The grade awarded for this course is “failed” unless student presents an excuse for absence that is accepted by the dean in which case, He/she is considered absent with acceptable cause. Student may attend exam of the course or may defer taking the exam till reset exams usually held in September
- In order that a student passes in a course, his grades should be above the percent for passing (60%) provided that he/ she gets at least 30% of the grades for the final written exam.
- For students who get less than 30% of the grade for the final written exam, no grades are recorded in that course, and he/ she is considered “failed” that course with a grade “very weak”.
- Students are graded as follows:

Excellent	≥ 85%
Very good	≥ 75% - less than 85%
Good	≥ 65% - less than 75%
Fair	≥ 60% - less than 65%
Weak	≥ 30% - less than 60%
Very weak	less than 30%
- A student who takes the make up exam due to absence with acceptable excuse is awarded the grade earned in the reset exam.
- Passing students in the fourth (final) year are awarded one of the following grades: excellent- very good- good & fair. The grade and rank of students for

this year is based on the cumulative total of grades in previous years .

- Students are awarded grades with honors if his/her final grade is excellent or very good provided that his/her grades throughout all the previous years are not less than very good. She should also have never failed in any course or any year.

8 – Evaluation of program intended learning outcomes

Evaluator	Tool	Sample
1. Senior students	√	50
2. Alumni	√	50
3. Stakeholders	√	10
4. External Evaluator(s)	√	1

C. Matrix of attributes of the graduates of dental medicine (NARS) and program aims

Attributes of the Graduates of Dental Medicine (NARS)	Program aims
1.1, 1.5, 1.6	1. Provide socio-economic dental services and oral health care in a safe and infection controlled environment.
1.2, 1.3, 1.4, 1.8	2. Develop effective clinical, communications and practical management skills for patient assessments, as well as responsible, ethical, professional and medico legal conduct.
1.3	3. Acquire knowledge and skills regarding basic sciences; related to dentistry, normal growth and abnormal behaviors of oro-facial tissues as well as accurate patient records.
1.7	4. Develop self-directed dentists who are critical thinkers, lifelong learners and problem solvers.
1.9	5. Acquire knowledge about diagnosis of different oro-facial and systemic diseases and their management considering limitation of clinical abilities and realize the need for proper referral.
1.10	6. Acquire skills in collection, evaluation and presentation of evidence, as well as response to ongoing dental technology.

D. Matrix of Program aims and program ILOs

Program aims	Program ILOs																									
	Knowledge and Understanding																									
	a.1	a.2	a.3	a.4	a.5	a.6	a.7	a.8	a.9	a.10	a.11	a.12	a.13	a.14	a.15	a.16	a.17	a.18	a.19	a.20	a.21	a.22	a.23			
1									x	x						x		x								
2															X	x	x					x				
3	X	x	x	X	X	x	x	x		x	X	x	X	x	X		x	x	x	x	x	x	x			
4																						x				
5					X										X							x	x			
6																				x	x					
	Intellectual Skills																									
	b.1	b.2	b.3	b.4	b.5	b.6	b.7	b.8	b.9	b.10	b.11	b.12	b.13													
1											x															
2	X				X	x	X		x		x															
3	X	x	x	X	X	x	X	x	x	x	x	x	X													
4													X													
5	X			X	X	x			x				X													
6			x	X	X		X	x																		
	Practical Skills																									
	c.1	c.2	c.3	c.4	c.5	c.6	c.7	c.8	c.9	c.10	c.11	c.12	c.13	c.14	c.15	c.16	c.17	c.18	c.19	c.20	c.21	c.22	c.23	c.24	c.25	c.26
1																		x								
2	X			X				x	x	x	x	x	X				x		X	X					x	
3	X	x	x			x	X							x		x			X		x	x				
4																										x
5		x		X	X					x	x	x			X									x		x
6																x								x		

General Skills									
	d.1	d.2	d.3	d.4	d.5	d.6	d.7	d.8	d.9
1	x	x				x			
2									x
3				x					
4					X		x	x	
5				x					
6			x					x	

E. Matrix of courses and program ILOs

Courses	Program ILOs																						
	Knowledge and Understanding																						
	a.1	a.2	a.3	a.4	a.5	a.6	a.7	a.8	a.9	a.10	a.11	a.12	a.13	a.14	a.15	a.16	a.17	a.18	a.19	a.20	a.21	a.22	a.23
Pediatric dentistry and dental public health	x	x	x	x	x			x	x	x	x	x		x	X		x	x	x	x	x	x	x
Oral and Dental Biology		x	x																				
Oral Medicine	x	x	x	x	x	x	x	x	x	x	x	x		x	x							x	
Oral and Maxillofacial Surgery				x						x	x	x		x	x	x	x	x				x	
Operative Dentistry										x	x	x		x	x								
Endodontic		x		x	x	x				x	x	x	x		x				x			x	
Fixed Prosthodontics					x					x		x	x	x	x						x	x	x
Orthodontics		x						x		x		x		x				x				x	
Removable Prosthodontics		x	x			x				x			x	x	x			x			x	x	x
Oral Pathology		x		x	x		x			x													
Dental Biomaterials													x										
Chemistry																	x						
Physics and statistics																		x	x	x			
Botany																			x				
Zoology																			x				
Anatomy																			x				
Physiology	x																		x				
Medical																	x						

Biochemistry																							
Histology																						X	
Microbiology				x	x																		
Pathology				X																			
Pharmacology																						X	
General Medicine and General Surgery										x												X	
Ophthalmology																						X	
Dermatology																						X	
ENT																						X	
English language																						X	
Human rights																						X	

Intellectual Skills

	b.1	b.2	b.3	b.4	b.5	b.6	b.7	b.8	b.9	b.10	b.11	b.12	b.13
Pediatric dentistry and dental public health	x	x			x	x	x		x	x	x	x	X
Oral and Dental Biology					x	X							
Oral Medicine	x	x			x	x	x	x	x	x		x	X
Oral and Maxillofacial Surgery	x				x	x	x		x	x		x	X
Operative Dentistry	x	x					x			x	x	x	
Endodontic	x		x			X	x		x	x		x	X
Fixed Prosthodontics			x				x			x		x	

Orthodontics	x		x		x	x			x			x	
Removable Prosthodontics	x		x		x	x			x		x	x	
Oral Pathology					x	x		x				x	
Dental Biomaterials			x	x									
Chemistry			X										
Physics and statistics			X										
Botany			X										
Zoology			X										
Anatomy			X										
Physiology			x										
Medical Biochemistry			X										
Histology			X										
Microbiology			X										
Pathology			X										
Pharmacology			X										x
General Medicine and General Surgery			X										
			x										
Ophthalmology			x										

Dermatology			x																							
ENT			x																							
English language			x																							
Human rights			x																							
	Practical Skills																									
	c.1	c.2	c.3	c.4	c.5	c.6	c.7	c.8	c.9	c.10	c.11	c.12	c.13	c.14	c.15	c.16	c.17	c.18	c.19	c.20	c.21	c.22	c.23	c.24	c.25	c.26
Pediatric dentistry and dental public health	x				x		x		x	x			x		x						x	x	x	x	x	x
Oral and Dental Biology				x	x																					
Oral Medicine	x		x		x	x			x	x		x	x	X									x	x	x	x
Oral and Maxillofacial Surgery	x									x	x											x		x	x	x
Operative Dentistry	x						x		x	x	x				x						x		x		x	
Endodontic	x									x	x	x	x		x	x	x					x		x		
Fixed Prosthodontics	x						x			x					x			X	x		x	x				
Orthodontics													x							x		x				
Removable Prosthodontics	x	x					x			x								X	x		x	x				x
Oral Pathology				x	x																					
Dental Biomaterials							x	x																		

Chemistry								x																				
Physics and statistics								x																				
Botany				x																								
Zoology				x																								
Anatomy										x																		
Physiology		x																										
Medical Biochemistry								x																				
Histology				x																								
Microbiology																												x
Pathology				x											x													
Pharmacology																												x
General Medicine and General Surgery		x																										x
Ophthalmology	x		x																									
Dermatology	x		x																									
ENT	x		x																									
English language	x																											
Human rights						x																						x

	General Skills								
	d.1	d.2	d.3	d.4	d.5	d.6	d.7	d.8	d.9
Pediatric dentistry and dental public health	x	x	x	x	x	x	x	x	x
Oral and Dental Biology	x	x	x				x		
Oral Medicine	x	x	x	x	x	x	x	x	x
Oral and Maxillofacial Surgery		x	x	x	x	x			
Operative Dentistry	x	x	x	x	x	x	x	x	
Endodontic			x	x	x	x	x		x
Fixed Prosthodontics		x		x		x	x	x	x
Orthodontics		x	x			x			
Removable Prosthodontics	x	x				x	x	x	
Oral Pathology	x		x	x			x		
Dental Biomaterials		x	X				x	x	x
Chemistry			X				X		
Physics and statistics			X				X		
Botany			X				X		
Zoology			X				X		

Anatomy			x				X		
Physiology			X				x		
Medical Biochemistry			x				X		
Histology			X				X		
Microbiology			X				X		
Pathology			X	x			X		
Pharmacology			X				X		
General Medicine and General Surgery			X	x	x		X	X	X
Ophthalmology			X	x	X		X	X	X
Dermatology			X	x	X		X	X	X
ENT			X	x	x		X	X	X
English language			X				x		
Human rights				x					