



Jordan University of Science and Technology
Faculty of Dentistry
Dental Surgery Department

DENT738 Growth And Development

First Semester 2024-2025

Course Catalog

2 Credit Hours. The aim of this course is to provide the learners with the basics of pre- and postnatal physical development and the fundamentals of postnatal intellectual, cognitive, language, social, and emotional development of children from birth to adulthood. Emphases will be placed on the hereditary and environmental factors that impact the development of the craniofacial complex including common birth defects and craniofacial teratological and syndromic malformations, with highlighting the clinical relevance of basic knowledge. The course will expand further to focus on interceptive orthodontics and will enable students to address pre-adolescent orthodontic problems which leads to correct orthodontic diagnoses and treatment planning, and successful treatment techniques.

Teaching Method: Blended

Text Book

Title	Anatomy For Dental Students
Author(s)	D. R. Johnson
Edition	3rd Edition
Short Name	Anatomy for Dental Students
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Oral Histology, Development, Structure and Function	Ten Cate's Oral Histology, Development, Structure and Function	A. Nanci	9th Edition	
Contemporary orthodontics	Contemporary orthodontics	William R. Proffit, Henry W. Fields Jr., Brent Larson	6th Edition	
Pediatric Dentistry	Pediatric Dentistry: Infancy through Adolescence	Paul S. Casamassimo, Henry W. Fields Jr., Dennis J. McTigue, Arthur Nowak	5th Edition	
Dentistry for the Child and Adolescent	McDonald and Avery Dentistry for the Child and Adolescent	Jeffrey A. Dean, David R. Avery, Ralph E. McDonald	9th Edition	
Interceptive Orthodontics	Interceptive Orthodontic by Andrew Richardson	Andrew Richardson	2nd Edition	
AAPD guidelines	American Academy of Pediatric Dentistry Guidelines	AAPD	1st Edition	2022

Instructor

Name	Prof. Ashraf Shaweesh
Office Location	271
Office Hours	
Email	ashrafis@just.edu.jo

Class Schedule & Room

Section 1:
 Lecture Time: Mon : 14:00 - 16:00
 Room: U

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Introduction to course	

Week 2	Prenatal development and development of craniofacial cartilage, bone and joint complex	From Anatomy for Dental Students , From Oral Histology, Development, Structure and Function
Week 3	Development orofacial and dental arch complex. When something goes wrong (birth defects, teratological and syndromic craniofacial malformations)	From Anatomy for Dental Students , From Oral Histology, Development, Structure and Function
Week 4	Growth of the body and craniofacial complex and growth assessment (phases and principles of physical growth, attainment of height and weight, changes in body composition and proportions, sexual maturation, physiological changes during growth, assessment of growth: assessment of height, weight, head circumference, fontanelle closure, BMI, growth monitoring, assessment of growth cessation)	From Anatomy for Dental Students , From Pediatric Dentistry
Week 5	Psychosocial development (cognitive, emotional & social): theories of Psychoanalytic Child Development Theories (Freud and Erikson), Behavioral Child Development Theories (Watson, Pavlov and Skinner), Cognitive Child Development Theories (Piaget), Social development theories (attachment theory, social learning theory, and sociocultural theory), How to assess in a simple way if child attained expected milestones (normal milestones for each stage), How our knowledge of the above theories will help us manage and shape behavior of children (Pinkham).	From Pediatric Dentistry , From Dentistry for the Child and Adolescent
Week 6	Aberrations of growth and development (terminology, causes and assessment , various relevant head and neck syndromes, low birth weight, prematurity & failure to thrive, dental implications)	From Pediatric Dentistry , From Dentistry for the Child and Adolescent
Week 7	Development & eruption of teeth: local, systemic & congenital factors influencing the process (eruption theories and chronology, AAPD guidelines)	From Oral Histology, Development, Structure and Function , From AAPD guidelines
Week 8	Midterm Exam	
Week 9	Development and assessment of occlusion: infancy to adulthood (examination of occlusion, diagnosing abnormalities, etiology of malocclusion)	From Contemporary orthodontics
Week 10	Interceptive orthodontics I: local factors, space problems (single tooth malalignment, tooth size-arch length discrepancies, alterations in tooth number)	From Contemporary orthodontics , From Interceptive Orthodontics
Week 11	Interceptive orthodontics II: anterior and lateral displacement (crossbite assessment and management)	From Contemporary orthodontics , From Interceptive Orthodontics
Week 12	Assessment and management of habits (non-nutritive sucking habits, bruxism, OSA)	From Contemporary orthodontics , From Pediatric Dentistry , From Dentistry for the Child and Adolescent
Week 13	Extraction of permanent first molar: literature review and guidelines	From Contemporary orthodontics , From Pediatric Dentistry , From Dentistry for the Child and Adolescent , From Interceptive Orthodontics
Week 14	Diagnosis and interception of skeletal problems I: Growth modification	From Contemporary orthodontics

Week 15	Diagnosis and interception of skeletal problems II: Growth modification	From Contemporary orthodontics
---------	---	--------------------------------

Mapping of Course Outcomes to Program Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
To demonstrate scientific knowledge in the physical development and growth of orodental and craniofacial complex from pre-natal to young adulthood stages	10%	
To address the relevance of basic scientific knowledge when something goes wrong in growth and development	7%	
To apply principles of critical thinking through appraisal and presentation of literature on physical, intellectual, cognitive, language, social, and emotional development of children from birth to young adulthood with emphasis on aberrations of growth and development, tooth eruption disorders, localized malocclusion, non-nutritive habits, growth modification and how these problems are diagnosed and managed	20%	

Relationship to Program Student Outcomes (Out of 100%)													
1.1 Scientific Knowledge and Cognitive Skills	1.2 Scientific Knowledge and Cognitive Skills	1.3 Scientific Knowledge and Cognitive Skills	1.4 Scientific Knowledge and Cognitive Skills	1.5 Scientific Knowledge and Cognitive Skills	1.6 Scientific Knowledge and Cognitive Skills	1.7 Scientific Knowledge and Cognitive Skills	2.1 Person Centered Care	2.2 Person Centered Care	2.3 Person Centered Care	2.4 Person Centered Care	3.1 Responsibility, Communication, Professionalism and Ethics	3.2 Responsibility, Communication, Professionalism and Ethics	3.3 Responsibility, Communication, Professionalism and Ethics

Date Printed: 2024-10-23