Course Specifications

General Information

Course name	Embryology
Course number	DENT1207
Faculty	
Department	
Course type	College Needs
Course level	1
Credit hours (theoretical)	2
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - This course provides a working structural knowledge of cell division and how the normal human body develops from fertilization to the end of the fetal period.

Intended Learning Outcomes

Knowledge and Understanding

* 2. The student will be able to describe gamete formation, ovarian cycle, endometrial cycle, fertilization, implantation, and blastocyst formation.
* 3. The student will be able to describe the bilaminar and trilaminar Disc Formation.
* 4. The student will be able to describe Gastrulation, Neurulation, Development of CNS, and Placenta and Fetal membranes formation.
* 5. The student will be able to explain head and neck formation including; describe the derivatives of each of the pharyngeal arches, pouches and clefts, describe the origin of the tongue including its nerve supply, define the terms primary and secondary palate and explain the origins of clefts in these structures and the upper lip. Also describe the formation of the deciduous and permanent teeth.
* 6- The student will be able to describe the development of various parts of the face like ear (external, middle and inner ear), nose, check, mouth, and development of Musculoskeletal System.
* 7- The student will be able to identify the principles of teratology; mechanisms of malformation and the etiology and pathogenesis of some of the more common human congenital abnormalities.
* 1. The student will be able to identify the cell division including meiosis and mitosis

Course Contents

1 - Cell division, meiosis, mitosis.
2 - Gametogenesis
3 - 1st week of development; Ovulation to Implantation (include fertilization, cleavage,& form. Of the blastocyst)
4 - 2nd week of development; Bilaminar Germ Disc formation.
5 - 3rd week of development; Trilaminar Germ Disc, Gastrulation, neurulation (neural tube formation).
6 - Embryonic period (3rd to 8th week) & Fetal period (3rd month to birth).
7 - Fetal membranes and Placenta, include Fetal membranes in Twins, and its clinical correlates.
8 - Congenital malformations, factors affecting congenital malformations, Principles of Teratology.
9 - Development of skeletal system (skull, limbs, vertebral column, ribs & sternum) & clinical correlates.
10 - Development of Muscular system and its clinical correlates.
11 - Derivatives of pharyngeal arches, pouches and clefts, innervations & clinical correlates.
12 - Development of tongue and thyroid gland and its clinical correlates.
13 - Development of all parts of the face and palate and clinical correlates.
14 - Development of teeth and tooth abnormalities.

Teaching and Learning Methods

1 - Formal lectures 2 hours per week
2 - . Slides demonstration
3 - LCD
4 - Hands Out
5 - Charts

Students Assessment

Assessment Method	TIME	MARKS
First Midterm exam		20%
Second Midterm exam		20%
Activities		10%
Final exam		50%

Books and References

Course note	UNSW embryology- google
Essential books	Langmans medical embryology, T. W. Sadler, Lippincott Williams & Wilkins, 2006.
Other References (Periodical, web sites, ... etc.)	Embryology homepage-google