

Grade: Second.

Semester: First.

Total Hours: Theory (15) Practical (30) Clinical

Hours/week: Theory (1) Practical (2) Clinical

Credits:

1. learning objectives

The course is designed to enable the student to:

1. Study the features of early development of embryo.
2. Understanding the embryological bases of birth defects.
3. Mapping the fate of embryonic tissues and organs.
4. Understanding the embryological bases related to fertility.

2. Instructional and Learning methods and tools

The syllabus is given to students in 15 hours of theoretical lectures, and 30 hours of practical sessions. The contents of the lectures include many topics related to problem solving in medical embryology and case based learning.

The theoretical lectures and the practical session involved dividing the class into two groups, one lecture/ weeks, and 2 hours' practical laboratory session/ week.

3. Syllabus

3.1 Theory:

Date	No.	Topics	Hours
1 st week	1	Gametogenesis: Conversion of germ cells into female (Oogenesis).	1
2 nd week	2	Gametogenesis : Conversion of germ cells into male (Spermatogenesis and Spermatogenesis)	1
3 rd week	3	First week of development : Ovulation & Fertilization	1
4 th week	4	First week of development : Cleavage & implantation	1
5 th week	5	The 2nd week of development: Bilaminar germ disc	1
6 th week	6	The 3rd week of development: The trilaminar germ disc	1
7 th week	7	The Third to Eighth weeks: The Embryonic period (Derivatives of the ectoderm, Mesoderm & Endoderm)	1
8 th week	8	Third month to Birth :Development of the fetus	1
9 th week	9	<i>Mid-term</i>	1
10 week	10	Third month to birth : Fetal membranes and the human placenta	1
11 th week	11	Functions of the placenta	1
12 th week	12	Methods of contraception	1
13 th week	13	Birth defects	1
14 th week	14	Prenatal diagnosis of fetal abnormalities	1
15 th week	15	Clinical aspects in general embryology	1
15			

3.2 Practical:

No.	Topics	Hours
1	Histological criteria of ovarian follicles	2
2	Histological organization of the seminiferous tubules.	2
3	Criteria of mature follicle	2
4	Fertilization.	2
5	Pre-implantation embryology	2
6	The embryonic membranes of the bilaminar germ disc	2
7	The gastrulation and trilaminar germ disc	2
8	The growth of the germ disc and early organogenesis	2
9	External morphology of human fetus	2
10	Embryological bases of contraception	2
11	General organization of the placenta and umbilical cord	2
12	General organization of umbilical cord	2
13	Ultrasound of congenital anomalies	2
14	Assisted reproductive techniques	2
15	Discussion of case – bases learning	2
Total		30

Lecturer:

1. Assistant Professor Dr. Thaer Mahmood Farhan
2. Assistant lecturer. Lamyaa

Practical sessions:

1. Assistant Professor Dr. Thaer Mahmood Farhan
2. Assistant lecturer. Lamyaa Hadi Mohammed
3. Assistant lecturer. Rash Abjad Salman
4. Assistant lecturer. Hiba Ahmed Abdul sattar
5. Assistant lecturer. Taghreed Abdulrasool Ali
6. Biologist Muhanad Ali
7. Biologist Jenan Ahmed

3.Student Assessment:

The minimum requirement of a student to pass is to achieve at least 50% of total 100 marks assigned for the course.

The marks are distributed as follows:

Mid-term Theory	Mid-term Practical	Quiz	Final Practical	Final Theory
14%	10%	6%	20%	40%

Students who fail to attain the 50% cut off mark are required to re-sit for a second trial examination similar to the final one. Failing in the second trial entails the student to repeat the academic year.

5. Books and references:

1. Sadler TW (2014): Langman's medical embryology. 13thEd. William & Wilkins. Philadelphia.
2. Moore KL and Persaud TVN (1998): Before we are born, Essentials of embryology and birth defects. 5th Ed. Saunders' comp. Philadelphia.
3. Moore KL and Persaud TVN (1998): The developing human, clinical oriented embryology. 6th Ed. Saunders' comp. Philadelphia.