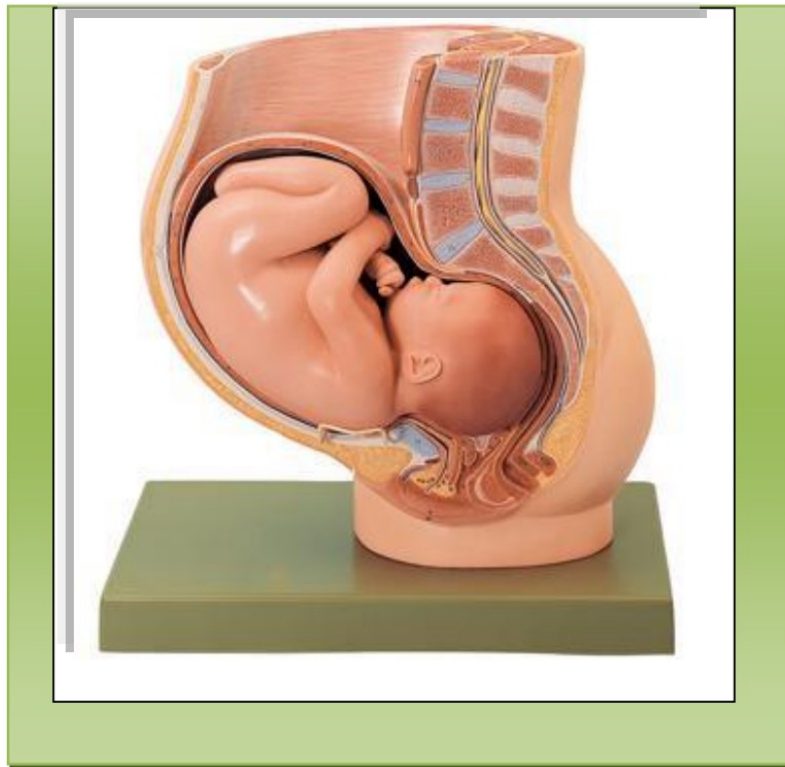


STUDY GUIDE

Embryology core course

1207212



Course coordination

Male section Dr. Mohammed Mahmoud Mosaed (Mohamed.Abdallah@nbu.edu.sa)

Female section Dr. Marwa Sayed Badawi (marwa.ali@nbu.edu.sa)

Course Identification

1. Credit hours	1 hours
2. Level/year at which this course is offered	2 nd year
3. Pre-requisites for this course	No

Course committee members

No	Specialty	Name of the contributor	Email ID
1	ANATOMY	Dr. Mohammed Mahmoud Mosaed	Omermm110@gmail.com
		Dr. Wajid ali chatha	drchatha@gmail.com
		Pro. Liaqat Ali Minhas	liaqatminhas1@hotmail.com
		Dr. Maraw sayed	yousef_yomna@yahoo.com

Actual Learning Hours (Copy and paste the table from courses specification)

No	Activity	Learning Hours
Contact Hours		
1	Lecture	14
2	Laboratory	4
	Total	18

Course Objectives

- Define the embryological terms.
- Explain the origin of organs and systems.
- Demonstrate the application and uses of the common tools applied for prenatal diagnosis of the birth defects.
- Illustrate the common clinical problems and interpret their developmental relationships.

- e. Construct the different period of development.

Course Learning Outcomes

Describe the conversion of germ cells into male and female gametes
Define and memorize the embryological events from formation of gametes till full term baby stage
List the teratogens, responsible for different congenital malformations
State the role of ultrasound, maternal serum screening, amniocentesis and chronic villus sampling in assessing the growth and development of fetus in utero

Course Content (Copy and paste the table from courses specification)

No	List of Topics	Contact Hours
1	Introduction	1
2	Gametogenesis -1 (Oogenesis)	1
3	Gametogenesis – II (Spermatogenesis)	1
4	Ist week of development (Ovarion cycle and fertilization)	1
5	First week of development (Cleavage and blastocyst formation)	1
6	Second week of development (Bilaminar germ disc)	1
7	Third week of development (Trilaminar germ disc -Gastrulation)	1
8	3 rd to 8 th week of development: Derivatives of Ectoderm	1
9	3 rd to 8 th week of development: Derivatives of Endoderm	1
10	3 rd to 8 th week of development: Derivatives of Mesoderm	1

11	Gut tube and formation of body cavities.	1
12	3 rd month to birth -1 (Development of Fetus)	1
13	3 rd month to birth -2	1
14	Birth defects & Prenatal diagnosis of birth defects	1
	List of topics of practical	Contact hours
1	Practical 1: Gametogenesis (Oogenesis, Spermatogenesis) , Ovarion cycle and fertilization	1
2.	Practical 2: Cleavage and blastocyst formation & Bilaminar germ disc & Trilaminar germ disc –Gastrulation	1
3.	Practical 3: Derivatives of (Ectoderm & Endoderm & Mesoderm), Gut tube and formation of body cavities	1
4.	Practical 4: Fetal membranes (chorionic villi , placenta, umbilical cord and amnion) &Twins, Birth defects	1
Total		18

Teaching strategies and Assessment Methods for Students (Copy and paste the table from courses specification)

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge		
1.1	Define and memorize the embryological events from formation of gametes till full term baby stage and the common congenital malformations	Direct instructional (Lecture)	Written Exam (MCQs ad SAQs) and practical exam
1.2	Describe the conversion of germ cells into male and female gametes	Direct instructional (Lecture)	Written Exam (MCQs ad SAQs) and practical exam

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.3	Define and memorize the embryological events from formation of gametes till full term baby stage	Direct instructional (Lecture)	Written Exam (MCQs ad SAQs) and practical exam
1.4	List the teratogens, responsible for different congenital malformations	Direct instructional (Lecture)	Written Exam (MCQs ad SAQs) and practical exam

Assessment Tasks for Students (Copy and paste the table from courses specification)

#	Assessment task*	Week Due	Percentage of Total Assessment Score
2	Midterm	6 th	25%
3	Assignment	10 th	15%
4	Final exam (theoretical and practical)	End of semester	60%

Course blueprint (% of total summative marks in blue print is to be given in the range)

Topics	Teaching strategies	Assessment methods	Knowledge			Skill			Competency			% of total contact hours	% of total summative marks
			K1	K2	...	S1	S2	...	C1	C2	...		
Introduction	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	5.00
Gametogenesis -1 (Oogenesis)	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	5.00
Gametogenesis – II (Spermatogenesis)	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	5.00

Topics	Teaching strategies	Assessment methods	Knowledge			Skill			Competency			% of total contact hours	% of total summative marks
			K1	K2	...	S1	S2	...	C1	C2	...		
Ist week of development (Ovarion cycle and fertilization)	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	4.4
First week of development (Cleavage and blastocyst formation)	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	4.4
Second week of development (Bilaminar germ disc)	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	4.4
Third week of development (Trilaminar germ disc - Gastrulation)	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	4.4
3 rd to 8 th week of development: Derivatives of Ectoderm	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	4.4
3 rd to 8 th week of development: Derivatives of Endoderm	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	4.4
3 rd to 8 th week of development: Derivatives of Mesoderm	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	4.4
Gut tube and formation of body cavities.	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	4.4
3 rd month to birth -1 (Development of Fetus)	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	4.4

Topics	Teaching strategies	Assessment methods	Knowledge			Skill			Competency			% of total contact hours	% of total summative marks
			K1	K2	...	S1	S2	...	C1	C2	...		
3 rd month to birth -2	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	4.4
Birth defects & Prenatal diagnosis of birth defects	Lecture	Written exams	K1	-	-	-	-	-	-	-	-	5.5	4.4
Practical 1: Gametogenesis (Oogenesis, Spermatogenesis) , Ovarion cycle and fertilization	Practical	Practical exam				S1						5.5	5.00
Practical 2: Cleavage and blastocyst formation & Bilaminar germ disc & Trilaminar germ disc – Gastrulation	Practical	Practical exam				S1						5.5	5.00
Practical 3: Derivatives of (Ectoderm & Endoderm & Mesoderm), Gut tube and formation of body cavities	Practical	Practical exam				S1						5.5	5.00
Practical 4: Fetal membranes (chorionic villi , placenta, umbilical cord and amnion) & Twins, Birth defects	Practical	Practical exam				S1						5.5	5.00

Learning Resources (Copy and paste the table from courses specification)

Required Textbooks	Langman's Medical Embryology 13 th edition by T.W. Sadler
Essential References Materials	
Electronic Materials	https://www.youtube.com/watch?v=VKCZnJeeHo
Other Learning Materials	Power points.

Related check lists

PBL
Assignment
Clinical skills checklist
Presentation checklist
Project checklist
Workshop checklist

(Checklist must be aligned with the learning outcomes)

Course quality evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students	Indirect assessment
Extent of achievement of course learning outcomes	Instructor	Direct assessment

Evaluation Areas/Issues	Evaluators	Evaluation Methods
	Students	Indirect assessment
Quality of learning resources	Student	Indirect assessment

H. Specification Approval Data

Council / Committee	Anatomy department Committee
Reference No.	1207212
Date	

After the end of the course, please give your **FEEDBACK** through the following QR code: