





## **2. Course Description**

This course provides an introduction to human development through the study of reproduction, early embryology, histogenesis, organogenesis, and morphogenesis. The roles of determination, differentiation, growth, morphogenesis, and pattern formation will be emphasized.

## **3. Course Teaching and Learning Activities (Pedagogical Approaches)**

Various teaching style (Pedagogical methods) will be used during the course in order to reach the learning objectives of course to students: -

- a. Presentation - use data show and power point
- b. Lecturing method - oral presentation intended to present information to teach students about the topics
- c. Class discussion - exchange information between and among teachers and students with the purpose of developing students' ability to expanding students' understanding.
- d. Lab base model blending method - is a form of learning through practical experimentation.

## **4. Course Learning Outcomes**

After completion of this course, students will be able to: -

1. Leads students toward understanding of the male and female reproductive system.
2. To identified gametes production and fertilization.
3. To know the different stage of development
4. Embryonic malformation.

## 5. Course Content

### Theory Topics

**Week 1+2:** Syllabus and introduction to embryology  
**Week 3+4:** Male reproductive system  
**Week 5+6:** Female reproductive system  
**Week 7:** fertilization and implantation  
**Week 8:** second and third week of gestation  
**Week 9:** Organogenesis, Nervous system development  
**Week 10:** Examination  
**Week 11:** Circulatory system development  
**Week 12:** : Digestive system development

### Practical Topics

Date	Weeks No.	Topics	Hrs.
	1	Course book	2
	2	Introduction of embryology and Male reproductive system 1	2
	3	Male reproductive system 2	2
	4	Female reproductive system 1	2
	5	Female reproductive system 2	2
	6	Exam 1	1
	7	fertilization and implantation	2
	8	second and third week of gestation	2
	9	Organogenesis, Nervous system development	2
	10	Circulatory system development	2
	11	Digestive system development	2
	12	Exam	1

## 6. Course Assessment Tools

### Theory

Exam No. 1 (Theory): 7.5%

Exam No.2 (Theory) : 7.5%

Mean Examination (Theory) : 7.5 %

Practical Examination : 35%

Total =50%

Final examination: 50 theory

### Practical

Assessment Tools	Descriptions	Weight
Quiz	Test during lecture	6
Activity	Extracurricular activities provide a channel for reinforcing the lessons learned in the classroom, offering students the opportunity to apply academic skills in a real-world context, and are thus considered part of a well-rounded education.	6
Seminar and Reports	Students discuss a topic and they will be encouraged to work as a group and will be participated to deliver the materials in the class. Students will choose a topic related to cell biology and make a academic report	8
Mid-term examination	Students will have a written exam related to the previous lectures	15
Total 35		

## 9. Textbooks and References

- ✓ Dixit, D. Human embryology (2004). CBS publishers and distributors

- ✓ Lopez-Gracia, M.L. and Ros, M. (2007). Advances in Anatomy embryology and Cell Biology. Springer Berlin Heidelberg New York.
- ✓ Slack, J.M.W. (2006). Essential Developmental Biology. 2<sup>nd</sup> ed. Blackwell Publishing Ltd.
- ✓ Sadler T. W. (2006). Medical embryology. 10 th edition. Lippincott Williams and Wilkins.
- ✓ SLACK, J.M.W. (1997). From egg to embryo regional specification in early development. 2<sup>nd</sup> ed. Cambridge university press Cambridge, New York, Melbourne
- ✓ E-books and research on the Internet.

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