Syllabus

Code/Name	SEC 302.3/ Developmental Biology
Type	Required
Credit/ECTS	5/5
Hour per Week	3 (3+0+0)
Level/Year	Undergraduate/3
Semester	Spring
Classroom	D306
Content	The aim of this course is to teach basic principles related to Developmental Anatomy and Cell-Cell Interactio, fertilization, Early Development – C. Elegans and Drosophila, Early Development – Amphibians and Fish, Early Development – Birds and Mammals Ectoderm and Neural Crest Cells, Mesoderm, Endoderm and Tatrapod Limb Development, Gender Determination and Germ Line.
Prerequisites	-
Textbooks	***Primary*** Developmental Biology, Scott F. Gilbert Sinauer Associates, Inc., ISBN-10: 0878933840 ***Secondary*** Recent articles Scientific videos
Objectives	• To convey basic concepts in developmental biology by focusing on cell-cell interactions and molecular mechanisms. • To explain early-stage development and gastrulation through selected model organisms • To comprehend signaling pathways responsible for germ layer fates.
Course Outcomes	In this course you will be able to: CO1 Ability to explain the basic concepts of developmental biology CO2 Ability to explain and discuss molecular mechanisms that play a role in developmental biology CO3 Ability to identify and question the methods used in the field of developmental biology research. CO4 Ability to access data and resources in the field of developmental biology research C05 identify model organisms used to investigate developmental biology and compare the developmental programs of different organisms

Weekly Schedule of Topics

W	Topic
1	Developmental Anatomy
2	Cell cell communication
3	Specification
4	Fertilization
5	Endoderm, mesoderm, ektoderm
6	*C. Elegans* early development
7	*D. Melanogaster* early development

8	*X.leavis* early development
9	*D. rerio* early development
10	*G. g. domesticus* early development
11	*H. sapiens* early development
12	Tetrapod limb development
13	Gender
14	Germ lines

Professional Contribution	

Contribution to Program Outcomes*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	4	1	4		3	3	3	3			2
CO2		4	2			4	3	3			2
CO3			5			3					2
C04		5		5	3						2
C05	4	5	3	3							2

* Contribution Level | 0: None | 1: Very Low | 2: Low | 3: Medium | 4: High | 5: Very High

Special Conditions	Students work in groups for the presentations.
Requirements	Basic knowledge of biology and Basic Computer Knowledge
Course Policy	• Be in the class on time. • English should always be used to communicate with one another. • At least 80% attendance is required, otherwise, a grade of **DZ** will be assigned. • You must be present in class for the presentations, otherwise you will not be graded.
Cheating & Plagiarism	• Copying or letting someone copy your work on exams, assignments, or reports is cheating. • Cutting and pasting text, figures, and tables from web sources or any other electronic source is plagiarism. • The consequence of academic dishonesty is to receive a grade of **FF** for the course.
Evaluation	Midterm 40% Final Exam 60% Total 100%

Instructor

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Room	314	Office Hours	Tuesday 14:30-15:15 and Wednesday 10:30-11:15/15:30-16:15

Prepared by Özgür Öztürk on November 18th, 2024