

The Cell: Structure, Development and Physiology II - Course Syllabus

Course Number: B213/CBE224

Course Title: The Cell: Structure, Development and Physiology II

Academic Semester: Spring **Academic Year:** 2015/ 2016
Semester Start Date: Jan 24, 2016 **Semester End Date:** May 19, 2016

Class Schedule: Monday and Thursday 2:30-4pm

Classroom Number: Room 3120, Building 9

Instructor(s) Name(s): Jasmeen Merzaban and Valerio Orlando
Email: jasmeen.merzaban@kaust.edu.sa
valerio.orlando@kaust.edu.sa

Office Location: Building 2, Office #3234 (Orlando)
Building 2, Office #4218 (Merzaban)

Office Hours: Office hours are flexible and students just need to inform the prof when a meeting is desired

Teaching Assistant name: N/A
Email:

COURSE DESCRIPTION FROM PROGRAM GUIDE

The scope of this course is to provide a comprehensive overview of eukaryotic cell structure and the fundamental functional aspects of membranes, organelles, nuclear architecture, genome and epigenome in the context of development, specialization, and integration with the environment. This course will run over the fall and spring semesters.

GOALS AND OBJECTIVES

The scope of part II of The Cell course will focus on developing an overview of eukaryotic cell in the context of development, stem cells, tissue regeneration, cancer and adaptation and the environment.

REQUIRED KNOWLEDGE

The Cell: Structure, Development and Physiology I

REFERENCE TEXTS

- 1) Molecular Biology of THE CELL, 5th or 6th edition or any other mainstream cell biology text book
- 2) Epigenetics, by Allis, Reinberg and Jenuwein

METHOD OF EVALUATION

Graded content
(20%) Participation/pop quizzes; (25%) Midterm Exam; (25%) Journal Article Presentation; (30%) Written Proposal and Oral defense; Attendance in class is mandatory unless a valid excuse is provided

COURSE REQUIREMENTS

Assignments

Participation/pop quizzes --> the student must come to class prepared to discuss the readings assigned for every class.

Midterm Exam --> will cover the material discussed up to the end of March

Journal Article Presentation --> either as individual or in a groups of 2 students, a topic will be given and related articles will be assigned to be presented to the class and instructors.

Written Proposal and Oral defense --> will be prepared on an individual basis on a topic of choice that was discussed in class.

Written topic should be chosen based on topics covered during this course; emphasis should be given to those discussed in this semester.

Written proposal should be no longer than 5-6 pages, excluding references and it should be divided in three main sections:

Introduction/general background and identification of the question/aim of the proposal (1.5-2 pages)

Experimental plan specifying technology, expected results, coherence with the rest of the outlined aims of the proposal (2-3 pages)

Final discussion and conclusions (1 page).

Proposal should be handed in by the last day of classes

Oral presentation should recap the topic and, like for the written proposal, introduce the

question, then discuss the experimental plan with some emphasis also on the technologies and final outcome of the project. Altogether 20min presentation (~20 slides) plus 20 min questions.

Dates: May 15-19. Final schedule will be circulated later.

Course Policies

- attendance in class is mandatory unless a valid excuse is provided
- it is the responsibility of the student to attend classes, exams and submit work on time
- plagiarism is not tolerated and this will be monitored for all work submitted

Additional Information

NOTE

The instructor reserves the right to make changes to this syllabus as necessary.