



Introduction of the course: Cytogenetics of the second semester of 1403-1404
Faculty: Medicine, Teaching Department: International General Medicine

Field and level of education: international M.SC of Human Genetics	Course name and number: Cytogenetics, 1211037
Place: Class 11	Day and time: Saturday, 10-12, Sunday 8-12
Number and type of units (theoretical/practical): 3 theoretical units	
Prerequisite courses: none	
Telephone and contact days: Saturday to Wednesday, Tel: 214	Name of the person in charge of the course: Dr. Teimori
Email: Hosseintimm@yahoo.com	Office address: Faculty of Medicine, Room24

The general objectives of the lesson are:

Familiarity with chromosomal Aberration, Causes and Effects

Specific objectives of the course: The most specific objectives of this course are to increase students' familiarity with and ability to explain and interpret the following concepts:

- 1- Students should be able to describe the ways of chromosome damages.
- 2- Students can distinguish differences between mitosis and meiosis.
- 3- Students can compare Euploidy and aneuploidy.
- 4- Students can explain cell cycle and what happen for genetic materials in each phase.
- 5- Students can explain the importance of molecular cytogenetics and their usages.
- 6- Students can describe structural abnormalities.
- 7- Students can distinguish different chromosomal syndromes.

The primary sources of the lesson (book title, author's name, year and place of publication, publisher's name, number of chapters or pages in this lesson if reading all of the books or volumes as a source is not required):

- 1- Emery's medical genetics, 17th edition
- 2- Thomson's Genetics in Medicine, 8th edition.
- 3- An International System for Human Cytogenomic Nomenclature (2024) .

The method of student evaluation and the times related to each evaluation:

(A) During the course (quizzes, assignments, mid-semester exam

Load: 30%

The mid-term exam will be held with the agreement of all students regarding the date of the

exam.
B) End of the course Load: 70% How to test:
The course manager's policy regarding dealing with student absences and tardiness in the classroom is: ☐ Absence exceeding the permitted limit will result in disqualification from the final exam. ☐ Attendance and absence are done carefully, and for each unexcused absence, 0.25 is deducted from the total grade. ☐ Timely and active attendance in class meetings is mandatory.

The timetable for the presentation of the lesson plan: genetics of the second semester of 1403-1404					
Students' necessary preparation before class	Lecturer	Title	Hour	Days	No
Published articles and books	Dr. Teimori	History, importance, application, and perspective	10-12	1404/1/30	1
Published articles and books	Dr. Teimori	Chromosome structure	8-10	1404/1/31	2
Published articles and books	Dr. Teimori	How to analyze chromosomes	10-12	1404/1/31	3
Published articles and books	Dr. Teimori	Banding Techniques	10-12	1404/2/6	4
Published articles and books	Dr. Teimori	Classification of chromosomes	8-10	1404/2/7	5
Published articles and books	Dr. Teimori	Chromosomal damages	10-12	1404/2/7	6
Published articles and books	Dr. Teimori	Mitosis and meiosis	10-12	1404/2/13	7
Published articles and books	Dr. Teimori	Eupolidy	8-10	1404/2/14	8

Published articles and books	Dr. Teimori	Nondisjunction and anaphase lag	10-12	1404/2/14	9
Published articles and books	Dr. Teimori	Numerical chromosomal syndromes	10-12	1404/2/20	10
- Published articles and books	Dr. Teimori	Unstable chromosomal Abnormalities	8-10	21/2/1404	-
Published articles and books	Dr. Teimuri	Deletions and duplications	10-12	1404/2/21	11
Published articles and books	Dr. Teimuri	Unilateral translocation, reciprocal translocation	10-12	1404/2/27	12
Published articles and books	Dr. Teimuri	Robersonian translocation, Inversions	8-10	1404/2/28	13
Published articles and books	Dr. Teimuri	Mosaicism and chimerismes	10-12	1404/2/28	14
Published articles and books	Dr. Teimuri	Isochromosomes and marker chromosomes	8-10	1404/3/4	15
Published articles and books	Dr. Teimuri	FISH analysis	10-12	4/3/1404	16

*** Date of the mid-semester exam: with the agreement of the students in the first half of the current semester**

❖ The date of the end of the semester exam: according to the curriculum

A) During the course (quizzes, assignments, mid-semester exam.)

B) End of the course: four-choice questions

FINAL SCORE: four-choice questions, descriptive questions, assignments during the semester, class activities

*** Other important notes for students:**

1- Attending class meetings on time and actively

2- Some classes will be video conferencing.

Announcing grades according to training schedule