

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	Medical genetics
Course number	MEDI3203
Faculty	
Department	
Course type	College Needs
Course level	3
Credit hours (theoretical)	2
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

- 1 - To familiarize the genetic variations in terms of gene mutations and chromosomal aberration
- 2 - to recognize the the molecular basis of inheritance in humans
- 3 - Learning the differences between the different modes of inheritance the Mendelian inheritance and non Mendelian inheritance
- 4 - To familiarize the practical applications and techniques of molecular biology (their uses and limitations) in diagnosis and management of human genetic disorders
- 5 - to recognize the importance of genetic testing, counseling and national screening programs in the control of genetic disorders
- 6 - increase awareness about the ethical issues and guidelines when dealing with human genetic disorders
- 7 - to recognize the differences between congenital and hereditary disorders
- 8 - to select and present short oral session about a genetic issue or topic
- 9 - to familiarize recording a family-history and constructing a pedigree for an index cases
- 10 - to associate a constructed pedigree with the molecular genotype of the family members

Course Contents

- 1 - This 2 credit-hour medical genetics course is offered for the medical students in their third year of the preclinical part and after successful completion of the molecular biology course.
- 2 - This course provides an overview of human genetic concepts, approaches and clinical disorders that have a genetic background with more emphasis on the molecular diagnosis and genetic counseling issues.
- 3 - The course gives the students the knowledge about the basics as well as the recent and substantial topics in field of medical genetics.
- 4 - The course is designed to strengthen the student familiarity about the role of genetics and molecular biology in understanding, diagnosing and managing disease, besides the recent approaches and methods of genetic testing and genetic counseling.
- 5 - The students will be divided into groups and each group will asked to select and present one topic about genetic disordered with more focus on the mode of inheritance and the conventional and most advanced molecular diagnostic tests for that disorder.

Teaching and Learning Methods

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| 1 - PowerPoint and whiteboard for more explanations |
| 2 - flash animations |

Teaching and Learning Methods for the Disabled Students

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| 1 - Will be treated and addressed individually according to the type of disability |
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Students Assessment

<u>Assessment Method</u>	<u>TIME</u>	<u>MARKS</u>
Midterm Exam	60 Min	15
oral presentation	20-30 Mins	15
assignment		10
participation, attendance		10
Final Exam	90 mins	50

Books and References

Recommended books	Peter D. Turnpenny and Sian Ellard. EMERY'S Elements of Medical Genetics. 14th edition, 2012. Churchill Livingstone, an imprint of Elsevier Ltd. Laura M. Gunder and Scott A. Martin. Essentials of Medical Genetics for Health Professionals. 2011 Jones & Bartlett Learning, LLC
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