# Course Specifications

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| Institution: **Umm Al-Qura University** | Date: **22/11/2018** |
| College/Department : **Faculty of Medicine / Department of Medical Genetics** | |

## A. Course Identification and General Information

1. Course title and code:
**Principle of medical genetics 4810110-2**

2. Credit hours: **2 credit hours**

3. Program(s) in which the course is offered.
(If general elective available in many programs indicate this rather than list programs)
**Medical track**

4. Name of faculty member responsible for the course
**Dr. Ahmad Omar Babalghith**

5. Level/year at which this course is offered: **1st year**

6. Pre-requisites for this course (if any):
**No Pre-requisites**

7. Co-requisites for this course (if any):
**No Co-requisites**

8. Location if not on main campus:
**On main campus**

9. Mode of Instruction (mark all that apply):

| | | | |
|---|---|---|---|
| a. traditional classroom | **Yes** | What percentage? | **80%** |
| b. blended (traditional and online) | | What percentage? | |
| c. e-learning | **Yes** | What percentage? | **20%** |
| d. correspondence | | What percentage? | |
| f. other | | What percentage? | |

Comments:

**B Objectives**

1. What is the main purpose for this course?

**Principle of Human Medical Genetics is one of the basic science courses that comprise The preclinical curriculum of the first three years of medical school. The overall goal of these courses is to provide students with the knowledge and understanding of the scientific principles that are the basis of current approaches to the diagnosis and Management of disease. The application of these scientific principles and knowledge to The practice of medicine, including the development of life-long learning and problem solving Skills, is emphasized. This goal is consistent with the objectives of the United States Medical Licensing Examination (USMLE), Step 1.**
**The Medical Genetic course consists of 15 lectures and covers topics that are basic principal of human genetics**
**Lecturers from both basic science and clinical disciplines teach the fundamental principles of genetic and how these principles apply to the diagnosis and treatment of These diseases.**

2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)

**As all teaching rooms connected to Wi-Fi network, the using of YouTube is very good tool to show the all mechanisms and molecular processes that been taken in the lecture for students.**

**C. Course Description** (Note: General description in the form used in Bulletin or handbook)

Course Description:
**At the end of this semester, students supposed to understand the main molecular processes in the cell regarding DNA and chromosomes, like DNA replication, genome organization, gene expression, cell division, mutations and pattern of inheritance.**

1. Topics to be Covered

| List of Topics | No. of Weeks | Contact hours |
|---|---|---|
| **DNA and RNA** | **1** | **2 hours** |
| **DNA replication** | **1** | **2 hours** |
| **Genome organization** | **1** | **2 hours** |
| **Transcription** | **1** | **2 hours** |
| **Translation** | **1** | **2 hours** |
| **Chromosomes** | **1** | **2 hours** |
| **Cell division – Mitosis** | **1** | **2 hours** |
| **Cell division – Meiosis** | **1** | **2 hours** |
| **Chromosomal abnormalities and DNA mutations 1** | **1** | **2 hours** |
| **Chromosomal abnormalities and DNA mutations 2** | **1** | **2 hours** |
| **Pattern of inheritance** | **2** | **4 hours** |

2. Course components (total contact hours and credits per semester):

| | | Lecture | Tutorial | Laboratory/ Studio | Practical | Other: | Total |
|---|---|---|---|---|---|---|---|
| Contact Hours | Planed | **24** | **0** | **0** | **0** | **0** | **24** |
| | Actual | **24** | **0** | **0** | **0** | **0** | **24** |
| Credit | Planed | **2** | **0** | **0** | **0** | **0** | **2** |
| | Actual | **2** | **0** | **0** | **0** | **0** | **2** |

. Additional private study/learning hours expected for students per week. **Not applicable**

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

**On the table below are the five NQF Learning Domains, numbered in the left column.**

**First**, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

| Code # | NQF Learning Domains And Course Learning Outcomes | Course Teaching Strategies | Course Assessment Methods |
|---|---|---|---|
| **1.0** | **Knowledge** | | |
| 1.1 | Recognize the pattern of inheritance | Blended instructions | Final exam(numeric marks) |
| 1.2 | Describe molecular mechanism related to DNA and chromosomes | Traditional classroom | Final exam (numeric marks) |
| **2.0** | **Cognitive Skills** | | |
| 2.1 | Measure the effective learning skills | Correspondence | Classroom discussion |
| 2.2 | Evaluate searching in web for enrichment info. | Blended instruction | Classroom discussion |
| **3.0** | **Interpersonal Skills & Responsibility** | | |
| 3.1 | Evaluate the effective and interactive discussion skills | Correspondence | Classroom discussion |
| **4.0** | **Communication, Information Technology, Numerical** | | |
| 4.1 | Appraise abilities for searching in web engines | Blended instruction | Activity (no marks) |
| 4.2 | Illustrate topics with medical animations related to topics | Blended instruction | Activity (no marks) |
| **5.0** | **Psychomotor** | | |
| 5.1 | Manipulate the desire to activate the genetic services | Traditional instruction | Not included in assessment |
| 5.2 | Contribute to improve the medical education of the community regard genetic diseases. | Traditional instruction | Not included in assessment. |

5. Schedule of Assessment Tasks for Students During the Semester

| | Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.) | Week Due | Proportion of Total Assessment |
|---|---|---|---|
| 1 | **Mid-term exam** | **9** | **40%** |
| 2 | **Final exam** | **16** | **60%** |

**D. Student Academic Counseling and Support**

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

**The student has the right to contact the lecturer(s) or the coordinator by their e-mails or during their office hours for academic advices or consultations**

**E. Learning Resources**

1. List Required Textbooks

**1- Emery's Elements of Medical Genetics: With Student CONSULT Online Access (Paperback) by Peter Turnpenny and Sian Ellard**

**2- Human molecular genetic by tom Strachan and Andrew Read**

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

**F. Facilities Required**

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

**Audiovisual tools for teaching (data-show, board).**

2. Technology resources (AV, data show, Smart Board, software, etc.)

**Data show**

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

**microphone, sound system,**

## G. Course Evaluation and Improvement Processes

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| 1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching<br>**This is attained by evaluation Questionnaire of the lecturer(s) at the end of the semester.** |
| 2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department<br><br>**By attending course lectures at classroom with students to evaluate overall performance by the lecturer** |
| 3. Processes for Improvement of Teaching<br><br>**Reviewing and implementing appropriate changes in the course based on student feedback and evaluations.** |
| 4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution)<br><br>**There is a special committee founded in the college to analyze and evaluate all exams results in all subjects, and how to improve results or to increase exams level.** |
| 5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.<br><br>**Regular meeting of the staff to review the course effectiveness** |

Course Coordinator: **Dr. Ahmad Omar Babalghith**