هيئة تقويم التعليم
Education Evaluation Commission
المركز الوطني للتقويم والاعتماد الأكاديمي
**National Center for Academic Accreditation and Evaluation**
**ATTACHMENT 5.**

Kingdom of Saudi Arabia
Ministry of Higher Education
Shaqra University
COLLEGE OF APPLIED MEDICAL SCIENCES
(DAWADMI)
Academic Year 2018-2019

**CLINICAL LABORATORY SCIENCE DEPARTMENT**
COURSE SPECIFICATIONS
of

# EPIDEMIOLOGY

# HLT 261

**Prepared by**

**Prof. Dr. IntisarElhag Elrayah** Signature: _____
Full Professor (Female Section) Date Completed:

**Dr.Sharief Hameed** Signature: _____
Assisstant professor (Male Section) Date Completed:

**Noted by**

**PROF. DR. Intisar Elhag Elrayah** Signature: _____
Supervisor of the Department (Female Section)

**Approved by**

**DR. Ali Ismail Ali Abdul Rahim** Signature: _____
**Program Supervisor**

**Dr. Masha'el Al-Ruwais** Signature: _____
**Vice Dean (Female Section)**

**DR. Nahed Bin Abdullah Alqweiz** Signature:_____
**College Dean**

هيئة تقويم التعليم
Education Evaluation Commission

**Course Specifications**

| | |
|---|---|
| Institution: Shaqra University | Date: 30/01/2019 |
| College/Department : College of Applied Medical Sciences / Clinical Laboratory Science at Al Dawadmi Campus | |

## A. Course Identification and General Information

| |
|---|
| 1. Course title and code: **EPIDEMIOLOGY HLT 261** |
| 2. Credit hours: : 3(2 Lecture + 1 Practical) |
| 3. Program(s) in which the course is offered.<br>(If general elective available in many programs indicate this rather than list programs)<br>Bachelor of Science in Clinical Laboratory Science (BSCLS**)** |
| 4. Name of faculty members responsible for the course:<br>**Prof. Dr. Intisar Elhag Elrayah,** Full Professor (Female Section)<br>**Dr.Sharief Hameed** Assisstant Professor (Male Section) |
| 5. Level/year at which this course is offered: Level 6/3rd year |
| 6. Pre-requisites for this course (if any): |
| 7. Co-requisites for this course (if any): None |
| 8. Location if not on main campus: College of Applied Medical Sciences – Al Dawadmi Campus |

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

| | | | |
|---|---|---|---|
| a. traditional classroom | √ | What percentage? | 70 |
| b. blended (traditional and online) | √ | What percentage? | 30 |
| c. e-learning | | What percentage? | |
| d. correspondence | | What percentage? | |
| f. other | √ | What percentage? | |

Comments:

**B Objectives**

1. What is the main purpose for this course?
   This course will enable the CLS students to:

At the end of this course students are expected to:

- Acquire knowledge about the nature of epidemiology and its uses in health field Identify the epidemiological methods in studying causes of disease .
- Identify the importance of epidemiology in disease prevention and in a well-clinical practice .
- Analyze the role of epidemiology in the evaluation of the effectively of health care and its competency .
- Acquire the required skills for implementing the epidemiology basics and methods in the fields of disease prevention and health promotion
- Understanding the distribution of health and diseases in the community.
- Calculate and interpret basic statistical measures (Ratios ,proportions, mortality and morbidity )

❖ .

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)

Plans that are being implemented for developing and improving the course:

- Continuous updating of the information, knowledge and skills included in the course through continuous search for new knowledge and skills available in recent publications (references, books, researches, magazines, internet….).
- Verifying the information resources.
- Continuous evaluation of the course content, student level, and develop plans accordingly.

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

Course Description:
**This course introduces the basic concepts of epidemiology as applied to public**

**health problems. Emphasis is placed on the principles and methods of epidemiologic investigation, appropriate summaries and displays of data, and the use of classical statistical approaches to describe the health of populations.**

| | 1. Topics to be Covered | | |
|---|---|---|---|
| List of Topics(theory Topics( 2 contact hours /wk ) | Practical Practical ( 2 contact hours/wk | Week No | Contact hours |
| Introduction to epidemiology<br>Definition and background.<br>History of epidemiology.<br>Uses and applications.<br>Scope of epidemiology. | Choosing an appropriate study design and site | 1 | 4 |
| Defining health and disease<br>Definitions of Measures<br>Methods for Measuring<br>Measuring disease frequency<br>Incidence and prevalence | Writing a study protocol | 2 | 4 |
| Types of epidemiology studies<br>Analytic epidemiological study<br>Descriptive epidemiological study (person, time and place). | Ethical issues in epidemiological research | 3 | 4 |
| Experimental studies (principles ,types ,ethics ) | sampling methods | 4 | 4 |
| Epidemiological aspects of infectious diseases<br>Definition and levels of disease occurrence<br>Agents of infectious diseases | Size of a study<br>Randomization | 5 | 4 |

| | | | |
|---|---|---|---|
| Epidemiological aspects of infectious diseases<br>Mechanism of transmission | Quantitative data collection 1: Questionnaires<br>Quantitative data collection 2: Other methods | 6 | 4 |
| Epidemiological aspects of infectious diseases<br>Case fatality rate<br>Principles of control | Qualitative data collection | 7 | 4 |
| Epidemiology and prevention measures<br>Definition of screening<br>Principles underlying screening program.<br>Evaluation. | Field organization and quality control / | 8 | 4 |
| Epidemiology and prevention measures<br>Level of Preventions | Data entry, validation and transfer | 9 | 4 |
| Clinical epidemiology<br>Experimental Designs/Clinical Trials<br>Measures of Effect/Disease Causation | management 1: Basic principles | 10 | 4 |
| Methods of Clinical epidemiology<br>Data Interpretation/Validity and Reliability<br>Screening for Disease/Disease Surveillance<br>Research designs | Data management 2: Advanced applications | 11 | 4 |
| Environmental epidemiology Definition<br>Clusters analysis<br>Ecological studies<br>Metanalysis | Summarizing and presenting data | 12 | 4 |
| Environmental epidemiology<br>Exposure Measurements errors<br>Exposure diseases models and errors models methods of studying environmental risks<br>Exposure assessment and risk assessment | Students presentations ( Selected publications) | | |
| Epidemiology and health services | visit to infectious control department / Ministry of health | 13 | 4 |
| Revision | | 14 | 5 |
| | | | |

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

| | | Lecture | Tutorial | Laboratory/ Studio | Practical | Other: | Total |
|---|---|---|---|---|---|---|---|
| Contact Hours | Planed | 30 | -- | 30 | -- | -- | 60 |
| | Actual | 30 | -- | 30 | -- | -- | 60 |
| Credit | Planed | 30 | -- | 15 | -- | -- | 45 |
| | Actual | 30 | -- | 15 | -- | -- | 45 |

3. Additional private study/learning hours expected for students per week. 2

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** | | |
| | | (a) Interactive Lecture/Discussion<br>(b) Report Back Session<br>(c) Power point/Multimedia Presentation<br>(d) CD/Video viewing<br>(f) Large Group Discussion<br>(g) Reading<br>(h) Online assignment/Assigned Homework | (a) Paper and Pencil Tests<br>(b) Baseline Assessments<br>(c) Oral Reports<br>(d) Interviews<br>(e) Multiple choice questions<br>(f) Open-book examinations and Closed-book examinations<br>(g) Tests and quizzes<br>(h) Assignments<br>(i) Final written examination at the end of semester |
| 1.1 | Acquire knowledge about the nature of epidemiology and its uses in health field | | |
| 1.2 | Identify the epidemiological methods in studying causes of disease and Frequency measures used in epidemiology. | | |
| 1.3 | Analyze the role of epidemiology in the evaluation of the effectively of health care and its competency and Identify its in disease prevention and in a well-clinical practice . | | |
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| **2.0** | **Cognitive Skills** | | |
| 2.1 | demonstrate skills in handling data and presenting quantitative results; | (a) Interactive Lecture/Discussion<br>(b) Report Back Session<br>(c) Power point/Multimedia Presentation<br>(d) CD/Video viewing<br>(f) Large Group Discussion<br>(g) Reading<br>(h) Online assignment / Assigned Homework | (a) Paper and Pencil Tests<br>(b) Demonstration<br>(c) Role Play<br>(d) Lab report<br>(e) Prepare an illustrated manual on using the equipment<br>(f) Observation of real or simulated professional practice<br>(g) Final written examination at the end of semester |
| 2.2 | • choose appropriate designs for epidemiological studies | | |
| 2.3 | • evaluate critically studies conducted by others (in terms of the question, the design,the method, how it was conducted and how it was analysed); | | |
| | | | |
| **3.0** | **Interpersonal Skills & Responsibility** | | |
| 3.1 | work constructively in a group, cooperating with their leaders and seniors and with other students, thus initiating the value of teamwork and compliance to work through systems; | (a) Assignment<br>(b) Internet search<br>(c) Group dynamics<br>(d) Online assignment/Assigned Homework<br>(e) Small Project | (a) Journal<br>(b) Portfolio<br>(c) Group work<br>(d) Oral examination<br>(e) Evaluation of assignments and search work.<br>(f) Observation of student ethical and moral behavior. |
| 3.2 | develop self-learning for the acquisition of greater knowledge, new information data or technique in the field of course for the best utilization of their lectures and tutorials; | | |

| | | | |
|---|---|---|---|
| | think critically and involve themselves in discussions with the instructor in classroom; | | |
| 3.3 | present related topics orally in class, and this work may be independently and as part of a team to encourage peer discussion and offer one to one discussion; | | |
| 3.4 | communicate properly and ethically with the patients in a serious and respectable manner to have relevant data to their complaints; and<br><br>Open discussion amongst themselves under the supervision of their instructor. | | |
| **4.0** | **Communication, Information Technology, Numerical** | | |
| | | (a) Teaching and learning in English to improve student communication skills.<br>(b) Training on numerical skills and data presentation.<br>(c) Student involvement in seminars.<br>(d) Internet search and assignments | (a) Written presentation (essay, report, reflective paper etc.)<br>(b) Oral presentation<br>(c) Group work<br>(d) Discussion/debate/role play<br>(e) Observation of real or simulated professional practice<br>(f) Problem scenario<br>(g) Work-based problem<br>(h) Analyze a case<br>(i) Seminar evaluation<br>(j) Examinations should be answered in English language<br>(k) Marks given to for good reports and presentations |
| 4.1 | Use computers and other updated materials in their mode of teachings, e.g., using CD, information items and accessories in their presentations (audio visuals). Students will be aware of these and likewise will learn and be updated on the use of these modern facilities, e.g. internet access wherein all the needed additional information in relation to their course and studies are available. | | |
| 4.2 | Develop the scientific language skills. | | |
| 4.3 | Develop communication skills with others via websites or e-mail. | | |
| 4.4 | Use online library and internet in searching for literature paper related to the subject. | | |
| 4.5 | Communicate with other students as well as other faculty members and deal with texts and images in the fashion of using PowerPoint. | | |
| **5.0** | **Psychomotor** | | |
| 5.1 | perform general and focused examination to | (a) Laboratory classes | (a) Demonstration |

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|---|---|---|---|
| | health and epidemiology samples; | (b) Emulation of the study skills for scientists and quantitative methods<br>(c) Reporting of laboratory exercises<br>(d) Engage students in analysis and evaluation of their practical work<br>(e) Training on methods of data manipulation and presentation. | (b) Role Play<br>(c) Make a video (write script and produce/make a video)<br>(d) Lab report<br>(e) Prepare an illustrated manual on using the equipment, for a particular audience<br>(f) Observation of real or simulated professional practice<br>(g) In-class tests<br>(h) Assessed laboratories |
| 5.2 | | | |
| 5.3 | | | |

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 | 1st Midterm Test | 6th week | 15% |
| 2 | 2nd Midterm Test | 12th week | 15% |
| 3 | Attendance & Quizzes | 1-15 weeks | 05% |
| 4 | Online assignment & Presentation | 7th and 12th week | 05% |
| | Practical midterm& activities | 6th/12th | 20% |
| 5 | Final Exam | | 40% |
| 6 | | | |
| 7 | Total | | 100% |

**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)

All the Teaching Staff are available to assist and support the students if they have any questions or inquiries. From the start, they were given the schedule of their lectures, tutorials, clinical session for the whole semester.

(a) Office hours (4 hours / week / staff)
(b) Regular meeting with course organizer and the team leader.
(c) Course 3 hours per day, 5 days a week for any inquiry and support for the students.

**E Learning Resources**

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|---|
| 1. List Required Textbooks<br>❖ Principles of Epidemiology, Second Edition: An Introduction to Applied Epidemiology and Biostatistics published by the U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention (CDC) – Epidemiology Program Office, Public Health Practice Program Office, Atlanta, Georgia 30333.<br>❖ Basic **epidemiology** / R. Bonita, R. Beaglehole, T. Kjellström. 2nd edition. **..... book**provides an introduction to the basic principles and methods of **epidemiology**.<br>❖ |
| 2. List Essential References Materials (Journals, Reports, etc.)<br>❖ Principles of Epidemiology, Second Edition: An Introduction to Applied Epidemiology and Biostatistics published by the U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention (CDC) – Epidemiology Program Office, Public Health Practice Program Office, Atlanta, Georgia 30333.<br>❖ Basic **epidemiology** / R. Bonita, R. Beaglehole, T. Kjellström. 2nd edition. **..... book**provides an introduction to the basic principles and methods of **epidemiology**.<br>❖ |
| 3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.<br>www.epimonitor.net<br>www.cidrap.umn.edu<br>www.jech.bmjjournals.com |
| 4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.<br>❖ |

**F. Facilities Required**

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|---|
| 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.)<br>❖ Classrooms ready and equipped with educational media<br>❖ Lecture rooms are air conditioned with at least 35 seats<br>❖ Labs equipped with material for teaching<br>❖ LCD projectors are available in the lecture rooms<br>❖ Smart Board available in the lecture rooms<br>❖ Laptop and desktop computers<br>❖ Central printer and scanner<br>❖ Up-to-date scientific books in the library |
| 2. Technology resources (AV, data show, Smart Board, software, etc.)<br>❖ LCD Projector<br>❖ Smart Board<br>❖ Internet (Wifi) connection in the lecture and laboratory rooms<br>❖ Desktop computer and microphone in lecture rooms |
| 3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) |

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## G Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching
   - ❖ Regular evaluation of the theoretical and practical parts of the course to identify the weaknesses.
   - ❖ Performance appraisal form filled out by each student to show level of fulfillment.
   - ❖ Confidential completion of standard course evaluation questionnaire.
   - ❖ Interactive Lecture/Discussion
   - ❖ Laboratory Activities/Experimentation

2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department
   - ❖ A statistical regular review and analysis of the students' achievement in the department.
   - ❖ Prepare a questionnaire which should be filled by the students at the end of the term.
   - ❖ The questionnaire should be analyzed and carefully studied

3. Processes for Improvement of Teaching
   - ❖ Provide training and workshop opportunities for the teaching staff to improve their teaching strategies.
   - ❖ Form committees to follow up progress and work on improvement.
   - ❖ Provide opportunities to improve academic courses and research through conferences.
   - ❖ Provide the teaching staff members with all the references and electronic resources.
   - ❖ Updating through more reading books and articles related to the course.
   - ❖ Improve relations between instructor and students.

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)
   - ❖ Check marking of the answer sheets of examination papers with other colleagues
   - ❖ Check progress level of the students (this can be done by an independent teacher by reviewing students' records and compare the students' work with another from a different institute).

5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.
   - ❖ Student's feedback on the quality of the course.
   - ❖ Consulting other faculty members or collaborators in overseas universities for their views on the method of quality of improvement
   - ❖ Check other universities websites to compare our lectures with them.
   - ❖ Compare the syllabus with the syllabus of standard universities.
   - ❖ Form a specialized committee from the department to review the progress of teaching and update the resources.
   - ❖ Consult distinguished students and discuss with them positive and negative points in Lectures.

Name of Course Instructors:

**Prof. Dr. Intisar Elhag Elrayah** Signature: _____

Full Professor (Female Section) Date Completed: **30 January 2019**

Dr. Shareef Hameed Signature: _____
Assisstant Professor (Male Section) Date Completed: **30 January 2019**

Program Coordinator:

**DR. Ali Ismail Ali Abdul Rahim** Signature: _____
Assistant Professor (Male Section) Date Completed: **30 January 2019**