**Course Description**

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| **Faculty** | **Pharmacy** |
| **Department**  | **1702-clinical pharmacy** | **Level** |  |
| **Course**  | **Epidemiology** | **Code** | **1702504** | **Prerequisite** | 1701402 |
| **Credit hours** | 2 | **Theoretical**  |  | **Practical** |  |
| **Coordinator** |  | **Email** |  |
| **Teachers** |  | **Emails** |  |
| **Lecture Time** |  | **Place** |  | **Attendance mode** |  |
| **Semester**  |  | **Preparation date**  |  | **Modification Date** |  |

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|  **Abstracted Course Description**  |
| The course covers topics such as principles of epidemiology, communicable diseases, vaccination, immunobiologic agents, non-infectious diseases, nosocomial infections and family health. |
| **Course Goals** |
| * To identify the etiology, or causes of disease and its relevant risk factor (i.e. factors that increase a person’s),
* To intervene to reduce morbidity and mortality from diseas,
* To develop a rational bases for prevention programs based on identify etiology or causal factors,
* To work on to reduce or eliminate exposure to those factors
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| **CILOs** |
| **Knowledge** |
| a1. Explain, assess and discuss basic concepts and theory within epidemiology, such as causality, bias, confounding, and effect modification.a2. Understand principles of epidemiology; Descriptive and Analytical.a3. Explain epidemiology and prevention of common communicable diseases. |
| **Skills** |
| b1. Understand principles of epidemics investigations.b2. Recognize main study designs.b3. Identify chronic diseases risk factors and preventive measures for modifiable risk factors.. |
| **Competencies** |
| c1. Explain, assess, and discuss basic concepts and theory within epidemiologyc2. Understand principles of epidemiology and prevention of common communicable diseases.c3. Identify chronic diseases risk factors and propose preventive measures for modifiable risk factors.. |
| **Learning Methods** |
| * Lecture material and notes ,Homework and Assignments, Projects, Presentation,
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| **Evaluation Tools** |
| Exams,Presentation, project, assignments. |
| **Week** | **Topics** | **Learning methods** | **Evaluation tool** | **ILOs** | **Hours** |
| **1.** | **Introduction,****Background to preventive medicine and principles of epidemiology**- Health education/health promotion- Preventive medicine- Disease screening- Sensitivity and selectivity of screening tests- Principles of epidemiology (study/distribution/determinants/health related states/specific populations/applications)- Uses of epidemiology | Lecture material and notes | Assignments, | **A2,a3,b1,b3,c2,c3** | **3** |
| **2.** | **Epidemiologic studies** - Descriptive studies Communicable DiseasesIllnesses due to a specific infectious agent (protozoa, fungi, helminths, bacteria, viruses, rickettsia) which is transmissible directly or indirectly from one host to another (man, animals, arthropods). |  | Assignments, | **A2,a3,b1,b3,c2,c3** | **3** |
| **3.** | 1. - Direct droplet infections:

- Droplets are large particles more than 5 µm that are transmitted directly from one person to another through spray of saliva and nasopharyngeal secretions during sneezing, coughing or talking,e.g Infuenza.1. Indirect droplet infections:
* Air-borne: residues of droplets less than 5 µm after evaporation of water, transmitted by air to infect other persons, e.g. T.B.
* Fomite-borne: e.g. towels, handkerchiefs, spoons, cups, etc., soiled with microorganisms may transmit respiratory tract and eye infections.
1. Food-borne infections (intestinal, fecal-oral)

Those are transmitted as follows feces-flies-food-fingers (4 f), e.g.Typhoid and Entamoeba | Lecture material and notes   | Assignments, | **A2,a3,b1,b3,c2,c3** | **3** |
| **4.** | **Nosocomial infection, hospital acquired infection, HAIs****Source of hospital acquired infection (HAI)** ***Measures Directed Against Reservoirs*****Factors Favoring HAI** |  | Assignments, | **A1,a2,b1,b2,c1** | **3** |
| **5.** | **- Immunization****- Immunobiologic agents**a) Antitoxinsb) Vaccinesc) Immunoglobulinsd) Toxoids**- Guidelines for administration of immunobiologic agents**  |  | Exams | **A1,a2,b1,b2,c1** | **3** |
| **6.** | Non-Communicable diseases (NCDs) | Lecture material and notes  | Exams | **A1,a2,b1,b2,c1** | **3** |
| **7.** | Food borne diseases is any disease resulting from The consumption of contaminated food with: | Lecture material and notes | Exams | **A1,a2,b1,b2,c1** | **3** |
| **8.** | **Epidemiology and prevention of non infectious diseases**- Heart diseases- Cancer- Cerebrovascular diseases- COPD- Liver cirrhosis- Diabetes- Renal diseases- Peptic ulcers- Anemia | Lecture material and notes | Exams | **A2,a3,b1,b3,c2,c3** | **3** |
| **9.** | **Occupational medicine and ergonomics**- Ilustrative examples | Lecture material and notesHomework and Projects, Presentation, … | Exams | **A2,a3,b1,b3,c2,c3** | **3** |
| **10.** | **Mental health/mental retardation**- Etiology- Prevention**Maternal health**- Pregnancy complications- Routine women care/ screening tests |  | Exams | **A2,a3,b1,b3,c2,c3** | **3** |
| **11.** | **Nosocomial infections**- Predisposing factors- Frequency- Infection control | Lecture material and notes Homework and Assignments, Projects, Presentation,  | Exams | **A2,a3,b1,b3,c2,c3** | **3** |
| **12.** | **Epidemic and pandemic alert and response and related diseases**- Neonatal and postneonatal mortality rate- EPAR- Examples of diseases covered by EPAR (anthrax/avian and swine influenza/Ebola/plague)- Bioterrorism | Lecture material and notes | Exams | **A1,a2,b1,b2,c1** | **3** |
| **13.** | **Food intoxication**- Non microbial - Microbial (foodborne infection / foodborne intoxication) | Lecture material and notes | Exams | **A1,a2,b1,b2,c1** | **3** |
| **14.** | **Nutrition/Smoking**- Malnutrition- Milk microbiology- Impact of smoking on diseases- Smoking cessation | Lecture material and notes | Exams | **A1,a2,b1,b2,c1** | **3** |
| **15.** | Final exam |  |  |  |
| **16.** |  |  |  |  |
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| **Plan of Course Evaluation** |
| **Evaluation Tools** | **Mark** | **ILOs** |
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| **First Exam (Mid-term)**  | **30%** | **A1,a2,b1,b2,c1** |  |  |  |  |  |
| **Second Exam (If available)** |  |  |  |  |  |  |  |
| **Final Exam** | **50%** | **A1,a2,a3,b1,b2,c1,b3,c2,c3** |  |  |  |  |  |
| **Activities** |  |  |
| **Activities Evaluation** | Homework/Tasks | 10% | **A1,a2,b1,b2,c1** |  |  |  |  |  |
| Case Study  |  |  |  |  |  |  |  |
| Discussion and Interactions |  |  |  |  |  |  |  |
| Group Activities |  |  |  |  |  |  |  |
| Laboratory Exams |  |  |  |  |  |  |  |
| Presentations |  |  |  |  |  |  |  |
| Quizzes | 10% | **A1,a2,b1,b2,c1** |  |  |  |  |  |
| Others |  |  |  |  |  |  |  |
| **Total** | 100% | **A1,a2,a3,b1,b2,c1,b3,c2,c3** |  |  |  |  |  |

 **Components**  |
| **Book** | - Principles of Epidemiology in Public Health Practice Third Edition An Introduction to Applied Epidemiology and Biostatistics- Applied Epidemiology: Theory to Practice / Edition 2, by Ross C. Brownson, Diana B. (Eds.) Petitti, Diana B. Petitti |
| **References** |  |
| **Recommended Readings** |  |
| **Electronic materials** |  |
| **Other websites** |  |

**Subject Coordinator:**

**Head of Curriculum Committee:**

**Department Head:**

**Faculty Dean:**

**Last update date:**