**Course Description**

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| **Faculty** | **Pharmacy** |
| **Department**  | Pharmaceutics and Pharmaceutical Technology | **Level** | 7 |
| **Course**  | Pharmaceutical Microbiology  | **Code** | 1701200 | **Prerequisite** | 0303105 |
| **Credit hours** | 2 | **Theoretical**  |  | **Practical** | 1702101 |
| **Coordinator** |  | **Email** |  |
| **Teachers** | * Dr. Yasser Gaber
 | **Emails** |  |
| **Lecture Time** |  | **Place** |  | **Attendance mode** | Face to face  |
| **Semester**  |  | **Preparation date**  |  | **Modification Date** |  |

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|  **Abstracted Course Description**  |
| The course provides the pharmacy students with the basics of microbiology. The course is the first contact of the pharmacy student to the Microbiology discipline; therefore, the course will provide the basics of bacteriology such as bacterial nomenclature, structure, genetics, and virulence factors. In addition, an introduction to virology and eukaryotic microorganisms as pathological agents. Most important bacterial and other pathogenic microorganisms infecting Urinary tract, respiratory and GIT will be introduced to the students.  |
| **Course Goals** |
| 1. Provide the students with the basic information about microorganisms, their basic structure and mode of growth
2. Provide the students with basic knowledge of viruses, fungi, helminths of medical relevance.

3. Provide the knowledge of relevant systemically classified infectious diseases especially UTI, GIT and respiratory infections. |

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| **CILOs** |
| **Knowledge** |
| 1. Understanding microbial classification, including structures and virulence factors of bacteria.
2. Understanding fundamental concepts of virology, including viral structures, replication cycles, and basic characteristics of viruses.
3. Knowledge of basic parasitology principles, including helminths and medical fungi.And Understanding the characteristics, life cycles, and pathogenicity of medically relevant parasites and fungi
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| **Skills** |
| B1. Efficiently managing time to balance learning, laboratory work, and study in microbiologyB2. Collecting microbiological data, organizing it effectively, and interpreting results accurately.B3. Articulating microbiological concepts clearly and effectively through both written reports and oral presentations. |
| **Competencies** |
| c.1. Ability to correlate bacterial pathogenesis with specific virulence factors, linking mechanisms of infection to disease manifestationc.2. Leadership- Demonstrate responsibility for creating and achieving shared goals, regardless of position.c.3. Self-awareness– Examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth. |
| **Learning Methods** |
| * Lectures
* Oral dissection
* Assignments
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| **Evaluation Tools** |
| **Exams****Quiz**  |
| **Week** | **Topics** | **Learning methods** | **Evaluation tool** | **ILOs** | **Hours** |
| **1.** | Introduction to Microbiology, The microbial world  | Textbook and handouts | QUIZ | **A 2** | **3** |
| **2.** | Introduction to Microbiology, The microbial worldNomenclature Gram negative bacteria and Gram Negative bacteria | Textbook and handouts | **A 3** | **3** |
| **3.** | Normal flora in and on human body Pathogenicity mechanisms of bacteria and viruses | Textbook and handouts | **A 1** | **3** |
| **4.** | iPathogenicity of micrograms (II)  | Textbook and handouts | **A 2** | **3** |
| **5.** | Diagnostic Microbiology | Textbook and handouts | **B 1**  | **3** |
| **6.** | Bacterial structures, growth and metabolism | Textbook and handouts | Exam | **B 3** | **3** |
| **7.** | Bacterial genetics | Textbook and handouts | Exam | **B 2** | **3** |
| **8.** | Eukaryotic pathogens (protozoa, fungi and Helminths) | Textbook and handouts | **C 2** | **3** |
| **9.** | Virology | Textbook and handouts | Exam | **C 1** | **3** |
| **10.** | Skin infections | Textbook and handouts | **C 2** | **3** |
| **11.** | Urinary tract Infection | Textbook and handouts | homework | **A 1** | **3** |
| **12.** | Oral and GIT Infection | Textbook and handouts | **C 3** | **3** |
| **13.** | Respiratory tract infection | Textbook and handouts | Exam | **A3**  | **3** |
| **14.** | Respiratory tract infection | Textbook and handouts | Exam | **A2**  | **3** |
| **15.** | Final Examinations |  | Exam |  | **2** |

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| **Plan of Course Evaluation** |
| **Evaluation Tools** | **Mark** | **ILOs** |
| **A1** | **A2** | **A3** | **B1** | **B2** | **B3** | **C1** | **C2** | **C3** |
| **First Exam (Mid-term)**  | **30%** | \* | \* |  |  |  | \* |  |  | \* |
| **Second Exam (If available)** |  |  |  |  |  |  |  |  |  |  |
| **Final Exam** | **50%** |  |  |  |  | \* |  |  | \* |  |
| **Activities** | **20%** |  |
| **Activities Evaluation** | Homework/Tasks | 10% |  |  | \* | \* | \* |  | \* |  |  |
| Case Study  |  |  |  |  |  |  |  |  |  |  |
| Discussion and Interactions |  |  |  |  |  |  |  |  |  |  |
| Group Activities |  |  |  |  |  |  |  |  |  |  |
| Laboratory Exams |  |  |  |  |  |  |  |  |  |  |
| Presentations |  |  |  |  |  |  |  |  |  |  |
| Quizzes | 10% |  | \* |  |  | \* |  |  |  | \* |
| Others |  |  |  |  |  |  |  |  |  |  |
| **Total** | 100% |  |  |  |  |  |  |  |  |  |

 **Components**  |
| **Book** | 1. Essential books

Lippincott’s Illustrated reviews Microbiology third edition Other references |
| **References** | Lippincott’s Illustrated reviews Microbiology third edition Other references  |
| **Recommended Readings** |  |
| **Electronic materials** |  |
| **Other websites** |  |

**Subject Coordinator:**

**Head of Curriculum Committee:**

**Department Head:**

**Faculty Dean:**

**Last update date**