



**Biosafety and Biosecurity**

**Syllabus of "Biosafety and Biosecurity "  
First Stage/ First Course /(2021-2022)**

Academic Year	(2021-2022), First Stage/ First Course
Course Title	Biosafety and Biosecurity
Credit Hours	1 Credit Theory (1 Hours) 1 Credit Practical Work (2 Hours)
Duration Time	15 Weeks
Credit Units in week	2 Credit Units
Credit Hours in Course	15 hrs "Theoretical" + 30 hrs "Practical" = 45 hrs
Credit Units in course	15 Us "Theoretical" + 15 Us "Practical" = 30 Us

**Theoretical Part**

**1-introduction to Biosafety and Biosecurity..... (1 Week)**

- Key components of biorisk management
- Component of safety in all the laboratories
- Chemical safety and chemical segregation
- General safety precautions

**2- Biosafety barriers in labs..... (2 Week)**

- PPT, - Laboratories design

**3- Biosafety levels ..... (3 Week)**

- Risk assessment strategy
- Risk group, Biosafety levels, practice and equipments
- Standard practices required in bio labs

**4- Biological agents ..... (4 Week)**

- Routes of infection, - Basic of control measures
- Hazards groups classification system
- A biosafety cabinet (BSC)

**5- Biorisk and Biohazards ..... (5 Week)**

- COSHH: Control of substances hazardous to health



## **Biosafety and Biosecurity**

- Assessing risk for work with blood and human tissues hazards
- Control measures for work with blood and human tissues
- Containment level

### **6 - Mid Course Exam..... (6 Week)**

### **7- Biorisk management system ..... (7 Week)**

- Assess the capability of the laboratory staff to control hazards
- Relation of risk group to Biosafety levels: practice and equipments
- Mitigation control measures
- Sustainability of biorisk Management system
- Strengthening biorisk management

### **8- Types of biological wastes ..... (8 Week)**

- Categories of biological wastes
- Decontamination of biological wastes

### **9- Transportation of biological materials ..... (9 Week)**

- International transport regulation
- The basic triple packaging system

### **10-Accident response ..... (10 Week)**

- Spill clean –up procedure, - Investigation an incident

### **11- Overview of biological safety and Security equipment ..... (11 Week)**

### **12- Introduction to Biosecurity ..... (12 Week)**

- Risk characterization in biosecurity
- Vulnerability assessment, - Component of lab biosecurity

### **13- Biosafety "practical part" ..... (13 Week)**

### **14- Biosafety rules "simulation 3D" ..... (14 Week)**

### **15- Biosafety training..... (15 Week)**

### **- Final course exam**