

## **Biorisk Management Curriculum for General university**

### **3 (2-1)**

#### **Theory:**

Theory: Introduction to Laboratory Biosafety and Biosecurity, History of Laboratory Biosafety and Biosecurity, Beginning of Biorisk management, Risks associated with Bioscience, introduction to AMP model (Assessment, Mitigation and Performance), Types of risks , Assessment of Lab. associated risks, Biorisk's Ethics , SOPS development for different Labs, Mitigation control measures, Designs for Biorisk management, Laboratory designing, Laboratory designing factors, Engineering controls, Laboratory guideline for Biorisk management, Measurement and Evaluation of Biorisk management, Communication of Biorisk management, Handling of Hazardous materials, Challenges and opportunities in BRM, BRM application in food value chain as envisioned under Dairy Science Park

#### **Practical**

Good laboratory practices, biosafety level of Labs., Personal protective equipments and its uses, Classes of chemicals, handling, storage, and transportation of hazardous chemicals, safe work practices, Making Plans of risk assessment, handling of radioactive materials, Management of Spills, Handling of different pathogens, assay to quarantine biological materials.

#### **Books recommended:**

##### **WHO/ Laboratory Biosafety Manual 3rd edition**

[http://www.who.int/csr/resources/publications/biosafety/WHO\\_CDS\\_CSR\\_LYO\\_2004\\_11/en/](http://www.who.int/csr/resources/publications/biosafety/WHO_CDS_CSR_LYO_2004_11/en/)

##### **Biosafety Manual /Environmental Health and Safety**

<https://www.ehs.uci.edu/programs/biosafety/BiosafetyManual.pdf>

##### **Biosafety Manual-DEHS**

[http://www.dehs.umn.edu/bio\\_pracprin.htm](http://www.dehs.umn.edu/bio_pracprin.htm)

##### **Introduction to Biorisk Management-Sandia National Laboratories**

<http://www.biosecurity.sandia.gov/ibtr/subpages/pastConf/20102011/brmgmt/introBRM.pdf>

##### **Dairy Science Park – Biorisk Management**

<http://dairysciencepark.org.pk/services-2/>