

**YTU Department of Bioengineering**

**BYM4451 Biotechnology and Biosafety Course Group-2 Presentation Topics**

***Biotechnology Topics***

Biotechnology Business opportunities/marketing/business potential

Epigenetics and Genetic Diseases -

Human Microbiome Project -

Metagenomics -

Protein Engineering -

Bioinformatics in Molecular Biology and Biotechnology -

OMICS = Proteomics, Genomics, Metabolomics-

Plant Biotechnology -

Animal Biotechnology -

Aquatic biotechnology -

Medical Biotechnology -

Biotechnological Vaccines -

Pharmaceutical Biotechnology -

Pharmacogenetics

Food Biotechnology -

Nanobiotechnology -

Biotechnology and Energy -

Gene Editing -

***Biosafety Topics***

National Regulations and Relevant International Agreements –

Biosafety and Biocontainment Concepts and Strategies –

Laboratory Biosafety and Biosecurity –

Biological Safety Cabinets –

Biotechnology and Intellectual Property Rights: Ethical and Social Economic Issues-

Shipping, Transport of Regulated Biological Materials -

The Spread of Organisms in the Laboratory-

Biological Waste Management -

Operational Biosafety Practices and Procedures -

Biorisk Management -

Bioethics -

Recombinant DNA, Risk of GMO and LMO and Ethical Issues -

Stem Cell Research and Human Gene Transfer and Ethical Issues -

Organs Transplantation in Human Beings and Ethical Issues-

Bioterrorism and Bioweapons-

Clean Room for Biotechnology-

Pest Resistance Management

Animal Biosafety and Facilities

Pathogens (bloodborne, bacterial, fungal, etc. and agriculture pathogen) Biosafety

Principles of Laboratory Biosafety and Biosecurity



**YTU Department of Bioengineering**

**BYM4451 Biotechnology and Biosafety Course Group-2 Presentation Schedule**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Week*** | ***Date*** | ***Lecture / Status*** | ***Presenter Group-1*** | ***Presenter Group-2*** | ***Presenter Group-3*** |
| 1 | 20.09.2019 | ***İntro*** | - | - | - |
| 2 | 27.09.2019 | ***Introduction to Biotechnology and Biosafety*** | - | - | - |
| 3 | 4.10.2019 | ***Biosafety and Biosecurity*** | - | - | - |
| 4 | 11.10.2019 | ***Biosafety and Biosecurity*** | - | - | - |
| 5 | 18.10.2019 | ***Risk Assessment for Biosafety and Biosecurity*** | - | - | - |
| 6 | 25.10.2019 | ***Risk Assessment for Biosafety and Biosecurity*** |  |  |  |
| 7 | 1.11.2019 |  |  |  |  |
| 8 | 8.11.2019 |  |  |  |  |
| 9 | 15.11.2019 | ***Midterm Exam*** |  |  |  |
| 10 | 22.11.2019 |  |  |  |  |
| 11 | 29.11.2019 |  |  |  |  |
| 12 | 6.12.2019 |  |  |  |  |
| 13 | 13.12.2019 |  |  |  |  |
| 14 | 20.12.2019 |  |  |  |  |
| 15 | 27.12.2019 | ***Final Exam***  |  |  |  |