

Environmental Biotechnology course, 2008-2009

Plan of lectures

1. Introduction to Molecular and Cellular Biology
2. Fundamental methods used in MCB
3. Cellular stress to proteins and DNA – impact of environmental pollution
4. How living organisms are modified ?
5. PCR- based methods for biomonitoring of environmental pollution
6. DNA array technology in biomonitoring
7. DNA arrays - application in toxicogenomics
8. Biomonitoring, biomarkers
9. Biosensors – living organisms and biomolecules as sensors of environmental pollution
10. Luminescence in biomonitoring
11. Detection of genetically modified organisms and their constituents in food. Monitoring of food quality and frauds.
12. New challenges in biomonitoring – bioterrorism
13. Bioremediation with the use of plants

Text book:

Environmental Biotechnology. Alan Scragg (2nd edition). Oxford University Press, 2007

How to have it passed?

The course ends with a written test. Students get their final grades based on active class participation (20%) and results of the test (80%).