

ENVIRONMENTAL BIOTECHNOLOGY (Dr. Rinkoo Devi Gupta) (2 credits)

1. Introduction to Environmental Biotechnology
2. Environmental pollutions, sources and control
3. Global environmental problems
4. Environmental monitoring
5. Wastewater treatment by physical, chemical and biological processes
6. Solid waste treatment by physical, chemical and biological processes
7. Biodegradation and bioconversion of natural compounds
8. Biodegradation and bioconversion of xenobiotic compounds
9. Bioremediation: concepts, strategies and applications
10. Phytoremediation: concepts, strategies and applications
11. Application of biotechnology in environmental management
12. Industrial problems and their remedial mechanism
13. Metagenomics: concept, strategies and applications in environmental biotechnology
14. Basic concepts and issues of biofuel production

Suggested reading

1. *Introduction to Environmental Biotechnology* by A K Chatterjee; Publisher Prentice-Hall of India, Second edition, 2007
2. *Environmental Biotechnology: Concepts and Applications* By Hans-Joachim Jördening, Josef Winter; publisher: Wiley-VCH, 2005
3. *Environmental Biotechnology* By C. S. K. Mishra; publisher: APH publishing corporation, 2007
4. *Environmental Biotechnology (volume 10)*, 1st edition; By Wang, L.K.; Tay, J.-H.; Tay, S.T.L.; Hung, Y.-T.; publisher: Humana Press, 2010
5. *Environmental Biotechnology: Basic Concepts and Applications* By Indu Shekhar Thakur; publisher I. K. International Pvt Ltd, 2006