Ministry of Human Resource Development
Government of India

GIAN
GLOBAL INITIATIVE OF ACADEMIC NETWORKS

MICROBIAL BIOTECHNOLOGY

19 Dec 2016 – 30 Dec 2016
(A Course under Global Initiative for Academic Network,
Ministry of Human Resource Development, Government of India)

About the Course

Today, all over the world, we are facing three major challenges viz. climate change, food security and dependence on imported petroleum. Micro-organisms have immense potential to help us meet out these challenges and contribute to sustainable development. In this respect, traditional microbiology has to go hand-in-hand with biotechnology utilizing its modern techniques for developing eco-friendly, sustainable and economically viable products. This course will expose the participants to the basics of microbial biotechnology and process design like Microbes in Human welfare, Microbial industrial enzymes and Taguchi method of process optimization. Moreover, the focus will also be on Green Biotechnology and Biorefinery development. Course participants will learn these topics through lectures and tutorials. Also case studies and assignments will be shared to stimulate research motivation of participants.

The Faculty

Dr. Sreenivas Rao Ravella, PhD is working as a Senior Fermentation Scientist in the Institute of Biological, Environmental and Rural Sciences (IBERS), Aberystwyth University, United Kingdom. He has wide research experience and have published several peer-reviewed research articles. Besides, he has also published many reviews and book chapters in the area of microbiology, fermentation and biorefining. His scientific work has received more than 1400 citations. Dr. Ravella's research interest includes combining the advanced statistical approaches with traditional microbiology for process optimization of various biotechnological products

Learning Modules

Module 1
Characterization of Microorganisms
Microbes in Human welfare Tutorials
Statistical approaches for process optimization
Microbial industrial enzymes
Taguchi method of process optimization
Advances in Microbial Biotechnology
Biofilms from Yeasts
Development of Transgenics
Community succession in anaerobic digestors
Techniques for strain improvement

Module 2
Green Biotechnology
Lignocellulose Biotechnology
Food security and sustainable agriculture
Biorefining Tutorials
Biotechnological production of xylitol
Biofuels
Biogas production
Use of laccase in drug synthesis
Production of xylooligosaccharides
Cellulosic ethanol

Registration details

Participants from abroad : US $300
Industry Organizations: INR 8000
Faculty: INR 4000
Students: INR 2000 (Gen/OBC) &
INR 1000 (SC/ST)
***Form is available on website**
**** Maximum participants: 50**

Who can attend..

Any Engineer/Researcher/ Faculty/ Research Student who is interested in Microbial Biotechnology.

Contact Person

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