

Applied Microbiology Winter Training

Transform your winter break into a career-advancing opportunity with our intensive Winter Training Program in Applied Microbiology at NTHRYS Biotech Labs. Dive deep into the fascinating world of microbiology, where theory meets practice through rigorous, hands-on training sessions. This program is meticulously crafted to bridge the gap between academic knowledge and real-world applications, equipping you with the skills necessary to excel in the field. Experience the thrill of working alongside seasoned professionals on innovative projects, and develop a robust understanding of microbial techniques and their industrial applications. Whether you're aiming to enhance your resume, prepare for advanced studies, or simply broaden your expertise, our winter training program offers a comprehensive and enriching experience. Join us this winter at NTHRYS Biotech Labs and embark on a journey of scientific discovery and professional growth.

Summer Training in Applied Microbiology - Variant 1 - Clinical Microbiology Techniques
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Importance of Clinical Microbiology Techniques

Clinical microbiology techniques are essential for diagnosing and managing infectious diseases. These protocols help in identifying pathogens, determining antimicrobial susceptibility, and monitoring infection control measures. Mastery of these techniques enables trainees to contribute to public health, improve patient care, and support clinical research. The training emphasizes accurate and timely diagnosis, ensuring effective treatment and prevention of infectious diseases. This comprehensive approach prepares participants for careers in clinical laboratories, hospitals, and research institutions.

1. Blood Culture Techniques
2. Urine Culture Methods
3. Sputum Culture Techniques
4. Throat Swab Culture
5. Wound Swab Culture
6. Stool Culture Techniques
7. Antimicrobial Susceptibility Testing
8. Rapid Diagnostic Tests
9. Serological Testing
10. Mycobacterium Tuberculosis Detection
11. Identification of Enteric Pathogens
12. Virology Techniques
13. Parasitology Methods
14. Fungal Culture Techniques

15. Molecular Diagnostics
16. Antibiotic Resistance Detection
17. Nosocomial Infection Surveillance
18. Microbial Genotyping
19. Point-of-Care Testing
20. Automated Identification Systems

5 Days Duration

Protocols 1, 2, 3, 4, 5

10 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8, 9

15 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

20 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

30 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

45 Days Duration

All protocols listed above

Fee Structure

Fee details in Rs per student					
Fee	5 Days	10 Days	20 days	1 Month	45 Days
Individual	12000	19000	25000	29000	38000
Group 2 - 4	11500	18000	24000	27000	36000
Group 5 - 7	11000	17500	23000	26000	35000
Group 8 - 10	10500	17000	22000	25000	34000

Statutory Note: NTHRYS Team can change the protocols, software, or tools used to achieve the tasks linked to the above-mentioned approaches or protocols.

Importance of Agricultural Microbiology Techniques

Agricultural microbiology techniques are vital for enhancing soil health, improving crop yields, and managing plant diseases. These protocols help in understanding plant-microbe interactions, developing biofertilizers, and employing biocontrol methods. Mastering these techniques enables trainees to contribute to sustainable agriculture, food security, and environmental conservation. The training focuses on practical applications of microbiology in agriculture, preparing participants for careers in agricultural research, agronomy, and biotechnology. This comprehensive approach ensures that trainees can implement microbial solutions to address agricultural challenges effectively.

1. Isolation of Rhizobia
2. Azospirillum Inoculation Techniques
3. Mycorrhizal Association Studies
4. Biological Nitrogen Fixation Assays
5. Phosphate Solubilization Assay
6. Plant Growth-Promoting Rhizobacteria (PGPR) Isolation
7. Soil Microbial Biomass Estimation
8. Compost Microbiology
9. Biocontrol Agent Screening
10. Pathogen Detection in Plants
11. Biofertilizer Production
12. Soil Enzyme Activity Assays
13. Plant-Microbe Interaction Studies
14. Green Manure Microbiology
15. Microbial Degradation of Pesticides
16. Biological Control of Plant Diseases
17. Microbial Inoculants for Sustainable Agriculture
18. Soil Microbial Diversity Analysis
19. Microbial Biofertilizers
20. Bioassay for Plant Growth Promoters

5 Days Duration

Protocols 1, 2, 3, 4, 5

10 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8

15 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

20 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

30 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

45 Days Duration

All protocols listed above

Fee Structure

Fee details in Rs per student					
Fee	5 Days	10 Days	20 days	1 Month	45 Days
Individual	12000	19000	25000	29000	38000
Group 2 - 4	11500	18000	24000	27000	36000
Group 5 - 7	11000	17500	23000	26000	35000
Group 8 - 10	10500	17000	22000	25000	34000

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Summer Training in Applied Microbiology - Variant 3 - Food and Dairy Microbiology Techniques

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Importance of Food and Dairy Microbiology Techniques

Food and dairy microbiology techniques are crucial for ensuring food safety, quality, and production efficiency. These protocols help in detecting foodborne pathogens, enhancing fermentation processes, and developing new food products. Mastering these techniques enables trainees to contribute to the food industry by improving safety standards, ensuring product quality, and innovating in food technology. The training covers essential methodologies for microbiological analysis in food and dairy products, preparing participants for careers in food microbiology, quality assurance, and research. This comprehensive approach ensures that trainees can apply microbiological principles to address challenges in the food industry effectively.

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1. Microbiological Analysis of Food
2. Detection of Foodborne Pathogens
3. Fermented Food Production
4. Dairy Product Microbiology
5. Yogurt Production
6. Cheese Making Techniques
7. Probiotic Product Development
8. Microbial Spoilage Detection
9. Food Preservation Techniques
10. HACCP Implementation
11. Food Quality Assurance
12. Microbial Enzyme Applications in Food
13. Detection of Mycotoxins in Food
14. Microbial Lipase Production
15. Vinegar Production
16. Sauerkraut and Kimchi Fermentation
17. Starter Culture Development
18. Microbial Biopreservation
19. Quality Control in Dairy Microbiology
20. Microbial Biotechnology in Food Industry

5 Days Duration

Protocols 1, 2, 3, 4, 5

10 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8

15 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

20 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

30 Days Duration

Protocols 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17

45 Days Duration

All protocols listed above

Fee Structures

Fee details in Rs per student					
Fee	5 Days	10 Days	20 days	1 Month	45 Days
Individual	12000	19000	25000	29000	38000
Group 2 - 4	11500	18000	24000	27000	36000
Group 5 - 7	11000	17500	23000	26000	35000
Group 8 - 10	10500	17000	22000	25000	34000

Statutory Note: NTHRYS Team can change the protocols, software, or tools used to achieve the tasks linked to the above-mentioned approaches or protocols.