

Microbiology Internship Topics

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52

Active Categories

60

Focused Areas

Internships
Internships

Microbiology Internship Categories

AI Microbial Community Ecology Research https://internships.nthrys.com/microbiology/ai-microbial-community-ecology-research	Machine Learning Microbial Pathogenesis Research https://internships.nthrys.com/microbiology/machine-learning-microbial-pathogenesis
AI Microbiome Host Interaction Research https://internships.nthrys.com/microbiology/ai-microbiome-host-interaction-research	AI Microbial Metabolism Research https://internships.nthrys.com/microbiology/ai-microbial-metabolism-research
AI Antimicrobial Resistance Research https://internships.nthrys.com/microbiology/ai-antimicrobial-resistance-res	AI Phage-Microbe Coevolution Research https://internships.nthrys.com/microbiology/ai-phage-microbe-coevolution-research
AI Microbial Genomics Research https://internships.nthrys.com/microbiology/ai-microbial-genomics-research	AI Synthetic Microbiology Research https://internships.nthrys.com/microbiology/ai-synthetic-microbiology-res
AI Extremophile Microbiology Research https://internships.nthrys.com/microbiology/ai-extremophile-microbiology-res	AI Microbiome Therapeutics Research https://internships.nthrys.com/microbiology/ai-microbiome-therapeutics-research
Bacterial Biofilm Formation and Inhibition https://internships.nthrys.com/microbiology/bacterial-biofilm-formation-inhibition	Fungal Pathogenesis and Virulence Factors https://internships.nthrys.com/microbiology/fungal-pathogenesis-virulence-factors
Wastewater Treatment Microbiology https://internships.nthrys.com/microbiology/wastewater-treatment-microbiology	Probiotic Microorganism Selection https://internships.nthrys.com/microbiology/probiotic-microorganism-selection
Clinical Microbial Diagnostics Development https://internships.nthrys.com/microbiology/clinical-microbial-diagnostics-development	Fermentation Optimization for Production https://internships.nthrys.com/microbiology/fermentation-optimization-production
Food Safety Microbiology Testing https://internships.nthrys.com/microbiology/food-safety-microbiology-testing	Environmental Microbial Bioremediation https://internships.nthrys.com/microbiology/environmental-microbial-bioremediation
Microbiome Analysis and Metagenomics Research https://internships.nthrys.com/microbiology/microbiome-analysis-metagenomics-research	Viral Isolation and Characterization https://internships.nthrys.com/microbiology/viral-isolation-characterization
Antibiotic Susceptibility Testing Methods https://internships.nthrys.com/microbiology/antibiotic-susceptibility-testing-methods	Soil Microbial Community Analysis https://internships.nthrys.com/microbiology/soil-microbial-community-analysis
Microbial Spoilage Mechanisms Study https://internships.nthrys.com/microbiology/microbial-spoilage-mechanisms-study	Oral Microbiome and Dental Disease https://internships.nthrys.com/microbiology/oral-microbiome-dental-disease
Aquatic Microbial Ecology Research https://internships.nthrys.com/microbiology/aquatic-microbial-ecology-research	Microbial Enzyme Production Systems https://internships.nthrys.com/microbiology/microbial-enzyme-production-systems
Hospital-Acquired Infection Surveillance https://internships.nthrys.com/microbiology/hospital-acquired-infection-surveillance	Plant Pathogenic Microbe Assessment https://internships.nthrys.com/microbiology/plant-pathogenic-microbe-assessment
Microbial Strain Isolation Techniques https://internships.nthrys.com/microbiology/microbial-strain-isolation-techniques	Microbial Biotechnology Applications https://internships.nthrys.com/microbiology/microbial-biotechnology-applications
Dental Biofilm Microbiology Research https://internships.nthrys.com/microbiology/dental-biofilm-microbiology-research	Microbial Identification via MALDI-TOF https://internships.nthrys.com/microbiology/microbial-identification-maldi-tof

Mycotoxin Production and Detection https://internships.nthrys.com/microbiology/mycotoxin-production-detection	Microbial Contamination in Pharmaceuticals https://internships.nthrys.com/microbiology/microbial-contamination-pharmaceuticals
Thermophilic Bacteria Characterization https://internships.nthrys.com/microbiology/thermophilic-bacteria-characterization	Microbial Corrosion Mechanism Studies https://internships.nthrys.com/microbiology/microbial-corrosion-mechanism-studies
Pathogenic Gram-Negative Bacteria Research https://internships.nthrys.com/microbiology/pathogenic-gram-negative-bacteria-research	Microbial Genetics and Mutagenesis https://internships.nthrys.com/microbiology/microbial-genetics-mutagenesis
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Brewery and Beverage Microbiology https://internships.nthrys.com/microbiology/brewery-beverage-microbiology	Microbial Cell Wall Structure Analysis https://internships.nthrys.com/microbiology/microbial-cell-wall-structure-analysis
Probiotics and Microbiome Therapeutics https://internships.nthrys.com/microbiology/probiotics-microbiome-therapeutics	Gastrointestinal Pathogen Identification https://internships.nthrys.com/microbiology/gastrointestinal-pathogen-identification
Microbial Biofuel Development Research https://internships.nthrys.com/microbiology/microbial-biofuel-development-research	Healthcare-Associated Microbe Genomics https://internships.nthrys.com/microbiology/healthcare-associated-microbe-genomics

Microbiology Internship Topics and Focused Areas

Machine Learning Microbial Pathogenesis Research

- Predictive Modeling of Bacterial Antibiotic Resistance
- Deep Learning for Pathogen Image Classification
- Genomic Sequence Analysis for Virulence Factor Identification
- Time-Series Modeling of Microbial Growth and Infection Kinetics
- Natural Language Processing for Microbiology Literature Mining

Bacterial Biofilm Formation and Inhibition

- Biofilm Formation Kinetics and Characterization
- Antimicrobial Peptides and Natural Compound Screening
- Quorum Sensing Inhibition and Signal Molecule Analysis
- Surface Modification and Anti-biofilm Material Development
- Polymicrobial Biofilm Interactions and Spatial Organization

Wastewater Treatment Microbiology

- Activated Sludge Process Microbial Community Profiling
- Pathogenic Microorganism Detection and Removal Efficiency
- Biofilm Formation and Bioreactor Performance in Treatment Systems
- Antibiotic Resistance Gene Prevalence in Wastewater Ecosystems

- Ammonia-Oxidizing Microorganisms and Nitrogen Removal Optimization

Probiotic Microorganism Selection

- In Vitro Probiotic Screening and Characterization
- Adhesion and Colonization Studies of Probiotic Candidates
- Genomic and Metagenomic Analysis of Probiotic Strains
- Probiotic Metabolite Production and Bioactive Compound Analysis
- Host-Microbe Interaction and Immune Response Modulation

Food Safety Microbiology Testing

- Pathogenic Bacteria Detection and Quantification
- Antimicrobial Resistance Profiling in Food Isolates
- Biofilm Formation and Control in Food Processing Environments
- Rapid Microbial Detection Method Development and Validation
- Spoilage Microorganism Identification and Shelf-Life Prediction

Microbiome Analysis and Metagenomics Research

- 16S rRNA Gene Sequencing and Taxonomic Classification
- Shotgun Metagenomic Assembly and Functional Annotation
- Metagenome-Assembled Genomes (MAG) Recovery and Binning
- Microbiome Diversity Analysis and Statistical Characterization
- Viral Metagenomics and Virome Characterization

Soil Microbial Community Analysis

- Bacterial Diversity Profiling Using 16S rRNA Gene Sequencing
- Fungal Community Composition and Function in Soil Ecosystems
- Microbial Metabolic Activity and Enzyme Assays
- Antibiotic-Resistant Microorganisms in Agricultural Soils
- Microbial Community Response to Environmental Stressors

Microbial Strain Isolation Techniques

- Enrichment Culture Techniques for Novel Microorganism Isolation
- Characterization of Isolated Microbial Strains Using Biochemical and Molecular Methods
- Screening and Selection of Microbial Strains for Biotechnological Applications
- Culture-Dependent and Culture-Independent Isolation Methods Comparison
- Single-Cell Isolation and Microbial Cloning Techniques

Microbial Biotechnology Applications

- Microbial Fermentation Engineering

- Enzyme Production and Characterization
- Probiotics and Microbial Therapeutics Development
- Bioremediation and Environmental Microbiology
- Synthetic Biology and Metabolic Engineering

Microbial Genetics and Mutagenesis

- Bacterial Mutagenesis and Phenotypic Screening
- Genetic Mapping and Complementation Analysis
- CRISPR-Cas9 Gene Editing in Microorganisms
- DNA Sequencing and Mutation Identification
- Horizontal Gene Transfer and Genetic Recombination Studies

Microbial Cell Wall Structure Analysis

- Peptidoglycan Cross-linking and Bacterial Resistance
- Gram-Positive and Gram-Negative Cell Wall Composition Comparison
- Fungal Cell Wall Biosynthesis and Chitin Organization
- Archaeal Cell Wall Diversity and S-Layer Protein Architecture
- Biofilm Formation and Extracellular Polysaccharide Matrix Analysis

Gastrointestinal Pathogen Identification

- Bacterial Pathogen Isolation and Characterization
- Viral Gastrointestinal Pathogen Detection
- Parasitic Infection Diagnosis and Epidemiology
- Antimicrobial Resistance Profiling in GI Pathogens
- Metagenomic Analysis of Gut Microbiota in Disease States

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