



Avinashilingam Institute for Home Science and Higher Education for Women
Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD (now MoE)
Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

Department of Biochemistry Biotechnology & Bioinformatics

ANNOUNCES

Summer Internship Program-2026 "Advanced Techniques in Biological Sciences"

Batch 1

06.05.2026 to 22.05.2026

Batch 2

25.05.2026 to 10.06.2026

Enhance your knowledge and hands-on skills in cutting-edge biological techniques through an intensive internship program (Optional: 15 days or 30 days).

This internship covers key areas of biological sciences through 6 comprehensive modules. Any 2 modules can be opted for 15 days and 4 modules for 30 days. Allocation of modules will be based on first come basis.

Molecular
Techniques

Microbial
Techniques

Plant Tissue
culture
Techniques

MODULES OFFERED

Advanced
Research
Techniques

Advanced
Bioinformatics

Enzyme
Analysis and
Kinetics

Eligibility & Registration

- ❖ Open to UG & PG Students in life sciences
- ❖ Limited seats available – Register early!
- ❖ Registration deadline: April 10, 2026

Program Highlights

- ❖ Hands-on training in advanced biological techniques
- ❖ Expert guidance from experienced faculty
- ❖ Opportunity to work with state-of-the-art laboratory equipment
- ❖ Certificate upon successful completion

Registration link: <https://forms.gle/3ctfhj4XFRm4gdF9>

SUMMER INTERNSHIP- 2026

S. No.	Name of the Module	Name of the coordinators
1.	Plant Tissue culture Techniques	Dr.Kalaiselvi Senthil and Dr.E. Nithya
2.	Enzyme Analysis and Kinetics	Dr.Anitha Subash and Dr.A. Shobana
3.	Molecular Techniques	Dr.S. Gayathri Devi and Dr.A. Gayathri
4.	Microbial Techniques	Dr.D. Kavitha and Dr.M. Vinodhini
5.	Advanced Research Techniques	Dr.R. Nirmaladevi and Dr.A. Poornima
6.	Advanced Bioinformatics	Dr.N. Santhi and Dr.M. Rajeswari

MODULES

1 Module -1: Plant Tissue culture Techniques

Aseptic conditions, Selection, Medium preparation, Preparation of stock solutions, Mixing of medium, Explant selection and preparation, Surface sterilization and inoculation, Hormones, Acclimatization, callus and suspension culture, Secondary metabolite production

2 Module -2: Enzyme Analysis and Kinetics

Crude enzyme extraction, Ammonium Sulphate / Acetone precipitation, Three phase partitioning, Dialysis, Chromatographic techniques (Ion exchange chromatography, Gel filtration chromatography) – Demonstration, Enzyme activity assays (Spectrophotometry), SDS PAGE, Immobilization, Application studies, Lyophilization (demonstration).

3 Module -3: Molecular Techniques

Isolation of DNA, RNA and Protein from Plant cells and Mammalian cells, Estimation of DNA, RNA and Protein isolated from eukaryotic cells, Plasmid DNA isolation, Agarose gel electrophoresis, Polyacrylamide gel electrophoresis (PAGE), Competent cell preparation and Transformation, Restriction Digestion and Polymerase chain reaction (PCR).

4 Module -4: Microbial Techniques

Isolation and identification of microbes from different sources, Antibigram profiling, Phenotypic antimicrobial resistant pattern, Probiotic assessment for Industrial applications.
Environmental sample collection, Isolation of characterization of microbes, Screening of biofilm forming microbes.

5 Module -5: Advanced Research Techniques

Analysis of Epigenetic modifications (methylation) in DNA, RNA Isolation and Protein expression analysis using Gold Fish, ROS, Loss of MMP, Apoptotic and cell cycle analysis using Flow Cytometer and data visualisation using R Programming, Introduction to computational methods for genomic data analysis.

6 Module -6: Advanced Bioinformatics

Small molecule database – PubChem and ZINC database, Acquisition of protein target structure – PDB databank, Understanding the file formats (sdf, mol, pdb), LINE Notations of small molecules (SMILES), Comparative/Homology modeling, Validation of predicted protein structure, Active site prediction or pocket identification, HTVS Molecular docking, Prediction of ADME profile.

Payment of registration fee to be made through online transfer to
"The Registrar"

Bank Name: INDIAN BANK

Branch: Avinashilingam Deemed University Campus

IFSC code: IDIB000A005

Account No.: 6010310202

For more details CONTACT

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For Registration

