



Department of Biotechnology



Sri Venkateswara University
Tirupati

Department of BIOTECHNOLOGY

Vision

The Vision is to become a Leader and Centre of Excellence in Technology based training and innovative research in the fields of Plant, Agriculture, Animal and Medical Biotechnology.

Mission

The Department's academic and research programmes will provide the students and research scholars value based, technology oriented education in a trusting and caring environment. The faculty strive to equip the students with technical expertise and knowledge to keep pace with the changes in technology and meet the new challenges in Life Sciences.

ABOUT THE DEPARTMENT

The Department of Biotechnology was established in 1995 as a research and teaching facility under the School of Biological and Earth Sciences and is currently under the College of Sciences. Its goal has been to train manpower in the area of Biotechnology to cater the needs of the country. The department provides rich educational experience to the students that include rigorous theoretical courses and practicals to understand the concepts of biotechnology. The interdisciplinary research programme envisages performing research of national and international prominence.

COURSES OFFERED

M.Sc Biotechnology : Duration : 4 semesters.
Total seats: 33 (Self Financing)
& 10 (Self Supporting)

Ph.D. Biotechnology
Total seats : Depending on the
availability with the faculty.

MODE OF ADMISSION

Admission into M.Sc course is through AP PG CET on merit basis and following the rule of reservations.
Admission into Ph.D. programme is through NET, AP RCET as per UGC regulations 2009.

COURSE STRUCTURE FOR M.Sc BIOTECHNOLOGY

	Components	Title of the paper	Credits
SEMESTER I	Core	Structure and Functions of Biomolecules	6
	Core	Advanced Tools and Techniques	6
	Compulsory Foundation	Microbiology and diseases Microbial physiology & Genetics	6 6
	Elective Foundation	Cell biology and genetics Molecular Genetics	6 6
	Practical-I	Bio-molecules and Advanced Tools and Techniques	6
	Practical-II	Microbiology and Cell Biology	6
	Audit course	Human Values& Professional ethics -I	6
SEMESTER II	Core	Enzymesand Intermediary Metabolism	6
	Core	Molecular Biology	6
	Compulsory Foundation	Immunology Cancer Biology	6 6
	Elective Foundation	Research Methodology, Biostatistics and Bioinformatics Biostatistics	6 6
	Practical-I	Enzymology, metabolism and Molecular Biology	6
	Practical-II	Immunology, Biostatistics and Bioinformatics	6
	Audit course	Human Values& Professional ethics - II	6
SEMESTER III	Core	Genetic Engineering	6
	Core	Food and Industrial Biotechnology	6
	Generic Elective	Bioprocess Engineering and Technology Legal, Ethical and Implications of Biotechnology Emerging technologies in Biotechnology	6 6 6
	Practical-I	Genetic Engineering, Food and Industrial Biotechnology	6
	Skill Oriented Course	Plant Tissue Culture	6
	Open Elective	Bioethics Bioinformatics	6 6
SEMESTER IV	Core	Environmental Biotechnology	6
	Core	Plant Biotechnology	6
	Generic Elective	Animal Biotechnology Applications of Biotechnology Pharmaceutical Biotechnology	6 6 6
	Practical-I	Environmental Biotechnology, Plant Biotechnology	6
	Multi-Disciplinary Course/Project Work	MOOCS / Project	6
	Open Elective	Applications of Biotechnology Tools in Biotechnology	6 6

INFRASTRUCTURE FACILITIES

The Department has well established Plant Cell and Tissue Culture, Microbiology & Molecular Biology Laboratories for carrying out research work. The Department is well equipped with instruments like Microscopes, UV-Vis Spectrophotometer, -20° C deep freezer, Thermal cycler, Cold room facility, Laminar air flow chambers, High speed refrigerated centrifuges, BOD incubators, Gel electrophoresis (Horizontal & Vertical), Gel documentation system.

RESEARCH AREAS

Plant Cell and
Tissue Culture

DNA Barcoding

Bioremediation

Plant Endophytes

Reproductive
Toxicology

Crustacean
Biology

Metabolic Disorders (Diabetes & Obesity)
& Medicinal Plants

RESEARCH PUBLICATIONS

RESEARCH PROJECTS

International - 38

National - 04

Books - 08

UGC - Budget Rs. 15,00,000/-

DBT - Budget Rs. 8,00,000/-

DEGREES AWARDED

Master Dissertation - 166

M.Phil - 01

Ph.D - 14

EXTENSION ACTIVITIES

The Students, Research Scholars and Faculty members actively participate in various extension activities of the University and Govt. Programmes.

- Swachh Bharat
- Vanam Manam
- Conducted sessions about Plant tissue culture and also Created awareness about opportunities in Biotechnology to graduate students.
- Collaborative research with other Departments on Campus and RARS (ANGRAU), Tirupati and SVIMS.

Future Plans

- Establishment of tissue cultures for endangered, endemic, rare, threatened plants of Seshachalam Biosphere Reserve.
- Organization of hands on training programmes in Biotechnology.
- Transfer of technologies from lab to community, industry.

Research Facilities



Plant Cell Tissue Culture



Microscope



Thermal Cycler



Spectrophotometer

Seminar / Conference / Workshop



NCIPCB - 2018



Foldscope Workshop



Workshop on Modern Techniques on Molecular Biology



Awareness Class on Plant Cell Culture



Workshop on Modern Tools on Bioinformatics

FACULTY & STAFF



Dr.K.V.Saritha, currently acting as Head and Chairperson, BOS, Department of Biotechnology, SV University. She obtained M.Sc., M.Phil and Ph.D in Biotechnology from Sri Venkateswara University. She has teaching experience of 15 years and research experience of 20 years. She is a recipient of UGC- Raman Fellowship to pursue Post-Doctoral Research in USA. She has published more than 30 research papers in national and international journals of repute. She also authored 1 book and 6 book chapters. Her current research focuses in the areas of Plant cell and Tissue culture, DNA Barcoding, Bioremediation and Phytoremediation. She has completed 3 major research projects funded by DBT & UGC. She has produced 3 Ph.Ds. and 2 M. Phils in Biotechnology.

ACADEMIC CONSULTANTS

Dr. T. GEETHARATHAN, M.Sc., Ph.D.

She has been working as Academic Consultant in the Department of Biotechnology, Sri Venkateswara University since 2016. She obtained her M.Sc., Ph.D in Biotechnology from Sri Padmavathi Mahila Viswavidyalayam (SPMVV), Tirupati. She has published 11 research papers and 2 books in National & International journals of repute. She has made 10 Oral / Poster presentations in the national and International conferences. She received Best Women Faculty Award in 2021 and Uttama Adyapika Award in 2022.



Dr. M. HEMALATHA, M.Sc., Ph.D.

She has been working as Academic Consultant in the Department of Biotechnology, Sri Venkateswara University since 2018. She obtained her M.Sc. in Biotechnology and Ph.D from Sri Padmavathi Mahila Viswavidyalayam (SPMVV), Tirupati. She has published 9 research articles and 1 book in reputed National & International journals. She has made 35 Oral / Poster presentations in the national and International conferences. She received appreciation certificate for successful completion of online test on basics of Bio- Technology in 2020 & in E-quiz on Awareness of Covid-19.



Dr. M. SRILATHA, M.Sc., Ph.D.

She has been working as Academic Consultant in the Department of Biotechnology, Sri Venkateswara University since 2017. She obtained her M.Sc., in Biotechnology from Periyar University, Tamilnadu and Ph.D from Sri Venkateswara University, Tirupati. She has published 5 articles and 4 books and book chapters in National & International reputed journals. She has made 15 Oral presentations in the National and International conferences. She has worked as a sitting observer for various UG and PG examinations.



Dr. M.V. JYOTHI KUMAR, M.Sc., Ph.D.

He has been working as Academic Consultant in the Department of Biotechnology, Sri Venkateswara University since 2016. He obtained his M.Sc in Biotechnology from Bangalore University and Ph.D from Sri Venkateswara University, Tirupati. He has published 13 research publications in reputed National & International journals. He has made 32 Oral / Poster presentations in the national and International conferences. He received best oral presentation award in AgriNANO-2017 and Young Scientist Award in NCIFCB-2018.

