

VELS

INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS)
(Deemed to be University Estd. u/s 3 of the UGC Act, 1956)
PALLAVARAM - CHENNAI

SCHOOL OF LIFE SCIENCES

VELS



INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS)
(Deemed to be University Estd. u/s 3 of the UGC Act, 1956)
PALLAVARAM - CHENNAI
ACCREDITED BY NAAC WITH 'A' GRADE
Marching Beyond 25 Years Successfully

The Best
Multi disciplinary University in Chennai.
- Asia Today 2020.

Rank 43
Pharmacy Category



Job Oriented & Innovative courses

Excellent placements

Highly qualified faculty

Located in Pallavaram
Heart of Chennai

50+ Value added courses

Ranked	Ranked	Ranked	Ranked	GRADED
AAA+	**5**	**TOP 50**	**AA+**	**A1**
India's Best Engineering Colleges - 2019	Among Top 10 Private Engineering Institutes in Tamil Nadu.	Private B'Schools In South India	in India's Best law Colleges	By the INDIAN REGISTER OF SHIPPING (IRS)
Source : Careers 360 April 2019	Times of India Engineering Survey 2019	Business World Nov 2018	Source : Careers 360 Jan 2018	(NOV-2019)

ORIGIN OF THE INSTITUTION

1992
VAELS Educational Trust was Established

2008
The Deemed University status was conferred on **04.06.2008 by the MHRD** under section 3 of UGC Act 1956, Govt. of India

2019
VISTAS is a **Multi-disciplinary Institution** offering varied andinnovative courses in emerging areas

VISTAS has two campuses
Pallavaram | Thalambur

VISION

To make the Institute an epitome of excellence in higher education by effectively providing high quality education and rigorous training to students in multiple streams of choice with ample scope for all round development to make them excel in their profession for betterment of the society.

MISSION

- Effectively imparting knowledge and inculcating innovative thinking
- Facilitating skill enhancement through add on courses and hands on training
- Doing original, socially relevant, high quality research
- Facilitating appropriate co-curricular, extracurricular and extension activities
- Instilling the spirit of integrity, equity, professional ethics and social harmony



PROGRAMMES OFFERED AT VISTAS

15 Schools

1. School of Basic Sciences
2. School of Computing Sciences
3. School of Engineering
4. School of Hotel and Catering Management
5. School of Languages
6. School of Law
7. School of Life Sciences
8. School of Mass Communication
9. School of Management Studies & Commerce
10. School of Ocean Engineering
11. School of Pharmaceutical Sciences
12. School of Maritime Studies
13. School of Physiotherapy
14. School of Education
15. School of Music & Fine Arts

Departments	41
UG Programmes	45
PG Programmes	33
Diploma	10
Research	M.Phil., Ph.D.

INFRASTRUCTURE FACILITIES

Total built-up area
11,65,620 Sqft

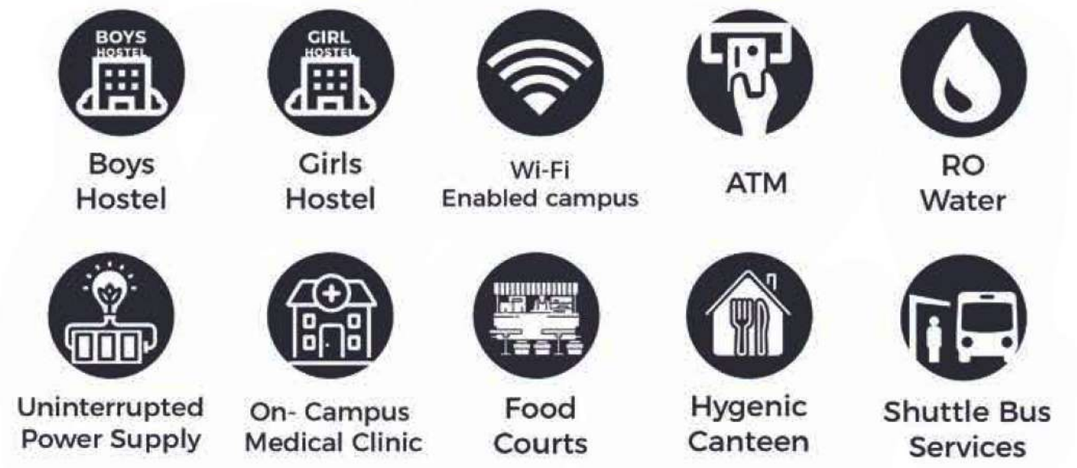
- Aquatic Complex
- 9 Captive power generators
- Wind mills & Solar Panels
- Vehicle parking area
- 24 Hrs Security Guards
- 24 Hrs Medical facilities
- CCTV Camera
- Waste management system

Total land area
29.13 acres

- Green Campus
- State-of-art the Library
- Boys Hostels
- Girls Hostels
- Staff Quarters
- Canteens
- Guest houses
- Play field
- Garden, Lawn



ALL AMENITIES A STUDENT NEEDS





School of Life Sciences

The School of Life Sciences (SLS) was established in 1993 and it strives to shape outstanding Bioscience professionals with values and grooming them to become future scientists for the improvement of humanity. The school consists of four departments namely Biochemistry, Bioinformatics, Biotechnology and Microbiology, headed by well-trained Professors. In addition, SLS has one research centre, The Centre for Fish Immunology. The school offers Certificate programs, Diploma programs, 4 Undergraduate programs, 5 Postgraduate programs and Research programs leading to M.Phil and Ph.D. The Departments in this School have highly qualified faculty members with rich experience in teaching and research. The faculty regularly publish research articles in SCOPUS indexed, peer reviewed international and national journals. Some of them have published books and laboratory manuals in
different subject areas in Life Sciences.
The school has specific laboratories for Plant Tissue Culture, Animal Cell Culture, Fermentation, Molecular Biology, Computational Biology, Bacteriology, Mycology, Hematology, Immunology, Phytochemical Analysis and Fish Immunology equipped with sensitive and sophisticated instruments like RT-PCR, Gradient PCR, Gel Documentation system, Fermentor, UV Spectrophotometer, HPLC, ELISA Reader, Biosafety cabinets etc.

The school has a strong commitment to excel in PG & UG educations and Research. Our close ties with many industries ensure the students to get a rigorous, relevant training in the fields and make them ready for Industries.



Department of Biochemistry

The Department of Biochemistry, School of Life Sciences was started in the year 1993 under the affiliation of University of Madras. The Department has well equipped laboratories, advanced research facilities, sophisticated services and computing and networking capabilities. The Department does exceedingly well in the fields of higher education, research, and industrial consultancy. Strong expertise exists among the highly qualified faculty on both theoretical and experimental methods of research.

Courses Offered

B.Sc., Biochemistry
M.Sc., Biochemistry
M.Phil., & Ph.D., Biochemistry
The academic programmes are based on the choice-based credit system as per UGC regulations. Each Programme comprises several core, elective courses, field visit and project work.

Department of Biotechnology

The Department of Biotechnology: The Department of Biotechnology at School of Life Science, VISTAS was founded in 2000 with a vision to be recognized as a Department of International repute with a strong interdisciplinary and multidisciplinary research and teaching base in biological sciences and an active collaboration with industries and institutions. These are exciting and challenging eras for Biotechnologists. Modern biotechnology, finds applications in a variety of domains such as in the production of high-technology Vaccines as well as in the making of Genetically Modified Organisms (GMO). Although there are many different research areas in the department, their research generally Animal Biotechnology, Plant Biotechnology, Microbial Biotechnology, Medical biotechnology, Pharmaceutical Biotechnology, Food Biotechnology etc..

Department of Biotechnology

The Department of Microbiology is one of the oldest departments, established in 1993 and was integrated into the School of Life Sciences, VISTAS after the Deemed to be University status was conferred to our educational institution by ministry of HRD, Govt. of India in June 2008. No. F.9-56/2004-un.3 dated 4th June 2008.
The department is bestowed with dedicated, experienced and qualified faculty members with teaching and research proficiency. In addition to teaching, the faculty members are actively engaged in research and publish their research findings in reputed SCOPUS indexed journals.
The department offers B.Sc. Microbiology and a novel job-oriented course, M.Sc. Immunology and Microbiology in addition to M.Phil. and Ph.D. programs in research. The syllabi of these programs are compatible with the latest developments and need for employability. The curriculum is based on Choice Based Credit System (CBCS) providing academic flexibility with Core and Elective courses enabling student community to prefer their electives of interest. Priority is also given to enhance the research ability among students and motivate them to become future scientists in the form of training/internship, group projects, dissertation works. This practice improves the analytical skill and logical reasoning of the student. Developing entrepreneurship skills among students is another priority given by the department. The department provides hands-on experience in microbiological techniques through two students' laboratories and one research laboratory, equipped with basic and modern equipments such as Thermocycler (PCR), Gel Documentation, ELISA Reader, Refrigerated Centrifuge, BOD etc.
The thrust areas of research include Marine Bio products, Fish Immunology, Plant- Microbe Interactions, Molecular drug resistance mechanisms, Molecular interactions in biofilms, Medical and Applied Mycology, Bio-nanomaterials etc.

Program :
B.Sc., Biochemistry

Duration : 3 Year (6 Semesters)

Eligibility for Admission :
- Pass in +2, HSC or equivalent with Biology / Maths / Physics / Chemistry



Program Objectives

- To demonstrate a coherent and systematic approach to the experimental and theoretical aspects of biochemistry
- To demonstrate the ability to understand the role of scientific developments, particularly, biological sciences in a changing world from the disciplinary perspective as well as in relation to its professional and everyday use.
- To communicate ideas, opinions, and values—both scientific themes and values of life in all shades and shapes—to expand the knowledge of the subject as it moves from the classroom/laboratory to industry and society.
- To recognize the scope of biochemistry in terms of career opportunities, employment and lifelong engagement in teaching, publishing, communication, media, soft skills, and other allied fields.



SEMESTER I
- Biomolecules
- Nutritional Biochemistry
- Practical I-
- Qualitative Analysis of Biomolecules
- Practical II-
- Nutritional Biochemistry

SEMESTER II
- Biomolecules-II
- Biochemical Techniques
- Practical – III
- Biochemical Preparation Techniques
- Practical – IV
- Biochemical Separation Techniques

SEMESTER I
- Enzymes & Intermediary Metabolism – I
- Clinical Biochemistry I
- Practical V –
- Hematology
- Practical VI –
- Soft Skills - I

SEMESTER II
- Enzymes & Intermediary Metabolism – II
- Clinical Biochemistry II
- Practical VII –
- Enzymology and Clinical Biochemistry II
- EVS
- Soft Skills – II

SEMESTER I
- Discipline Specific Elective I
- DSE II
- DSE III
- DSE PRACTICAL VIII
- Generic Elective I
- NSS

SEMESTER II
- SEMESTER – VI
- Discipline Specific Elective IV
- DSE V
- Generic Elective II
- PROJECT WORK

Employment oriented add-on courses

- DMLT – Diploma in Medical Lab Technology.
- Diploma in Clinical Psychology.

Program :
M.Sc., Biochemistry

Duration : 2 Year (4 Semesters)

Eligibility for Admission :
Degree in Biochemistry, Chemistry, Microbiology, Nutrition & Dietics and Life Sciences
(10+2+3 pattern)



Program Objectives

- To Expose the students to a wide range of careers that combine biology, plants and medicine.
- To Provide students with some work experience, for example a internship or a research project in a research laboratory to further boost the career prospects.
- To Develop in students the ability to apply the knowledge and skills they have acquired to the solution of specific theoretical and applied problems in biochemistry.
- To Provide students with the knowledge and skill base that would enable them to undertake further studies in biochemistry and related areas or in multidisciplinary areas that involve biochemistry and help develop a range of generic skills that are relevant to wage employment, self-employment and entrepreneurship.



SEMESTER I

- Chemistry of Biomolecules
- Advanced Instrumental techniques
- Practical I
- Biochemistry&Insrumentation Lab
- DSE I
- DSE II
- GE I

SEMESTER II

- Enzymology
- Intermediary metabolism
- Practical II
- Biotechnology
- Practical III
- Microbiology
- DSE III
- DSE IV
- GE II
- GE III

SEMESTER I

- Genetics and Molecular Biology
- Clinical biochemistry
- Practical III
- Clinical Biochemistry
- DSE V
- DSE VI
- GE IV
- Internship

SEMESTER II

- Toxicology & Forensic Biochemistry
- Project

Career Prospects

Students have no trouble finding coveted positions in reputed corporate companies that visit the campus every year, offering an excellent salary package on par with international standards. Candidates interested in career options other than clinical diagnostics shall also be assisted in pursuing their interests. Placements has been obtained earlier from reputed corporates include Cipla, Alkem, Orchid, Pfizer, Ranbaxy, DRL etc.,

Program :
B.Sc Biocomputing

Duration : 3 Years (6 Semesters)

Eligibility for Admission :
The basic eligibility criterion for joining B. Sc. Bio-computing degree is Qualifying 10, +2 or equivalent examination.



Program Objectives

The Biocomputing is supposed to be an enigmatic field in areas like software development, bio-database design and maintenance, sequence assembly, proteomics, clinical pharmacologist, sequence analysis, and bio-analytics. A career in Biocomputing offer good prospects with excellent job opportunities in IT and Pharmaceutical companies in India & abroad. Several Indian companies have already started offering good employments for Biocomputing candidates. A broad range of course will be studied to establish a basic understanding and appreciation of the issues and problems of computational biology. The course includes an applied component, which gives an introduction to programming for biological data and use of a range of web-based Biocomputing utilities.



SEMESTER I

- LANG - Tamil I/ Hindi I/ French I
- ENG - English I
- CORE - Introduction To Computer, Algorithm And Statistics
- CORE - Ce11Biolos. And Biochmistry
- CORE - Basic Concepts And Algorithms In Computes Practical
- CORE - Techniques In Biochemistry Practical

SEMESTER II

- LANG-Tamil II/ Hindi II/ French II
- ENG -English II
- CORE – Programming in C
- CORE - Biological Databases and sequence analysis
- CORE - Programming in C (Practical)
- CORE - Biological Databases and sequence analysis (practical)

SEMESTER III

- LANG- Tamil III/HindiIII/French III
- ENG -English-III
- CORE - Programming in C++
- CORE - Plant Bioinformatics
- CORE - Bioinforrratics in Microbiology, Immunology and Nanotechnology
- CORE - Programming in C++ Practical
- CORE - Plant Bioinformatics Practical
- SEC – Soft Skills – I

SEMESTER IV

- LANG Tamil IV/ Hindi IV/ French IV
- ENG English IV
- CORE Cheminformatics
- CORE Operating System and Computer Networks
- CORE Medical Coding and Transcription
- CORE Cheminformatics Practical
- AECC Environmental Studies
- SEC Soft Skills – II

SEMESTER V

- DSE DSE – 1
- DSE DSE – 2
- DSE DSE – 3
- DSE Programming in Java Practical
- DSE Pearl and Bioperl Practical
- GE Generic Elective – I
- SEC NSS

SEMESTER VI

- DSE DSE – 4
- DSE DSE – 5
- DSE DSE – 6
- DSE Programming in Visual Basics and Python Practical
- GE Generic Elective – II
- SEC NSS
- DE Project Work

Discipline Specific Elective Courses

Programming in Java, 2. Programming in Java – Practical. 3. Programming in PERL and Bioperl, 4. PERL and Bioperl – Practical, 5.Genomicsand Proteomics, 6.Programming in Visual Basics and RDBMS, 7.Programming in Visual Basics and Python – Practical, 8.Programming in Python, 9.Enzymes and Metabolism, 10.Mathematics of Bioinformatics, 11.Virology, 12.Biophysical Chemistry, 13.Cloud Computing Basics, 14.Recombinant DNA Technology, 15.Data Warehousing and Data Mining

Career Prospects

The Biocomputing is supposed to be an enigmatic field in areas like software development, bio-database design and maintenance, sequence assembly, proteomics, clinical pharmacologist, sequence analysis, and bio-analytics. A career in Biocomputing offer good prospects with excellent job opportunities in IT and Pharmaceutical companies in India & abroad. Several Indian companies have already started offering good employments for Biocomputing candidates. A broad range of course will be studied to establish a basic understanding and appreciation of the issues and problems of computational biology. The course includes an applied component, which gives an introduction to programming for biological data and use of a range of web-based Biocomputing utilities

Flow Chart

I year – BASICS TO BIOLOGY, COMPUTER, STATISTICS & ALGORITHM

II Year – BASICS ON 'C', PROGRAMING & BIONFORMATICS DATABASE

III year – SKILLS IN 'C++' & CORE BIOINFORMAICS

IV Year – BASICS IN OS & CHEM INFORMATICS

V year – BUILD CORE PROGRAMING SKILLS LIKE JAVA, PERL AND ALLIED BIOINFORMATICS

VI Year – SKILLS IN PYTHON, DRUG DESIGN & PROJECT

Program :
M.Sc Bioinformatics

Duration : 2 Years (4 Semesters)

Eligibility for Admission :
A Candidate with Bachelor's Degree in Science in the disciplines of Genetics, Biology, Biochemistry, Biotechnology, Physics, Chemistry, Computer Science, Botany, Zoology, Microbiology, Mathematics, Statistics, Nutrition, Food Service Management – Dietetics, Agriculture, B.E./B.Tech (Bio Tech), B.V.Sc, B.Pharm, BPT & BCA.



Program Objectives

The Bioinformatics course provides students with theoretical and practical knowledge of methods to analyze and interpret the data generated by modern biology. This involves the appreciation of biochemistry and molecular biology, together with the techniques of IT and computer science that will prepare students for multidisciplinary careers in research. This course develops the computational and analytical understanding necessary as a platform for processing biological data. This course also demonstrates applications and worked examples in the fields of Bioinformatics and System Biology, integrating with student involvement through project work.



SEMESTER I

- Core Introduction to Bioinformatics
- Core Biological Databank and Sequence Analysis — Practical
- Core Computer Programming in C And C++.
- Core Bioprograming in C and C++ - Practical
- DSE Discipline Specific Elective I
- DSE Discipline Specific Elective II
- GE Generic Elective I

SEMESTER II

- Core Programming In VB and RDBMS
- Core Programming In VB and RDBMS - Practical
  Core Core Programming In Perl And Bioperl
- Core Programming In Perl And Bioperl - Practical
- Core Mini Project
- DSE Discipline Specific Elective III
- DSE Discipline Specific Elective IV
- GE Generic Elective II

SEMESTER III

- Core Molecular Modeling and Drug Designing
- Core Computer Aided Drug Designing -Practical
- Core Advanced Programming in Java
- Core Programming in Java and Biojava -Practical
- DSE Discipline Specific Elective V
- DSE Discipline Specific Elective VI
- GE Generic Elective III

SEMESTER IV

- Core Operating Systems
- Core Clinical Research
- Core Mani Project

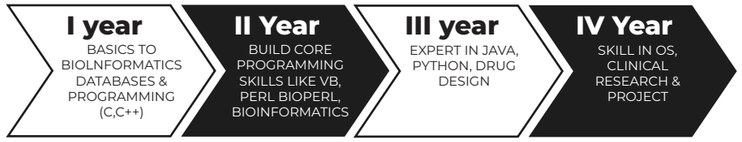
Discipline Specific Elective Courses

Genomics and Proteomics, Molecular Cell Biology and Biochemistry, Bioenergetics, Cheminformatics, Biophysical Chemistry, Structural Bioinformatics, Enzymes and Metabolisms, Virology, Data Warehousing and Data Mining, Python for Bioinformatics, Cloud Computing, Genetic Engineering and Nanotechnology

Career Prospects

The Bioinformatics course provides students with theoretical and practical knowledge of methods to analyze and interpret the data generated by modern biology. This involves the appreciation of biochemistry and molecular biology, together with the techniques of IT and computer science that will prepare students for multidisciplinary careers in research. This course develops the computational and analytical understanding necessary as a platform for processing biological data. This course also demonstrates applications and worked examples in the fields of Bioinformatics and System Biology, integrating with student involvement through project work.

Flow Chart



Program :
M.Sc., Biotechnology

Duration : 2 Years (4 Semesters)

Eligibility for Admission :
Degree in B.Sc Zoology/Botany/Chemistry/Biology/ Biotech/Biochemistry/Microbiology or B.V.Sc /B.Sc Agri/B.Tech Biotech/MBBS



SEMESTER I

- Cell and Developmental Biology,
- Biochemistry
- Enzymology,
- Discipline Specific Elective I & II,
- Generic Elective I

SEMESTER II

- Microbiology and Immunology,
- Molecular Genetics,
- Discipline Specific Elective III & IV,
- Generic Elective II

SEMESTER III

- Plant and Animal Biotechnology,
- Genetic Engineering and Fermentation,
- Discipline Specific Elective V & VI,
- Generic Elective III

SEMESTER IV

- Dissertation/Project

Career Prospects

- Pharmaceutical, Food, IT, Medical, Clinical Sectors Department of Chemical and Pharmaceutical Industries.
- In R & D centers, Universities of advanced learning, Research Centre of Excellence, Government bodies and Multi-national companies.

Program Objectives

- This program will strengthen the graduates' foundation in different facets of Biotechnology, enhance their knowledge, hone their research skills and prepare them for higher studies and become professionals in reputed academic institutions
- This program will inspire, motivate, guide and train graduates to become globally competent and find employment in various Biotechnology sectors
- This program will help graduates to enhance their creative thinking, analytical and managerial skills imbibed with ethical values to develop products, become successful entrepreneurs, and to serve the society Curriculum



Program :

M.Sc., Applied Medical Biotechnology & Clinical Research

Duration : 2 Years (4 Semesters)

Eligibility for Admission :
Degree in B.Sc Zoology, Botany, Chemistry, Biology, Biotech, Biochemistry, Microbiology, Home Science, Physics, Genetics, B.Sc Agri., B.V.Sc, B.F.Sc, B.Sc MLT, BDS, MBBS & B.Pharm



Program Objectives

- This program will help students for research, investigate, critically analyse and solve problems in the different areas of Biotechnology
- This program improve the ability to write and present precise and accurate data, publish papers and communicate the findings to scientific community and society
- To impart knowledge to enthusiastic young minds and become ideal teachers in reputed academic institutions
- An ability to find employment in pharma, food and other Biotech industries in R&D, quality control, process control and product development sectors or become entrepreneurs imbibed with ethical and humane values Curriculum



SEMESTER I

- Applied Medical Biochemistry and Cell Biology,
- Clinical Microbiology and Medical Record science,
- Discipline Specific Elective I & II,
- Generic Elective I

SEMESTER II

- Statistics for Clinical Research,
- Research Methodology,
- Genetic Engineering and Computational Biology,
- Discipline Specific Elective III & IV,
- Generic Elective II

SEMESTER III

- Advanced Clinical and Molecular Diagnostic-techniques,
- Medical Immunology and Clinical Research,
- Discipline Specific Elective V & VI,
- Generic Elective III

SEMESTER IV

- Dissertation/Project

Career Prospects

- Pharmaceutical, Food, IT, Medical, Clinical Sectors Department of Chemical and Pharmaceutical Industries.
- In R & D centers, Universities of advanced learning, Research Centre of Excellence, Government bodies and Multi-national companies

Program :

DEGREE OF BACHELOR OF SCIENCE IN BIOTECHNOLOGY

Duration : 3 Years (6 Semesters)

Eligibility for Admission :
Pass in +2, HSC or equivalent with Biology / Botany / Zoology / Biochemistry / Biotech / Microbiology.



Program Objectives

- To apply knowledge across the disciplines and in emerging areas of biotechnology for higher studies, research, employability and product development.
- To produce Biotechnology graduates who will be employable in core Biotech/Pharma industries and domain based software services.
- To produce research oriented Biotechnology graduates who can pursue higher studies and research in renowned institutes around the globe.
- To improve communication skills, sense of responsibility to protect the environment and ethical conduct towards their profession to serve the society.
- To provide academic excellence, managerial skills, leadership qualities and understand the need for lifelong learning for a successful professional career.



SEMESTER I

- Tamil / Hindi / French,
- English,
- Fundamentals of Cell Biology,
- Basics of Chemistry

SEMESTER II

- Tamil/ Hindi/ French,
- English,
- Molecular Genetics and Developmental Biology,
- Biochemistry and Bioinstrumentation

SEMESTER III

- Tamil / Hindi/ French,
- English,
- Clinical Diagnostic Techniques,
- Principles of Microbiology,
- Soft Skills

SEMESTER IV

- Tamil/ Hindi/ French,
- English,
- Plant and Animal Biotechnology,
- Microbial and Environmental Biotechnology,
- Environmental Studies,
- Soft Skills

SEMESTER V

- Genetic Engineering,
- IPR and Bioethics,
- Immunotechnology,
- Biophysics,
- Biostatistics and Computational Biology

SEMESTER VI

- Bio fermentation and Downstream Processing,
- Pharmaceutical Biotechnology,
- Generic Elective,
- Medical Coding and Clinical Research,
- Project work

Career Prospects

- Biochemistry, Food Biotechnology, Medical Biotechnology, Pharmaceutical Biotechnology, Agricultural Biotechnology, Medical Genetics, Animal Biotechnology, Genetic Engineering, Bioinformatics
- Jobs in Pharmaceutical, Food, IT, Medical, Clinical Sectors, Research Institutions, Universities

Program :

M.Sc., IMMUNOLOGY AND MICROBIOLOGY

Duration : 2 Years (4 Semesters)

Eligibility for Admission :
Degree in B.Sc., (Microbiology/ Biotechnology/ Biochemistry/ Bioinformatics/ Botany / Zoology or any Biological Sciences)



Program Objectives

- To gain knowledge and analytical skills in Immunology and Microbiology at an advanced level.
- To broaden and deepen their capabilities in analytical and experimental research methods, analysis of data, and drawing relevant conclusions for scholarly writing and presentation.
- To create a congenial environment that promotes research based learning.
- To inspire students to be a part of active research groups and motivate to conduct independent research.
- To enrich the Job opportunities in wide sector of Bio-industries, R & D Centre and top-ranked academic institutes.



SEMESTER I

- Microbiology
- Immunology
- Medical Microbiology
- Industrial & Pharmaceutical Microbiology
- Labs in Microbiology, Immunology & Med MB.
- Generic Elective-I

SEMESTER II

- Microbial Genetics & Molecular Biology
- Molecular Immunology & Immunogenetics
- Immunotechnology
- Cloning Strategies & Nanomicrobiology
- Labs in Molecular Biology & Immunotechnology
- Generic Elective-II

SEMESTER III

- Clinical Immunology & Vaccinology
- Applied Microbiology
- Biofertilizers
- Cell Culture & Fermentation Technology
- Labs in Vaccine Technology & Applied Microbiology
- Generic Elective-III

SEMESTER IV

- Project & Viva-voce

Career Prospects

- Provides employment in pharma / biopharma industries as a Quality control trainee.
- Quality control / quality assurance job profile in food industry (includes food, beverage, hospitality sector, Airlines catering etc).
- Also can opt for research positions after MSc, leading to a PhD in Microbiology.

Flow Chart

I YEAR
The tailor made course work in line with industry requirements add value to this program.
The program gives equal weightage to Immunology and Microbiology

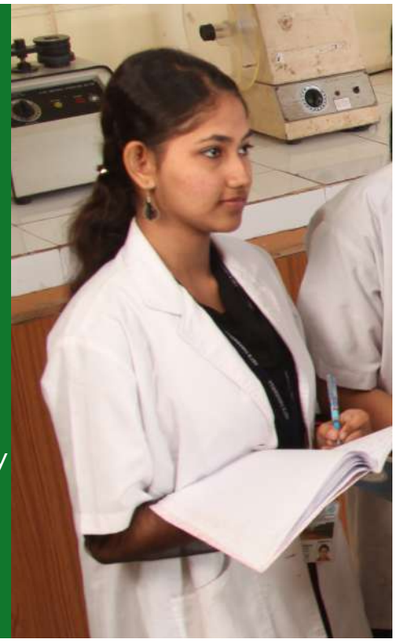
II YEAR
Students will become critical thinker and acquire problem solving capabilities.
The laboratory training is the major part of the program which enhances practical and research skill of the students

Program :

DEGREE OF BACHELOR OF SCIENCE IN MICROBIOLOGY

Duration : 3 Years (6 Semesters)

Eligibility for Admission :
A pass in higher secondary with Physics, Chemistry, Biology/ Botany/Zoology or any Life Sciences or any examination of any other boards accepted by the BOM of VISTAS as equivalent. Usual concession for minimum marks as stipulated by University and the State Government from time to time shall apply to SC/ST, OBC, and Other Categories of candidates.



Program Objectives

- To impart the fundamentals of Microbiology and applied sciences to transform the students as Microbiologists.
- To provide an environment that ensures cognitive development of students in a holistic manner. A dialogue about microbes and its significance is fostered in this framework, rather than didactic monologues on mere theoretical aspects
- To pursue post-graduation and research in an innovative field.



SEMESTER I

- Language-I (Tamil, Hindi & French)
- English-I
- General Microbiology
- Immunology
- Lab I- Basic techniques in Microbiology
- Lab II- Immunology

SEMESTER II

- Language-II (Tamil, Hindi & French)
- English-II
- Microbial Genetics and Molecular Biology
- Industrial Microbiology
- Lab I- Microbial Genetics and Molecular Biology
- Lab II- Industrial Microbiology

SEMESTER III

- Language-III (Tamil, Hindi & French)
- English-III
- Food Microbiology
- Environmental Microbiology
- Lab I- Food Microbiology
- Lab II- Environmental Microbiology
- Soft skill-I

SEMESTER IV

- Language-IV (Tamil, Hindi & French)
- English-IV
- Medical Microbiology
- Reombinant DNA Technology
- Lab I- Medical Microbiology
- Environmental studies
- Soft skill-II

SEMESTER V

- Biochemistry
- Pharmaceutical Microbiology
- Discipline Specific Elective
- Lab I-Biochemistry
- Generic Elective-I
- Soft Skill-III
- NSS

SEMESTER VI

- Immunotechnology
- Discipline Specific Elective
- Generic Elective II
- Soft Skill-IV
- Project work

Career Prospects

- Eligible to apply for the Master's degree in Microbiology
- QC/QA in Pharma, Food and Biomedical Industries
- Microbiology supervisors/technicians for immunodiagnostics/pathogen identification
- Become entrepreneurs in FMCG/diagnostic laboratories.

Flow Chart

I YEAR
To provide a basic and broad knowledge in Microbiology with necessary practical inputs

II YEAR
Impart knowledge on both Medical and Applied Microbiology

III YEAR
Acquire practical skills- plan & execute experimental techniques independently as well as to analyse & interpret data.

Program :

CERTIFICATE COURSE IN FERMENTATION TECHNOLOGY

Duration : 3 Months

Eligibility for Admission :

- A pass in the higher secondary or equivalent examinations conducted by boards/departments recognized by the University.
- Usual concession for minimum marks as stipulated by University and the State Government from time to time shall apply to SC/ST, OBC, and Other Categories of candidates.



Course Objectives

- Obtain knowledge on Fermentation and quality control.
- Understand Fermenter operations
- Gain knowledge on production of various useful microbial fermentation products.

Career Prospects

- Technician in Fermentation Industries.
- Technician in Pharma and Food Industreis
- Self-employment (Microbial Products)





TESTIMONIALS

When I decided to do my M.Sc, I came across in contact of many Universities in Bangalore and Chennai, but at last I stopped in VELS University (VU) in Chennai. I have seen many universities, which are doing business of education instead of giving quality of studies to students. But VU is best, which is always thinking of students' perspective. I had a great time at VU. It was very helpful in achieving my career goal and converts my endeavors into real time world.

The faculties are very experienced and committed to help the students to excel. I am very thankful to the faculty that gave me the knowledge and confidence and has brought a new dimension into my life to achieve a successful career .I would strongly recommend anyone to VU for its quality in studies/course frame.

BIRAJA S. PATTNAIK

Food Technologist, Valid International, M. Sc., 2009-2011

VEL's educates students in a very creative way and encourages them to think out of the box. The multicultural environment that is unique to VEL's provides me with the opportunity to become friends with people from all different corners of the Country.
During my study period I found the college to be the best for me as the teachers were able to deliver the best of education. Staff members were always ready to help. Combining both amazing teachers and staff with a challenging personalized learning experience, VEL's did not only improve my academic skills, but also helped me significantly to get accepted by one of the world's best biotech company. I am happy to recommend everyone whoever is planning to make their future with VEL's.

J. VINAY KUMAR

Assistant Consultant, Roche Diagnostics India Pvt. Ltd., M. Sc., 2009-2011

I like to mention that I am so grateful to spend my amazing three years in Vels University. After my school, I came across various people from different state, culture, background and countries in my college life. I was properly and carefully molded by my faculties both in professional and personal way. The department gave a amazing environment and stage to groom myself and achieved lots in my academics and also in extra-curricular activities. The infrastructure was excellent in the campus and also the quality of education was best in the city. I got well trained in the placement and attended campus drive. With that best training from the Vels University, I got placed in HCL technologies and now I am in right path of my career.

Sharmila T (14114125)

Customer Support Executive, HCL Technologies,Chennai

During my academic tenure in Vels University, I had brilliant time, meeting new friends throughout my time here and growing as a person both academically and in personal life. I gained qualification and best knowledge that made my future in IT field and currently mold me as Data Scientist. The placement training and campus drive was excellent. I got placed in the campus drive that provided me better platform to become a successful person

Hubert J (15114110)

Data Scientist, Ethna Attributes Soft Technologies Pvt Ltd, Chennai

I always cherish about my college life at Vels University and had excellent and sweet memories. VISTAS provided best opportunity to improve my sports skills and always been a department representative in all sports. I also well shined in my studies with the help of highly talented faculties and established lab facilities. I should mention about the campus drive which direct my career in the medical coding field. I also improved my extracurricular and co-curricular activities in VISTAS. I am very grateful to the university for providing me a best education to build myself in all forms.

Gayathri S (16114110)

Junior medical coding executive, Visionary RBM, Chennai

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