



JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN (AUTONOMOUS)

DEPARTMENT OF MICROBIOLOGY
"MOTIVATE TO ACHIEVE AND EXCEL"

DEPARTMENT PROFILE

The P. G Department of Applied Microbiology was inaugurated in AUGUST 1999. The Department consisted of 4 staff members and 16 students initially.

In SEPTEMBER 2000, the Under Graduate course was started foreseeing the increasing demand for microbiology as a research-oriented career course.

At present, the Department has risen to a student strength of 172, guided effectively by 10 Staff members.

Vision:

To transform socially and economically backward students to become qualified and competent in education and skills to enable them pursue a career in Microbiology.

Mission:

To prepare students with in-depth knowledge and research skills for professional careers in Microbiology. To enhance opportunities for research and promote employability for undergraduate and postgraduate students.

B.Sc. Microbiology: 50

M.Sc. Applied Microbiology: 26



AFFILIATION DATE

M.Sc Applied Microbiology-August,1999

B.sc Microbiology-September,2000

B.Sc. Microbiology

Core Theory/ Practicals

1. Fundamentals of Microbiology
2. Fundamentals of Microbial Physiology
3. Basics of Immunology
4. Microbial Genetics
5. Microbial Biotechnology
6. Introduction to Medical Bacteriology
7. Introduction to Medical Parasitology
8. Soil & Agricultural Microbiology
9. Environmental Microbiology
10. Fundamentals of Industrial Microbiology
11. Food & Dairy Microbiology

Practical 1- General Microbiology & Microbial Physiology

Practical 2- Basic and Applied Immunology

Practical 3- Medical Microbiology

Practical 4- Applied Microbiology

Allied Theory/ Practicals

1. Cell Biology
2. Bioinstrumentation Techniques in Microbiology
3. Biochemistry-I
4. Biochemistry-II

Practical 1- Bioinstrumentation

Practical 2- Biochemistry

Core Elective

1. Introduction to Medical Mycology/ Intermediary Metabolism
2. Introduction to Medical Virology/ Bioinformatics/
Plant Microbial Technology
3. **Group Project/** Biomedical Technology

NME

1. First Aid & Safety
2. Health & Hygiene

Skill Based

1. Diagnostic Microbiology/ Complementary & Alternative Medicine
2. Bioethics & IPR/ Mushroom Technology

VALUE ADDED COURSES

Biogas Technology

Public Health Management

M.Sc. Applied Microbiology

Core Theory/ Practicals

1. General Microbiology
2. Immunology
3. Microbial Physiology
4. Medical Virology
5. Medical Bacteriology
6. Medical Mycology
7. Molecular Biology & RDNA Technology
8. Advanced Food & Dairy Microbiology
9. Microbial Genetics
10. Environmental and Agricultural Microbiology

Practical 1 – General Microbiology and Immunology

Practical 2 – Medical Microbiology

Practical 3 – Applied Microbiology

Practical 4 – Molecular Biology and Biotechnology

Project Work and Viva voce

Core Elective

1. Medical Parasitology/ Bioinformatics
2. Clinical Microbiology/ Intermediary Metabolism
3. Advanced Industrial Microbiology/ Cosmetic Microbiology
4. Analytical Microbiology/ Biophysical Technology
5. Medical Entomology/ Research Methodology

EDP

1. Disaster Management
2. Public Health

Soft Skill

1. Personality Enrichment
2. Food Safety & Hygiene
3. Women's Health care
4. Technical Writing

Self Study Paper

Forensic Science
Forensic Microbiology
Entrepreneurial Microbiology

OPPORTUNITIES FOR STUDENTS

- ✓ Bachelor's degree or Masters Degree in Microbiology can lead to lucrative jobs in India as well as Abroad. The students can get placed in Hospitals, Clinical Laboratories and Industries as Microbiologists or as Quality Analysts.
- ✓ Student can also continue in the academic field by pursuing a Ph.D. Job opportunities are available in the following sectors:

- Pharmaceutical – Biotech industries
- Academia (Colleges & Universities)
- Clinical(Diagnostic) laboratories
- Health Care Institutions
- Research Organizations
- Environmental Agencies
- Food Industry
- Beverage Industry
- Chemical Industries
- Agriculture & Forestry Department
- Fisheries and Aquaculture Department
- National Institute of Ocean Technology.

Specialization

Specializations after Graduation/ Post Graduation:

- Agricultural Microbiology
- Industrial Microbiology
- Evolutionary Microbiology
- Nano Microbiology
- Cellular Microbiology
- Soil Microbiology
- Veterinary Microbiology
- Generation Microbiology
- Virology
- Water Microbiology
- Pharmaceutical Microbiology
- Environmental Microbiology
- Microbial Genetics



FACULTY EXPERTISE

- ✓ The Department has a team of experienced Facilitators who provide leading education and innovative research guidance to students. The faculty members of the Department have undertaken research projects spanning many disciplines and all of them have also published research papers in UGC approved and Indexed Journals.
- ✓ The Management, through the Multi-Disciplinary Research Centre (MRCC), funds Staff research projects and 5 faculty members have received seed capital assistance..
- ✓ Total number of Research papers published by the Faculty along with the students in Both International and National Journals - **61**
- ✓ Our faculty have received awards for "Best Paper" in International and National Seminars and Conferences.



INFRASTRUCTURE FACILITIES OF THE DEPARTMENT

The Department is furnished with Sophisticated Laboratories equipped with modern facilities to address scientific questions in the field of Microbiology. The list of laboratories is as follows:

- Lab 1 Parasitology Lab – Media Preparation Room
- Lab 2 Virology Lab, Mycology Lab, Bacteriology Lab
- Lab 3 Immunology Lab, Molecular Biology Lab
- Lab 4 Under Graduate Lab- Fermentor room
- Multi-purpose Lab

There is a Library cum Seminar Room which houses Research Journals and Reference Books which are made accessible to the students for reference and borrowing.





PASTEUR CLUB

HISTORY

The Pasteur Club was instituted by the Department in the year 2015 to commemorate the contributions of the great scientist and microbiologist Sir Louis Pasteur, the Father of Modern Microbiology. It was proposed to initiate the beginning of the multidisciplinary bioscience club for the benefit of students of afternoon session of Justice Basheer Ahmed Sayeed College for Women.

MOTTO

Cognizant for a Cause – be aware of health issues for the benefit of the society

ACTIVITIES

- Pasteur club, an initiative of the Department of Microbiology creates awareness on Communicable diseases and their preventive measures among the staff and students of the college and also periodically conducts Medical camps for their benefit.
- In January 2016, the Pasteur club in collaboration with Green Environment India, an Environmental Engineering company incubated at IIT Madras, conducted a practical event on "Aqua Pure- Be water wise" – Water quality testing camp in the college campus to test basic water quality parameters and the most appropriate and cost-effective solutions were offered for safe drinking water.



NOTABLE ALUMNAE

- **Nandhita Murali**- Scientific Assistant at Washington State University.
- **Sanobar**- Radio Jockey at Fever FM.
- **Neelambigai**- Team Leader- Merck TDOS FSP at ICON Plc.
- **Pavithra**- Center Head, International Montessori Teacher training institute.
- **Minhaj Nooria**- QC at FCI.
- **Bharathy Sriram**- Project manager at SPI Global-Lumina.
- **Shrin Syed**- Microbiologist- L'Oreal Paris.
- **Kokila S** - Research Assistant, Government Children Hospital and Research, Egmore.
- **Selvi M** - Senior Treatment Supervisor, District Health Society - RNTCP, Chennai District.
- **Aisha Aaliya** - Post Graduate Assistant Teaching Staff (University of Manchester- School of Medicine and Biological Sciences. Manchester.
- **Pavithra V M** - Process Technician (Water Treatment/ TSE), PWA GTC/033/2016, Edgewater Technical Services. Doha Qatar.
- **Soifat Abdou Soumara** - Laboratoire du Centre Medico-Churgical de MBENI, Mbeni, Republic of Comoros.
- **Sumathy.D**- Marketing Research & Business Development, Associate Director, Population Health & Informatics at House call Doctors Medical group, California.
- **Abirami** – Administration Executive, Wellbuilt Construction PTE. Ltd. Singapore.
- **Dr. Elavarashi Ramesh** – Assistant Professor at Sri Ramachandra Institute of Higher Education and Research.



HIGHLIGHTS OF THE DEPARTMENT

- The Department excels in research and publication activities and believes in the process of enlisting and guiding the talents and energies of students toward achieving common educational aims. The faculty of the department participate in International and National Level Conferences and Workshops and present papers and encourage the students to do the same. Our students have also published research papers in reputed Journals.
- The Department was honored with "Research Excellence Award" in appreciation of the extensive research activity of the staff and students by the Management of Justice Basheer Ahmed Sayeed College for Women during the academic year 2018-2019.
- The Department has bagged 13 undergraduate research projects and 7 postgraduate research projects sponsored by management and funded through the Multi-Disciplinary Research and Consultancy Centre (MRCC), since 2017. Students have also participated in Idea factory - A Competition for innovative ideas conducted by MRCC and won several prizes.
- O.S.K Pavana of B.Sc. Microbiology (2017-2020) was adjudged the "Best Outstanding Student" of the College in the year 2020. R. Sneha of B.Sc Microbiology (2016 – 2019) has participated in National games of the Deaf during 2016-2019 and won 4 Gold medals and 8 Silver medals and created 6 new meet records.
- The Department conducts Exhibition on AIDS Awareness every year on Dec 1st – World AIDS day.
- During the COVID- 19 pandemic, the staff and students of the department were involved in creating awareness on social distancing and hand sanitation measures among the local population as well as students of our college and schools in the vicinity.
- The students performed Skits and distributed pamphlets to the parents during the parent – teacher meet to make them aware of safety measures to be followed to prevent Corona virus infection.

