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Dr. Manikandan A, Assistant Professor  
Dr. Ch. Bhanupriya, Assistant Professor  
Dr. Nimita Venugopal C, Assistant Professor

## REGISTRATION FORM

Name: .....

Course: .....

Year/Sem: .....

Contact no.: .....

E-mail: .....

Registration Fees: Free

Entry Restricted to First 30 Participants Only.

Registration Link: <https://forms.gle/j4nFjGe8pb6hJHLM7>

**Event Coordinators:** Department of Microbiology, MSRCASC.

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**RAMAIAH**  
College of Arts, Science  
& Commerce



DEPARTMENT OF BIOTECHNOLOGY  
MINISTRY OF SCIENCE & TECHNOLOGY, GOVERNMENT OF INDIA

# Value added programme on TECHNIQUES IN MOLECULAR BIOLOGY AND RDT (Under DBT Star College Scheme)

18<sup>th</sup> to 21<sup>st</sup> July, 2022



Organized by  
**Department of Microbiology**

**M.S. Ramaiah College of  
Arts, Science and Commerce**  
MSRIT Post, MSR Nagar, Bangalore - 560 054  
[www.msrmcollege.edu.in](http://www.msrmcollege.edu.in)  
(Re-accredited "A" by NAAC,  
Affiliated to Bangalore Central University,  
Approved by AICTE)

## ABOUT THE COLLEGE

Dr. M.S Ramaiah, a visionary and philanthropist established "Gokula Education Foundation (GEF)", in the year 1962, to deliver education and healthcare for the betterment of mankind. Under the umbrella of GEF, M.S Ramaiah college of Arts, Science and Commerce (MSRCASC) was established in 1994. The college is affiliated to Bengaluru City University (BCU), approved by AICTE, New Delhi, recognized by UGC under 2(f) and 12 (B) of UGC Act 1956. MSRCASC is reaccredited with "A" Grade by NAAC. MSRCASC has bagged 55<sup>th</sup> rank under college category in NIRF-2022. The college has been selected under DBT-STAR College Scheme-2020. Our college is a unique learning institution offering multidisciplinary Programs which plays a pioneering role in providing academic excellence. The college offers Eight UG Programs and six PG programs in Arts, Science, and Commerce with more than 2700 students. The College has excelled record of obtaining many University ranks and Gold medals..

### DEPARTMENT OF MICROBIOLOGY

The Department of Microbiology, established in the year 1999, offers both undergraduate and postgraduate courses. The Department has been Selected under DBT-STAR College Scheme and also the Department has received State level "Best Department Award 2021 from Microbiologist Society, India. The faculty of the department are highly qualified with experience and expertise in various domains of Microbiology. The department has very good infrastructural facilities to carry out teaching and research activities. The theory and practical classes lay emphasis on 'problem based learning', knowledge content, utility value, application in real life, latest developments etc. The department is undertaking research projects in the major thrust areas of microbiology and attracted funds from various agencies. Also, the faculty of the department carry out multi-disciplinary research programs, encourage students to carryout in-house research projects, present papers, publish their research work and to participate in co-curricular and extra-curricular activities.

### ABOUT THE VALUE ADDED PROGRAMME

The current 'omics' era, emphasizes the understanding and applications of molecular biology and Recombinant DNA techniques for research.

**Objective:** The Value Added Programme aims to train the students with hands on experience on the basic and advanced concepts of Molecular Biology which involves- Agarose Gel Electrophoresis, Isolation of Genomic and Plasmid DNA, Restriction Digestion and *In Vitro* DNA Ligation.

**Outcome:** This workshop envisions to make students well acquainted with emerging technologies in Molecular Biology and RDT which will help them to perform efficiently with better understanding and designing new approaches in the area of Molecular Biology research.

Modules		
<b>Module 1: Basic Concepts of Techniques in Molecular Biology</b>	<b>Module 2: Electrophoretic Techniques and Isolation of DNA</b>	<b>Module 3: Concepts in Recombinant DNA Technology</b>
<ul style="list-style-type: none"> <li>•Introduction to Molecular Biology Techniques</li> <li>•Handling of Micropipettes</li> <li>•Preparation of Buffers and Reagents</li> </ul>	<ul style="list-style-type: none"> <li>•Agarose Gel Electrophoresis</li> <li>•Isolation of Genomic DNA</li> <li>•Isolation of Plasmid DNA</li> <li>•Determination of Quality of Isolated DNA</li> </ul>	<ul style="list-style-type: none"> <li>•Concept of Restriction Endonucleases and Ligases</li> <li>•Restriction Digestion of DNA</li> <li>•<i>In vitro</i> DNA Ligation</li> </ul>

Programme Schedule		No. of Hours
<b>18/7/2022</b>	Inauguration	1
	Introduction to the Workshop and Molecular Biology Techniques	2
<b>18/7/2022</b>	Handling of Micropipettes	1
	Preparation of Buffers and Reagents	1
<b>19/7/2022</b>	Introduction to Electrophoretic Techniques and its Applications	1
	Agarose Gel Electrophoresis	3
	Isolation of Genomic DNA	3
<b>20/7/2022</b>	Isolation of Plasmid DNA	3
	Determination of Quality of Isolated DNA	1
	Concept of Restriction Endonucleases and Ligases	1
<b>21/7/2022</b>	Restriction Digestion of DNA	5
	<i>In vitro</i> DNA Ligation	5
	Applications of Molecular Biology Techniques in Research	2
<b>21/7/2022</b>	Assessment and Feedback	1