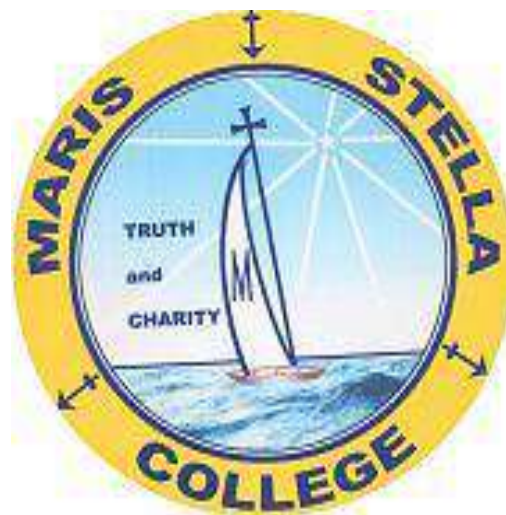


MARIS STELLA COLLEGE (AUTONOMOUS), VIJAYAWADA

A College with Potential for Excellence

ISO 9001: 2015 Certified



PROGRAMME REGISTER

UG DEPARTMENT OF BIOCHEMISTRY

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UG PROGRAMMES OFFERED

S.No.	Programme	Combination offered	Programme Code
1	B.Sc.	Food Science & Technology, Microbiology, Biochemistry (FMB)	332

PROGRAMME OUTCOMES (POs)

2020-2023

At the end of the programme students will have:

PO1: Essential Knowledge:

Comprehensive discipline knowledge and understanding, the ability to engage with different schools of thought and to apply their knowledge in practice including in multi-disciplinary or multi-professional contexts.

PO2: Creative and critical thinking and problem-solving abilities:

Be effective problem solvers, able to apply critical and evidence-based thinking to conceive innovative responses to future challenges.

PO3: Teamwork and communication skills:

Be able to convey ideas and information effectively to a range of audiences for a variety of purposes and contribute in a positive and collaborative manner to achieving common goals.

PO4: Digital capabilities:

Demonstrate preparedness for living, learning and working in a digital society.

PO5: Professionalism and leadership readiness:

Be able to engage in professional behaviour and have the potential to be entrepreneurial and take leadership roles in their chosen occupations and communities.

PO6: Intercultural and ethical competency:

Be responsible and effective global citizens whose personal values and practices are consistent with their roles as responsible members of society.

PO7: Self-awareness and emotional intelligence:

Be self-aware and reflective, flexible and resilient and act with integrity and take responsibility for their actions as empowered women.

PO8: Social responsibility:

Be sensitive to and demonstrate agency in matters of environment, gender and other social issues to promote an equitable society.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

2020-2023

At the end of the programme students will be able to:

- PSO1:** Summarize the concepts, principles, classifications, theories and mechanisms.
- PSO2:** Discuss hypothesis, procedures, results and draw conclusions.
- PSO3:** Apply tools and techniques in solving problems, sample analysis and production.
- PSO4:** Develop skills pertinent to sustainability, higher progression and employability.
- PSO5:** Exhibit communicative competence and apply skills in computers, creative and critical thinking, interpersonal relationships and managing emotions in real life situations.

Course Outcomes (COs)

2021-2024

S.No.	Sem	Course Code	Course Title	Course Outcomes (COs)
1.	I	21BCCCBM14	Biomolecules	<p>CO1: Schematize the structures of biomolecules.</p> <p>CO2: Classify the carbohydrates, lipids, proteins, and, amino acids with examples</p> <p>CO3: Summarize the Physical-chemical properties of biomolecules.</p> <p>CO4: Analyze the types of biochemical reactions undergone by biomolecules.</p> <p>CO5: Understand the importance of these biomolecules in living organisms.</p>
2.	II	21BCCCBT24	Biophysical Techniques & Microbiological Methods	<p>CO1: Gain of knowledge for preparing all the reagents, buffer, and solutions by themselves</p> <p>CO2: Analysis of biological or non-biological sample identification of its chemical composition of biomolecules</p> <p>CO3: Identification of its chemical composition of Biomolecules</p> <p>CO4: Calibration of pH meter. Weighing machine.</p> <p>CO5: Use genetic material isolation techniques for research.</p>
3.	III	20BCCCIM34	Enzymology, Bioenergetics & Intermediary Metabolism	<p>CO1: Gain knowledge about the physiological importance of enzymes</p> <p>CO2: Classify the metabolic reactions</p> <p>CO3: Explain the fate of various cell metabolites.</p> <p>CO4: Analyse different energy transformation laws</p> <p>CO5: Understand the pathophysiology of metabolic diseases</p>
4	IV-I	20BCCCCB44	Physiology, Nutrition & Clinical Biochemistry	<p>CO1: Gain knowledge about the different Physiological systems</p> <p>CO2: Classify the Hormones based on functions</p> <p>CO3: Explain the details of nutrient requirements</p>

5	IV-II	20BCCCMB44	Microbiology, Immunology Course Code 20BCCCMB44 &Molecular biology	CO4: Analyse different parameters in blood and serum CO5: Understand the pathophysiology of organs for different diseases CO1: Gain knowledge about the different interdisciplinary fields CO2: Classify the Microorganisms CO3: Explain the details of nitrogen Utilization CO4: Utilize different biochemical processes CO5: Understand the basic concepts of Immunology and Molecular Biology
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Mapping of COs with PSOs

S.No.	Sem	Course Code	Course Title	COs	PSOs
1	I	21BCCCBM14	Biomolecules	CO1	PSO1, PSO2
				CO2	PSO1
				CO3	PSO2
				CO4	PSO3
				CO5	PSO5
2	II	21BCCCBT24	Biophysical Techniques & Microbiological Methods	CO1	PSO1, PSO4
				CO2	PSO2, PSO3, PSO5
				CO3	PSO4, PSO3
				CO4	PSO4
				CO5	PSO4, PSO5
3	III	20BCCCCIM34	Enzymology, Bioenergetics & Intermediary Metabolism	CO1	PSO1, PSO2
				CO2	PSO1
				CO3	PSO2
				CO4	PSO3
				CO5	PSO4, PSO5
4	IV	20BCCCCB44	Physiology, Nutrition & Clinical Biochemistry	CO1	PSO1, PSO2
				CO2	PSO1
				CO3	PSO1, PSO4, PSO5
				CO4	PSO3
				CO5	PSO1, PSO2
5	V	20BCCCMB44	Microbiology, Immunology & Molecular biology	CO1	PSO1
				CO2	PSO1
				CO3	PSO1
				CO4	PSO3, PSO1
				CO5	PSO1

Mapping of Courses with PSOs

Course	PSO1	PSO2	PSO3	PSO4	PSO5
21BCCCBM14	√	√	√		√
21BCCCBT24	√	√	√	√	√
20BCCCCIM34	√	√	√	√	√
20BCCCCB44	√	√	√	√	√
20BCCCMB44	√		√		

Mapping of PSOs with POs

PSOs	PO1 Essential Knowledge	PO2 Creative and critical thinking and problem solving abilities	PO3 Teamwork and communication skills	PO4 Digital capabilities	PO5 Professionalism and leadership readiness	PO6 Intercultural and ethical competency	PO7 Self-awareness and emotional intelligence	PO8 Social Responsibility
PSO1	✓			✓			✓	
PSO2	✓	✓		✓			✓	✓
PSO3	✓	✓		✓	✓		✓	✓
PSO4	✓	✓		✓	✓		✓	
PSO5	✓	✓	✓	✓	✓	✓	✓	✓

Mapping of Courses with POs

Course	PO1 Essential Knowledge	PO2 Creative and critical thinking and problem solving abilities	PO3 Teamwork and communicatio n skills	PO4 Digital capabilities	PO5 Professionalism and leadership readiness	PO6 Intercultural and ethical competency	PO7 Self- awareness and emotional intelligence	PO8 Social Responsibility
21BCCCBM14	√			√			√	
21BCCCBT24	√	√		√		√	√	
20BCCCCIM34	√	√	√	√	√	√	√	√
20BCCCCB44	√	√	√	√	√	√	√	√
	√		√	√	√	√	√	√
20BCCCMB44								