



PROF. DR. T. J. SAWANT
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Founder Secretary

JAYAWANT SHIKSHAN PRASARAK MANDAL'S
JAYAWANTRAO SAWANT COMMERCE AND SCIENCE COLLEGE

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Email Id: principal@jspmjscocs.edu.in Website: www.jspmjscocs.edu.in
Approved by Govt. of Maharashtra & Affiliated to SPPU, Pune-07
College Code: PU/PN/CS/485/2018



Dr. Vinod R.Kulkarni
M.Com.M.A.MBA,M.Phil, PhD
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2.6.1. Programme Outcomes (POs) and Course Outcomes (COs) for all Programmes offered by the institution are stated and displayed on website.

HEI Input:

Provided list of Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) for all Programmes.




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PROGRAMME OUTCOMES (POS)

POs of B.Sc. Programmes

The under-graduate students, after completing their study of B.Sc. programme must acquire following.

Characteristics attributes of science graduate.

PO-1	Scientific Knowledge and Experimental Skills: The graduates must be able to demonstrate fundamental concepts in science and apply it in relative specialized areas like research & development, teaching and government, social or public services.
PO-2	Communication skills : The graduates must be able to transmit complex scientific and technical information in clear and concise manner relating to all areas of science subjects he studied
PO-3	Critical Thinking & Problem Solving ability: The graduates must be able to employ critical thinking and problem solving skills find appropriate solutions for the scientific and technical problems in the field related science subjects.
PO-4	Team leading and working capability: The graduates must be capable to work independently as well as a team leader or a member.
PO-5	Project Management: The graduates must be able to identify need, scope and beneficiaries to develop a project by observing responsible & ethical conduct and also with cyber security and safety.
PO-6	Digital Proficiency to use Modern Digital Tools: The graduates must be capable to learn and use modern technology like data mining, handling & management, robotics and artificial intelligence.
PO-7	Environmental and Societal Consciousness: The graduates must be aware about the environmental & the societal problems and must be capable to use and demonstrate the acquired knowledge to address these problems and to find appropriate solutions thereof.



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PO-8	Ethics and Human values: The graduates must be capable to think and behave rationally on the ethical issues they come across at their work place. Also, the graduates should adopt human values to keep harmony with individuals and with human beings.
PO-9	Lifelong Learning: The graduates should adopt lifelong learning to keep pace with emerging trends in technology and research.




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PROGRAM SPECIFIC OUTCOMES (PSOs) SCIENCE

Microbiology

1. To enrich student's knowledge and train them in the pure microbial sciences
2. To introduce the concepts of application and research in Microbiology
3. To utilize knowledge and skills to solve societal problems and build a professional career.

Chemistry

1. To Demonstrate comprehensive knowledge and understanding of core principles, theories, and concepts in chemistry
2. To apply critical thinking skills to analyze complex chemical phenomena, evaluate experimental data, and propose innovative solutions to theoretical and practical problems in chemistry
3. To utilize knowledge and skills to solve societal problems and build a professional career.

PHYSICS

1. To give students exposure to the latest advances in physics, allied disciplines and research.
2. To develop competence and skill in solving both theoretical and applied physics problems.
3. To utilize knowledge and skills to solve societal problems and build a professional career.




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LIST OF COURSE OUTCOME

ACADEMIC YEAR 2022-2023

(Semester I and semester II) (2019 Pattern)

Subject- Microbiology

Subject Name :Introduction to Microbial world & Bacterial cell and Biochemistry			Subject Code :MB111/121T
Course	Course Code	Course Outcome Number	Course Outcome
Introduction to microbial world (Theory)	MB 111		Upon completion of the course student will be able to
		CO1	To enrich students' knowledge and train them in the pure microbial sciences.
		CO2	To introduce the concepts of application and research in Microbiology.
		CO3	To inculcate sense of scientific responsibilities and social and environment awareness.
		CO4	To help students build-up a progressive and successful career.
Bacterial cell and biochemistry (Theory)	MB121		Upon completion of the course student will be able to
		CO1	To enhance the knowledge of bacterial cell structure
		CO2	To study all essential organelles
		CO3	To enhance the knowledge of biochemistry of cell
		CO4	To help students to build knowledge about structure and function of cell



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Subject Name: Basic Techniques in Microbiology

Subject Name: Basic Techniques in Microbiology		Subject Code : MB 112	
Course	Course Code	Course Outcome Number	Course Outcome
Basic Techniques in Microbiology MB112 (Theory)	MB 112		Upon completion of the course student will be able to
		CO 1	To introduce units of measurements- modern SI units.
		CO 2	To impart knowledge of Bright field Microscopy. Working of different Microscopes.
		CO 3	To acquaint Principle and working of different Microscopes.
		CO 4	To impart understanding about Sterilization
		CO 5	To impart understanding about Sterilization




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Semester III and IV
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Subject Name : Bacterial Physiology & Fermentation Technology (SEM III)		Subject Code: : MB 212	
Course	Course Code	Course Outcome Number	Course Outcome
Bacterial Physiology & Fermentation Technology MB 212 (Theory)	MB 211		Upon completion of the course student will be able to
		CO1	To understand methods of active site determination, role of enzymes and its cofactors in microbial physiology.
		CO2	To learn to perform enzyme assay, purification and quantification of enzymes activity, enzyme kinetics in terms of initial, final velocity, mathematical expression of enzyme kinetic parameters.
		CO3	To correlate regulation of metabolism at enzymatic levels and apply, methodology for commercial applications of enzymes
		CO4	To learn to perform enzyme immobilization



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(Semester III and IV)

(2019 Pattern)

Subject Name: Air, Water and Soil Microbiology		Subject Code: MB 222 T/MB 223 P	
Course	Course Code	Course Outcome Number	Course Outcome
Air, Water and Soil Microbiology (Theory)	MB 222		Upon completion of the course student will be able to
		CO1	To understand air Microbiology
		CO2	To understand water Microbiology
		CO3	To understand bacterial analysis of water for potability
		CO4	To understand Soil Microbiology




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(Semester V and semester VI)
(2019 Pattern)

Subject Name :Genetics and molecular biology		Subject Code:MB354/ MB364	
Course	Course Code	Course Outcome Number	Course Outcome
Genetics	MB 354		Upon completion of the course student will be able to
		CO1	To exhibit a knowledge base in Genetics and Molecular Biology
		CO2	To understand the central dogma of Molecular Biology
		CO3	To Understand Regulation of transcription
		CO4	To get introduced to concept of recombination and bacteriophage Genetics
		CO5	To understand the concept Genetic mapping in bacteria
Molecular Biology	MB364		Upon completion of the course student will be able to
		CO1	To understand gene linkage and crossing over
		CO2	To understand bacteriophage genetics
		CO3	To understand DNA damage and repair mechanism
		CO4	To understand Recombinant DNA technology
		CO5	To understand Molecular techniques used in RDT



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Subject Name: Agricultural Microbiology		Subject Code: MB 356 T	
Course	Course Code	Course Outcome Number	Course Outcome
Agricultural Microbiology (Theory)	MB 356		Upon completion of the course student will be able to
		CO1	To understand plant growth improvement with respect to disease resistance, environment tolerance.
		CO2	To understand the importance of microorganisms in sustainable agriculture, biotechnological application of bio films, edible vaccines.
		CO3	To correlate Soil Micro biome and Role of microorganisms in soil health
		CO4	To determine the use of Microorganisms as tools in plant genetic engineering
		CO5	To correlate stages of plant disease development, epidemiology, and symptom based classification, control methods.



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