JSS College for Women (Autonomous)

Program: B.Sc

Combination: Microbiology, Biotechnology

At the end of the program the student should be able to:

PSO1. Knowledge and understanding of concepts of microbiology and its application in pharma, food, agriculture, beverages, nutraceuticals industries.

PSO2. Understand the distribution, morphology and physiology of microorganisms and demonstrate the skills in aseptic handling of microbes including isolation, identification and maintenance

PSO3. Competent to apply the knowledge gained for conserving the environment and resolving the environmental related issues.

PSO4. Learning and practicing professional skills in handling microbes and contaminants in laboratories and production sectors.

PSO5. Exploring the microbial world and analyzing the specific benefits and challenges.

PSO6. Applying the knowledge acquired to undertake studies and identify specific remedial measures for the challenges in health, agriculture, and food sectors.

PSO7. Thorough knowledge and application of good laboratory and good manufacturing practices in microbial quality control.

PSO8. Understanding biochemical and physiological aspects of microbes and developing broader perspective to identify innovative solutions for present and future challenges posed by microbes.

PSO9. Understanding and application of microbial principles in forensic and working knowledge about clinical microbiology.

PSO10. Demonstrate the ability to identify ethical issues related to recombinant DNA technology, GMOs, intellectual property rights, biosafety and biohazards.

PSO11. Demonstrate the ability to identify key questions in microbiological research, optimize research methods, and analyze outcomes by adopting scientific methods, thereby improving the employability.

PSO12. Enhance and demonstrate analytical skills and apply basic computational and statistical techniques in the field of microbiology.

PSO13: Domain Knowledge - Acquire and apply knowledge of science in relevant areas.

PSO14: Problem Analysis – Recognize real-world problems and user's requirements to

propose solutions for the same using basic principles of science.

PSO15: Design and Development of Solutions – Developing solutions and inferences for complex problems using critical and analytical thinking.

PSO16: Investigation & Research – Ability to formulate hypothesis, augment research questions and identify & refer relevant sources for examining or inspecting technical issues as per their levelof understanding and knowledge.

PSO17: Use of Modern Techniques/Tools – Use digital resources, various software/platforms andappropriate techniques to interpret concepts of science.

PSO18: Impact of Science on Society – To prepare competent human resource and to develop scientific attitude at local and global levels for social benefit.

PSO19: Environment and Sustainability – Apply the knowledge gained for conserving environment and to handle environmental issues with sustainable solutions.

PSO20: Moral and Ethical Values – Imbibe moral values and professional ethics to maintain the integrality in a professional scenario while being aware of the cultural diversities.

PSO21: Individual and Team Work with Time Management – Work productively in a team or as an individual while exhibiting time management skills.

PSO22: Communication – Develop the caliber to convey various concepts of science effectively.

PSO23: Project Management and Finance – Set up enterprises/companies and build entrepreneurship, project management and finance planning skills.

PSO24: Life-long Learning – Engage in the art of self-directed learning.