

	Name of the Papers	Course Outcome
1.01	Research Methodology & Biostatistics	CO1: Understanding about types of Research CO2: Methodology of literature collection and citation CO3: Through knowledge about systematic research and research methodology CO4: Targeting research problem CO5: Gives upper hand in attaining the knowledge of experimental design, sample design, methods of data collection, processing and analysis, hypothesis testing etc CO6: Gives thorough knowledge on Interpretation and report writing
1.02	Modern trends in Biotechnology	<ol style="list-style-type: none"> 1. The scholar will have a fair knowledge on biodiversity, their recent measures of conservation, various growth indices , sustainable science etc 2. The scholars will have a fair knowledge on genetic engineering, forensic science, edible vaccines, operon concept etc 3. The scholars will be conversant with technologies related to fermented food, probiotics, food processing etc 4. By studying this paper the scholars will have a upper hand in getting employment in food and industries related to genetic engineering etc
1.03	Information and Communication Technology, Bioinformatics and application	<ol style="list-style-type: none"> 1. The scholars will be thorough with programming languages used to manage biological data base 2. The scholars will be beneficial in data mining form the data of Biological sciences
1.04	Optional Papers	
1.04a	Bamboo Technology and Utilization of bamboo	<p>Upon completion of this course, the student will be able to:</p> <ol style="list-style-type: none"> 1. Know about the systematic position of bamboo with respect to Family, Genera, Species, Variety or Forma. 2. Understand impact of bamboo plantation on environment and society. 3. Know the vegetative plant propagation practices for bamboo cultivation. 4. Know the anatomy of bamboo along with the chemical, physical and mechanical properties. 5. Study the post-harvest management of bamboo and bamboo shoots. 6. Understand the work space, tool and equipment design for post-harvest techniques and value addition. 7. Study the various preservation methods. 8. Acquaint with different strategies for management of bamboo diseases.

1.04b	Environmental Biotechnology and Bioresource	<ol style="list-style-type: none"> 1. The scholars will know from this paper the sustainability science with respect to nature and natural resources 2. Bioresource management using biotechnological tools 3. Different form of Bioremediation
1.04c	Genetic Engineering and Molecular Biology	<ol style="list-style-type: none"> 1. The scholar will have a fair knowledge on biodiversity, their recent measures of conservation, various growth indices , sustainable science etc 2. The scholars will have a fair knowledge on genetic engineering, forensic science, edible vaccines, operon concept etc 3. The scholars will be conversant with technologies related to fermented food, probiotics, food processing etc <p>By studying this paper the scholars will have an upper hand in getting employment in food and industries related to genetic engineering etc</p>
1.04d	Biochemistry	<ol style="list-style-type: none"> 1. The scholars will have an upper hand with the biochemical processes and pathways to understand biochemical processes 2. The scholars will have an upper hand energy management of Biochemical processes 3. The scholar after studying the paper will have an upper hand during employment opportunity in Start up related to Biochemical engineering etc
1.04e	Microbiology and Food Biotechnology	<p>Course outcome</p> <ul style="list-style-type: none"> • The course teaches to apply the theories and principles of food bioprocessing in practical, real-world situations and problems. • Understand the role of biotechnology in food industry and processes involved in production of transgenic for better food production in the food industry. • Have a clear concept on the idea of role of microorganisms in food fermentation, study about the different value added products by fermentation technique and also understand the role of beneficial microorganisms in food processing and preservation. • Understand bioprocess technology and the application of enzymes in food processing industries. • Students will gain understanding about the sources and nature of wastes obtained from various food industries and the ways to convert it into valuable products. Recognize and

		<p>communicate common processes which allow the different food processing waste to be converted into valuable products.</p> <ul style="list-style-type: none"> • Gain insights into the principles of Food Safety and Quality, surveillance and monitoring techniques.
1.05	Research and Publication ethics	<ol style="list-style-type: none"> 1. At the end of the course, the student will have awareness about the publication ethics and publication misconducts 2. The students will have a fair idea of scientific conduct 3. The students have rough idea of data base and research matrix