Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh

Monthly Teaching Plans- Odd Semester (Semester I)
Session–(2026-2027)
Name of the Teacher:Dr. Vandana Sharma
Department:Department of Food Science
Class:B.Sc. MFT (I)
Subject:PRINCIPLES OF MICROBIOLOGY
(BMF-DSC-MAJ -101)

S.No.	Date(Monthly)		Topics to be Covered	Academic Activity Undertaken
	From	To		
1.	23/07/2026	31/07/2026	**History and Development of Microbiology:** Discovery of microbial world, Importance of microbiology.	Interactive Lecture method, Power Point Presentations, Reference book
2.	01/08/2026	20/08/2026	**Prokaryotic cell structure and function:** Cell-wall: Structure and Functions, Gram and acid-fast staining mechanisms, Cell Membrane: Structure and Functions; Flagella; Pili; Cytoplasm: Ribosomes, nucleoid, chromosome, Endospore formation. **Revision Test**	Interactive Lecture method, Power Point Presentations, Reference book
3.	21/08/2026	31/08/2026	**Microbial Nutrition:** Nutritional requirements of microbes; Classification and functions of nutrient media; Classification of microbes on the basis of nutritional requirements.	Interactive Lecture method, Power Point Presentations Practical demonstration
4.	01/09/2026	19/09/2026	**Principles of microbial diagnostics:** Conventional, serological and molecular approaches. **Revision Test**	

5.	21/09/2026	05/10/2026	**Bacterial Growth:** Bacterial growth curve, Synchronous growth, Direct and Indirect methods to measure microbial growth.	
6.	06/10/2026	14/10/2026	**Control of microorganisms:** Physical and Chemical methods of sterilization/Disinfection. **Revision Test**	Interactive Lecture method, Power Point Presentations, Audio-visual aid
8.	15/10/2026	26/10/2026	**Microbiology of air:** Number and kinds of microorganisms in air, Sources of air borne microorganisms, significance of air flora in human health, industries.	Interactive Lecture method, Power Point Presentations, Audio-visual aid
9.	27/10/2026	07/11/2026	**Microbiology of water:** Microbial communities in natural water, Water pollution: causes hazards &control of human water borne diseases.	Interactive Lecture method, Power Point Presentations, Group Discussion, Flipped classroom
10.	08/11/2026	17/11/2026	**Revision test and remedial classes**	

MCM DAV College for Women, Sector – 36 A, Chandigarh

Monthly Teaching Plans **(**Odd Semester**)**

Session–(2026-27)

Name of the Teacher**: Dr. Gurpreet Kaur**

Department**: Department of Food Science**

Class**: B.Sc. MFT (I)** Section**: A**

Subject: BMF-DSC-MAJ-102 / **FOOD BIOMOLECULES**

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken
	From	To		
1.	23.07.26	9.08.26	Introduction to Bio-molecules - Major and minor constituents of food, their functions, sources, Bioavailability of nutrients.	**Lecture, Online Sources, PPT**
2.	10.08.26	22.08.26	**Water-** Definition and structure of water in food, Types of water, Phase diagram of Water, Water activity and food Spoilage	**Lecture, PPT**
3.	23.08.26	31.08.26	**Enzymes-**Definition, Enzymes classification, Factors affecting catalytic efficiency of enzymes	**Lecture, PPT**
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
4.	1.09.26	12.09.26	**Lipids:** Classification, structure and functions of lipids, saturated and unsaturated fatty acids, Physical properties-melting point, softening point, specific gravity, refractive index, smoke, flash, and fire point. **Chemical Properties**-Reichert meissel value, polenske value, iodine value, peroxide value, saponification value. Oxidative and Hydrolytic rancidity.	**Lecture, PPT**
5.	13.09.26	26.09.26	**Proteins:** Classification and Structure and of amino acids, Essential and non-essential amino acids, structural organization of proteins, physico-chemical properties of proteins, Denaturation of proteins	**Lecture, PPT**
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
6.	27.09.26	6.10.26	**Carbohydrates:** Classification of Carbohydrates, structure and properties of Important Mono-, Di- and Polysaccharides, enzymatic and non-enzymatic Browning, Fermentation.	**Lecture, PPT**
7.	7.10.26	14.10.26	**Vitamins and Minerals:** Classification, sources, and functions.	**Lecture, PPT**
8.	15.10.26	24.10.26	**Pigments** - Food pigments - Chlorophyll, carotenoids, anthocyanins, flavonoids, betanins.	**Lecture, PPT**
9.	25.10.26	31.10.26	**Flavours** Definition and basic taste factors. The smell sensation, Flavour Enhancers, and flavourings	**Lecture, PPT, Online Videos**
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
10.	1.11.26	10.11.26	Revision of topics, class tests and assignments	**Discussion**
Departmental Meeting to Coordinate and Review the Practical exams and internal assessment				

Name of the Teacher**: Dr. Anila Kumari**
Department**: Department of Food Science**
Class**: B.Sc. MFT (I)** Section**: A**
Subject: BMF-DSC-MIN-103/ **Fundamentals of Biotechnology**

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken
	From	To		
1.	27.07.2026	31.07.2026	Introduction to Biotechnology: Importance and scope of biotechnology	**Lecture, Online Sources, PPT, Quiz**
2.	01.08.2026	26.08.2026	**Cell Biology:** Structure, functions and organization of Prokaryotic (Bacteria) and Eukaryotic Cells (Animal, Plant, Fungal cells) **Microbial Diversity:** Importance of bacteria, yeasts, fungi, viruses and bacteriophages in biotechnology.	**Lecture, PPT**
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
3.	31.08.2026	09.09.2026	**Basic Tools and Techniques in Biotechnology:** Introduction to Microscopy; Simple and Differential Staining Techniques; Aseptic Techniques, Concept of Pure Culture, Serial Dilution Method, Pour Plate and Spread Plate Techniques. **Introduction to Enzymes used in Biotechnology; Introduction to concept of genomics and proteomics.**	**Lecture, PPT**
4.	14.09.2026	22.09.2026	**Genetically engineered organisms (GEOs)**: Genetically modified organisms (GMOs), genetically modified foods and transgenic plants and animals, along with their uses in various biotechnological applications.	**Lecture, PPT**
5.	23.09.2026	30.09.2026	**Fermentation:** Basic fundamentals of Biotechnology in fermentation processes. **Biotechnological Advances in Medical Diagnostics and Gene Therapy:** The significance of biotechnology in diagnostic methods, and an overview of gene therapy.	**Lecture, PPT**
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
6.	01.10.2026	07.10.2026	**Sustainability:** Green technology for managing soil and water pollution.	**Lecture, PPT**
7.	08.10.2026	22.10.2026	**Biothreats:** Public concerns and potential risks linked to genetic engineering: Bioterrorism and biowarfare.	**Lecture, PPT**
8.	23.10.2026	07.11.2026	**Ethics:** Understanding the ethical, social, and legal issues related to biotechnology.	**Lecture, PPT, Online Videos**
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
10.	12.11.2026	17.11.2026	Revision of topics, class tests and assignments	**Discussion**
Departmental Meeting to Coordinate and Review the Practical exams and internal assessment				