

(Teaching Plan)
MCM DAV College for Women, Sector– 36A, Chandigarh
Monthly Teaching Plans (Odd Semester)
Session – (2025-26)

Name of the Teacher: **Dr. Vandana Sharma**

Department: **Department of Food Science**

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

Section: **A**

Subject: BMF-DSC-MAJ -101 / PRINCIPLES OF MICROBIOLOGY

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken
	From	To		
1.	24/07/2025	30/07/2025	History and Development of Microbiology: Discovery of microbial world, Importance of microbiology.	Interactive Lecture method, Power Point Presentations, Reference book
2.	01/08/2025	20/08/2025	Prokaryotic cell structure and function: Cell-wall: Structure and Functions, Gram and acid-fast staining mechanisms, Cell Membrane: Structure and Functions; Cytoplasm: Ribosomes, nucleoid, chromosome, endospore etc. Revision Test	Interactive Lecture method, Power Point Presentations, Reference book
3.	21/08/2025	31/08/2025	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.	01/09/2025	20/09/2025	Principles of microbial diagnostics: Conventional, serological and molecular approaches. Revision Test	
5.	21/09/2025	05/10/2025	Bacterial Growth: Bacterial growth curve, Synchronous growth, Direct and Indirect methods to measure microbial growth.	
6.	06/10/2025	14/10/2025	Control of microorganisms: Physical and Chemical methods of sterilization/Disinfection. Revision Test	Interactive Lecture method, Power Point Presentations, Audio-visual aid
8.	15/10/2025	25/10/2025	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.	26/10/2025	04/11/2025	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.	05/11/2025	13/11/2025	Revision test and remedial classes	

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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.	24.07.2025	31.07.2025	Introduction to Bio-molecules - Major and minor constituents of food, their functions, sources, Bioavailability of nutrients.	Lecture, Online Sources
2.	01.08.2025	20.08.2025	Water -Definition and structure of water in food, Types of water, Phase diagram of Water, Water activity and food Spoilage Enzymes -Definition, Enzymes classification, Factors affecting catalytic efficiency of enzymes	Lecture
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
3.	21.08.2025	3.09.2025	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
4.	04.09.2025	20.09.2025	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
5.	21.09.2025	30.09.2025	Carbohydrates : Classification of Carbohydrates, structure and properties of Important Mono-, Di- and Polysaccharides, enzymatic and non-enzymatic Browning, Fermentation.	Lecture, PPT
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
6.	01.10.2025	07.10.2025	Vitamins and Minerals : Classification, sources, and functions.	Lecture, PPT
7.	08.10.2025	22.10.2025	Pigments - Food pigments - Chlorophyll, carotenoids, anthocyanins, flavonoids, betanins.	Lecture, PPT
8.	23.10.2025	01.11.2025	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.	2.11.2025	10.11.2025	Revision of topics, class tests and assignments	Discussion
Departmental Meeting to Coordinate and Review the Practical exams and internal assessment				

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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.	24.07.2025	31.07.2025	Introduction to Biotechnology: Importance and scope of biotechnology	Lecture, Online Sources
2.	01.08.2025	20.08.2025	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
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
3.	21.08.2025	3.09.2025	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.	04.09.2025	20.09.2025	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.	21.09.2025	30.09.2025	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.	01.10.2025	07.10.2025	Sustainability: Green technology for managing soil and water pollution.	Lecture, PPT
7.	08.10.2025	22.10.2025	Biothreats: Public concerns and potential risks linked to genetic engineering: Bioterrorism and biowarfare.	Lecture, PPT
8.	23.10.2025	01.11.2025	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.	2.11.2025	10.11.2025	Revision of topics, class tests and assignments	Discussion
Departmental Meeting to Coordinate and Review the Practical exams and internal assessment				

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Name of the Teacher: **Dr.Gurpreet Kaur & Dr. Anila Kumari**

Department: **Department of Food Science**

Class: **UG-1stYear**

Section: **A**

Subject: **BMF-MDC-1-101 / NUTRITIONANDDIETARY MANAGEMENT**

S. No.	Date (Monthly)		TopicstobeCovered	Academic Activity Undertaken
	From	To		
1.	1.08.2025	7.08.2025	NeedandScopeofSpecialtyFoods: Needandscope ofspecialtyfoods,Functionalfoods	Lecture,
2.	08.08.2025	15.08.2025	Conveniencefood,Healthcareandmedicalbenefits, Nutritional status, Low-cost foods. Nutritional labeling	Lecture
3.	16.08.2025	23.08.2025	Specialty Foods Based on Sources: Cereals and millets, Legumes and pulses, Fruits and vegetables Animalfoodsources,By-productbased,bioactive components	Lecture,PPT
4.	23.08.2025	30.08.2025	Introduction to human nutrition, energy value of foods andfromproximateprinciples,dailycalorieneedsfor basalmetabolism.	Lecture,PPT
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
5.	01.09.2025	14.09.2025	Dietary Requirements of Nutrients: Requirements and role of carbohydrates, lipids, water, proteins, vitamins, and minerals in human health, recommended dietaryallowance(RDA),dietarysources.Anti-nutritionalfactorsinplantfoods	Lecture,PPT
6.	15.09.2025	30.09.2025	Therapeutic Foods: Modification of diets in disorders ofdigestivetract,liver,cardiovascularsystem,kidney, metabolicdisorders,allergy, endocrinedisorders.	Lecture,PPT
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
7.	1.10.2025	15.10.2025	SpecificConsumerOrientedFoods: Defencepersons, Space/astronaut,Highaltitudemountainclimbers, Disaster situation – crises, care, and maintenance	Lecture,PPT
8.	16.10.2025	31.10.2025	NutritionManagementTechniques: Infantnutrition andinfantfoods,geriatricnutrition,maternalnutrition, SportsNutrition.	Lecture,PPT
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans				
9.	1.11.2025	10.11.2025	Advances in Nutrition: Effect of processing, preservation, and storage on nutritional quality offoods,foodfortification,foodenrichment, complementationandsupplementationdiets.	Discussion
Departmental Meeting to Coordinate and Review the Practical exams and internal assessment				