

Lesson Plan
Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans- (Semester-V)
Session – 2016-17

Name of the Teacher- Dr.Sandeep Kaur
Department- Food Science
Class- B.Sc. III (MFT)

Paper–I: Environmental Microbiology (BMF-5001)

Month	Date		Topics to be Covered	Academic Activity Undertaken
	From	To		
July	11.07.2016	31.07.2016	Introduction to Soil Microbiology <ul style="list-style-type: none"> • Soli composition, Rhizosphere, soil enrichment techniques, soil enzymes) • Isolation of Soil microbes and their characterization 	Lecture method, PPT
August	01.08.2016	31.08.2016	Biological interactions (positive, negative and neutral); special emphasis on VAM, lichens, Nitrogen fixation Introduction to Bio-fertilizers, Bio-pesticides (Different classes and types), advantages of using them over chemical fertilizers	Lecture method, PPT, Animation videos
September	01.09.2016	30.09.2016	Biogeochemical cycling of nutrients and role of microbes Introduction to terms: Bio-sorption, Bio-remediation, Bio-degradation, Bio-deterioration, xenobiotics. Microbial deterioration of Wood, Textiles, Paper	Lecture method, PPT, Animation Videos
October	01.10.2016	31.10.2016	Biogas production pathway and their advantages, Hydrogen gas production and its applications. Solid waste management (types of solid waste and different methods)	Lecture method, PPT, visit to Vermi-compositing college setup.
November, December	01.11.2016	03.12.2016	BOD, COD, sewage water treatment steps (primary, secondary, tertiary) Role of biofilms and indicator microbes for potability, Revision and Class test	Lecture method, PPT, Animation videos

Lesson Plan
Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans- (Semester-V)
Session – 2016-17

Names of the Teachers- Dr.Kirti
Department- MFT (Food Science)

Class- B.Sc. III (MFT)

Paper–II: Food analysis and Quality control (BMF-5002)

Month	Date		Topics to be Covered	Academic Activity Undertaken
	From	To		
July	22.07.2016	31.07.2016	Introduction to Food Quality Control, Sampling techniques and preparation of food samples	Lecture method, PPT,
August	01.08.2016	31.08.2016	Proximate analysis of Food-Moisture, Carbohydrates, Proteins, Fats, Crude Fiber, Ash content, Minerals, Vitamins. Physico-chemical properties– (TS, TSS, Acidity, solubility, sedimentation)	Lecture method, PPT
September	01.09.2016	30.09.2016	Sensory assessment of food quality – Appearance of food, Flavor of food, Texture of food – Subjective & Objective Analysis Sensory Tests – Difference, Rating & Sensitivity tests, Types of panels, Testing area & schedule Food Safety – Role of agencies & legal aspects, National & International food laws, Nutritional labeling requirements of foods MST	Lecture method, PPT
October	01.10.2016	31.10.2016	. Quality control of Milk & milk products, Oils & Fats, Cereal grains & flours, Fruits & vegetable products, Canned foods, Egg & egg products, Meat & Meat products	Lecture method, PPT
November	01.11.2016	01.12.2016	Adulterants and Preservatives Food quality management – TQM, Good manufacturing practices, seven principles of HACCP & codex, Quality control methods of raw materials, manufacturing process & finished products Revision and Class test	Lecture method, PPT

Lesson Plan
Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans- Even Semester (Semester-VI)
Session – 2016-17

Name of the Teacher- Dr. Sandeep Kaur

Department- Food Science

Class- B.Sc. III (MFT)

Paper-I: Intellectual Property rights (BMF-6001)

Month	Date		Topics to be Covered	Academic Activity Undertaken
	From	To		
January	11.01.2017	31.01.2017	Introduction to tangible and non-tangible property, IPR rights, and their types, Paris and Berne convention, WIPO, WTO and their role , TRIPS agreement and its implications (in India). Concept of prior and competing art, types of prior art searches, databases for search, USPTO and EPO,	Lecture method, PPT, hands on search using free online search databases
Departmental Meeting on 06.02.17 to coordinate and review the monthly completion of syllabus as per lesson plans				
February	01.02.2017	29.02.2017	Patent and its definition, types. Basic requirement of patentability-novelty, non-obviousness, public domain and utility. Indian Patent Act-1970 and its recent amendments. Patent Filing process-fees, forms, guidelines, who can file a patent etc. Types of patent applications, provisional and complete, Conventional patent filing process in detail. International patenting, PCT and its implications..	Lecture method, PPT,
March	01.03.2017	31.03.2017	Patent infringement (meaning, scope, case studies). Special issues in patenting. Role of country patent office, Publication rules for university and organization, publication by students, lecturers, scientists. Credit sharing and financial incentives.	Lecture method, PPT, case studies regarding patent infringement

			Govt. policy and rules for regulation of nanotechnology, Safe workplace and self-regulation.	
April	01.04.2017	19.04.2017	Liability and negligence of nanotechnology, Class action and certification, Risks associated with Nano-particles Revision and Class test	Lecture method, PPT

Lesson Plan
Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans- (Semester-VI)
Session – 2016-17

Names of the Teachers- Dr.Sonu
Department- MFT (Food Science)

Class- B.Sc. III (MFT)
Paper–II: Food Engineering (BMF-6002)

Month	Date		Topics to be Covered	Academic Activity Undertaken
	From	To		
January	11.01.2017	31.01.2017	Units and Dimensions: Concept of Unit operation, Mass Energy balance, Dimensions and Units, Unit Conversion, Dimensional Analysis Psychrometric chart: Dry and wet bulb temperature, humidity & relative humidity, adiabatic saturation temperature, Dew point, Information about psychrometric chart	Lecture method, PPT
Departmental Meeting on 06.02.17 to coordinate and review the monthly completion of syllabus as per lesson plans				
February	01.02.2017	28.02.2017	Refrigeration: Reverse Carnot's cycle, Pressure enthalpy chart, temperature entropy chart, vapor compression refrigeration system, equipment's C.O.P., Refrigeration load calculation, Application of refrigeration in food processing Operations Freezing: Principles and methods, Different types of Freezers, Industrial problems associated of frozen storage food products	Lecture method, PPT,
Departmental Meeting on 15.03.17 to coordinate and review the monthly completion of syllabus as per lesson plans				
March	01.03.2017	31.03.2017	Introduction to Heat Transfer: Heat Transfer, modes of heat transfer, conduction through a flat wall, conduction through hollow cylinder, convective heat transfer, radiation heat transfer Heat transfer Equipments and Design: Heat Transfer equipments, parallel and counter current flow heat exchangers, Logarithmic mean temperature difference, heat transfer coefficient, heat exchanger design (preliminary), concept of black body, Emissivity and Absorptivity MST	Lecture method, PPT,
April	01.04.2017	30.04.2017	Flow of fluids: Types of fluids and fluid flows, viscosity, Bernoulie's equation and its application for measurement of flow rate Different types of pumps (Reciprocating, rotary and centrifugal pumps).	Lecture method, PPT

			<p>Evaporation: Mechanisms of vaporization, Boiling Point elevation, Different types of evaporators, Evaporation of heat sensitive materials</p> <p>Size Reduction: Principles of size reduction, methods of size reduction.</p> <p>Mixing: Theory of mixing, mixing of liquids & solids, types of mixers, power calculation in mixing. Homogenization</p>	
May	1.05.2017	16.05.2017	<p>Separation processes: Principles and methods of gas absorption, Distillation, Extraction and washing, Filtration, sedimentation, sieving, centrifugation</p> <p>Membrane Separation Processes: Separation by Sieving, Screen effectiveness; Theory of filtration, Reverse Osmosis, Nano filtration and Ultra filtration</p>	