Name of Faculty:- Bansi Lal
Discipline: - FoodTechnology
Institute: Govt. Polytechnic Mandi Adampur
Semester:- 5th
Subject: - Technology of Oils and Fats (Theory and Practical)
Lesson Plan Duration: - 16 weeks (Aug 2025 to Nov-2025)
Workload (Theory/Practical) per week (in hours): Theory- 02, Practical- 04

Week	Lecture Day	Topic
1st	1.	Introduction to oils and fats
	2.	Definition of oils , fats, esters, Acids, Triglycerides
	3.	**Determination of smoke point of a given sample (Practical)**
	4.	**Determination of smoke point of a given sample (Practical)**
2nd	5.	Glycerol, fatty acids, monoglycerides, Diglycerides, visible fat, invisible fat,
	6.	Shortenings, and trans fats; Types of fatty acids (saturated,unsaturated,MUFA,PUFA)
	7.	**Determination of Flash point of a given sample (Practical))**
	8.	**Determination of Flash point of a given sample (Practical)**
3rd	9.	Essential fatty acids, importance of essential fatty acids, Omega fatty acids, free fatty acids
	10.	Composition of oils and fats.
	11.	**Determination of Fire point of a given sample (Practical)**
	12.	**Determination of Fire point of a given sample (Practical)**
4th	13.	Sources of oils and fats.
	14.	Physical properties of oils and fats.
	15.	**To determine the acid value of the given sample (Practical)**
	16.	**To determine the acid value of the given sample (Practical)**
5th	17.	Physical properties of oils and fats.
	18.	Chemical properties of oils and fats.
	19.	**To determine the iodine value of the given sample (Practical)**
	20.	**To determine the iodine value of the given sample (Practical)**
6th	21.	Chemical properties of oils and fats.
	22.	Nutritive value of oils and fats
	23.	**To determine the saponification value of a given sample. (Practical)**
	24.	**To determine the saponification value of a given sample. (Practical)**
7th	25.	SESSIONAL-I
	26.	Functions of oils and fats in food: Tenderness, Texture
	27.	**Determination of rancidity of a given sample. (Practical)**
	28.	**Determination of rancidity of a given sample. (Practical)**
8th	29.	Functions of oils and fats in food:, Flavour, Emulsion.
	30.	Processing of oil and fats.
	31.	**To determine the melting point of a given sample. (Practical)**
	32.	**To determine the melting point of a given sample. (Practical)**
9th	33.	Pre-treatment and extraction method.
	34.	Rendering and pressing, Solvent extraction and refining.
	35.	**To determine the fat content of a given sample by soxhlet apparatus. (Practical)**
	36.	**To determine the fat content of a given sample by soxhlet apparatus. (Practical)**

10th	37. 38. 39. 40.	Bleaching and Hydrogenation. Winterization, Degumming & Fractionation. **Detection of adulteration in fats and oils (Practical)** **Detection of adulteration in fats and oils (Practical)**
11th	41. 42. 43. 44.	SESSIONAL-II Deodorizing, Plasticizing and Packaging **Detection of adulteration in fats and oils (Practical)** **Detection of adulteration in fats and oils (Practical)**
12th	45. 46. 47. 48.	Production and processing of animal fats: Margarine Production and processing of animal fats: Margarine **Visit to the oil processing industry** **Visit to the oil processing industry**
13th	49. 50. 51. 52.	Production and processing of animal fats: Lard Production and processing of animal fats: Larrd Production and processing of animal fats: Fish oil Production and processing of animal fats: Fish oil
14th	53. 54. 55. 56.	Production and processing of vegetable oils -Soya bean oil Production and processing of vegetable oils -Soya bean oil Production and processing of vegetable oils –Mustard oil. Production and processing of vegetable oils –Mustard oil
15th	57. 58. 59. 60.	Production and processing of vegetable oils –Groundnut oil. Production and processing of vegetable oils –Groundnut oil. Production and processing of vegetable oils –Sunflower oil. Production and processing of vegetable oils –Olive oil.
16th	61. 62. 63. 64.	SESSIONAL-III Production and processing of vegetable oils –Olive oil. Production and processing of vegetable oils –Palm oil. Production and processing of vegetable oils –Palm oil.