

MEDICINAL CHEMISTRY

Semester	Subject Code	Category	Lecture Hours		Theory hours		Practical Hours		Credits
			Per week	Per sem.	Per week	Per sem.	Per week	Per sem.	
III	21NCH3A	Non-major-I	2	30	2	30	-	-	2

COURSE OBJECTIVES:

The students will be able to

- Gain knowledge about the introductory idea in Biochemical analysis, Common diseases and their treatment, First aid and some of the important Indian medicinal plants.

COURSE OUTCOMES:

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	Learn about the first aid and safety methods.	K4
CO2	Gain knowledge about some common drugs, uses and their effects.	K2
CO3	Gain knowledge about the vital ailments and treatments, classification of vitamins and their sources.	K3
CO4	Learn about the Indian medicinal plants and its uses.	K3
CO5	Understand about air and water-borne diseases, their control and treatments.	K2

*CO – Course Outcomes

Knowledge Level: K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze.

MAPPING WITH PROGRAMME OUTCOMES:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	S	S	M	S	S
CO2	S	S	M	M	M	S
CO3	S	S	M	S	S	S
CO4	S	S	S	S	S	S
CO5	S	S	S	M	S	S

(S – Strong; M – Medium; L – Low)

UNIT- I: First Aid and Safety**6 Hours**

- 1.1 First aid for accidents – Important rules of first aid – Treatment of shock, Haemorrhage, cuts and wounds.
- 1.2 Abrasion – Bruises – Bleeding – Fracture – Burns – Fainting – Poisonous Bites – Hazards Alert and Precautions for Safety.

UNIT – II: Common Drugs**6 Hours**

- 2.1 Drugs –Definition – Antibiotics, Antipyretics, Analgesics, Anti-inflammatory agents, Sedatives – Vaccines.
- 2.2 Antiseptics, Antihistamines, Tranquilizers, Hypnotics and Antidepressant drugs – Definition, examples, uses and their side effects.

UNIT – III: Vital Ailments and Vitamins**6 Hours**

- 3.1 Blood pressure – Hypertension and Hypotension – Diabetes, Cancer, AIDS – Causes, Symptoms and treatments.
- 3.2 Vitamins – Classification of vitamins – Sources and deficiency diseases caused by vitamins.

UNIT – IV: Indian Medicinal Plants**6 Hours**

- 4.1 Palak, Neem, Kizhanelli, Amla, Hibiscus– Chemical Constituents and Medicinal Uses.
- 4.2 Ginger, Thoothuvalai, Nochi, Thulasi, Aloe Vera – Chemical Constituents and Medicinal uses.

UNIT – V: Air and Water-borne diseases**6 Hours**

- 5.1 Air and its Compositions – Common air-borne diseases, their control and treatment – Diphtheria, Whooping cough, Influenza, Measles, Mumps and common cold.
- 5.2 Common water-borne diseases – Cholera, Typhoid and Dysentery – Water treatment and control of water-borne diseases – Covid-19 (droplets).

TEXT BOOKS:

S. No.	Authors	Title	Publishers	Year of publication
1.	Jayashree Ghosh	A Textbook of Pharmaceutical Chemistry	S. Chand and Company Ltd.	2012
2.	Jayashree Ghosh	Fundamental Concepts of Applied Chemistry	S. Chand and Company Ltd.	2006

3.	S. Lakshmi	Pharmaceutical Chemistry	Sultan Chand	2011
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REFERENCE BOOKS:

S. No.	Authors	Title	Publishers	Year of publication
1.	S. C. Rastogi	Biochemistry	Tata McGraw Hill Publishing Co	1993
2.	Rasheeduz Zafar	Medicinal Plants of India	CBS Publishers and distributors	2017
3.	B. L. Oser	Hawk's Physiological Chemistry	Tata McGraw – Hill Publishing Co. Ltd.	1993
4.	Asutosh Kar	Medicinal Chemistry	New Age International Publishers	2007
5.	Gudeep R. Chatwal	Medicinal Chemistry	Himalaya Publishers House	2012
6.	V. K. Ahluwalia and M. Chopra	Medicinal Chemistry	Ane Books Pvt. Ltd.	2008

TEACHING METHODOLOGY:

- Power Point Presentations
- Assignments
- Animated videos
- Chalk and Board
- Group discussion

SYLLABUS DESIGNER:

- Dr. R. Arunadevi, Assistant Professor of Chemistry