



CRITERION I - CURRICULAR ASPECTS

1.3 Curriculum Enrichment

1.3.2 Certificate Courses/Value-added Courses

Value added Courses

Department of Chemistry
2022-2023

Syllabus

- 1. Analytical chemistry and instrumentation techniques**
- 2. Water and Effluent Analysis**
- 3. Chemistry in Changing Lifestyle**
- 4. Soaps and Detergent Making**
- 5. Phytochemistry and Biological Activities of Medicinal Plant.**

GOVERNMENT COLLEGE FOR WOMEN, (AUTONOMOUS), KUMBAKONAM.
DEPARTMENT OF CHEMISTRY
VALUE ADDED COURSE -2022-23

COURSE CONTENT

VAC -1

Analytical chemistry & instrumentation techniques

- UV-visible double beam spectrophotometer
- Colorimeter
- pH Meter

VAC-2

Water and effluent analysis

- Measurement of total hardness of water.
- pH measurement of ground water.
- COD determination of water sample.

VAC-3

Chemistry in changing life style

- Dry Cleaning of Clothes, Versatile Bleaching Agents. Environmental Pollution by Volatile Organic Solvents / Compounds (VOCs).
- Lubricants; Definition, function of lubricants and properties. Examples, classification of lubrication, additives for lubricating oils, synthetic lubricants, greases and solid lubricants (Graphite and MoS₂).

VAC-4

Soap and detergent making

- Raw material for soap industry and their selection.
- Plant and process employed in soap manufacturing.
- Solid soap manufacture.
- Preparation of liquid soap.
- Manufacturing of hard soap

VAC-5

Phytochemistry and biological activities of Medicinal plants

- Extraction – purification of bio-active compounds from plants.
- Isolation of bioactive compounds
- Importance of Herbal medicine
- traditional uses of Indian medicinal plants – *Ecliptaalba*, *Gymnema Sylvestre*, *Ocimum sanctum*, *Curcuma longa*.