



MANNAR THIRUMALAI NAICKER COLLEGE(Autonomous)

(An Autonomous Institution Affiliated to Madurai Kamaraj University)

(Accredited with "A" Grade by NAAC)

Pasumalai, Madurai -625004

Programme : UG	Part III : Core
Semester : V	Hours : 05
Subject Code : 17UCHC51	Credits : 05

ORGANIC CHEMISTRY –II

Course outcomes:

CO1: To know about the details of aromatic compounds and aromatic hydro compounds

CO2: To get knowledge in halogens, nitro and amino compounds

CO3: To study about the aromatic acids

CO4: To analysis the skills in polynuclear hydrocarbons

Programme : B.Sc (Chemistry)	Part III : Core
Semester : V	Hours : 05
Subject Code : 17UCHC52	Credits : 05

PHYSICAL CHEMISTRY – II

Course outcomes:

CO1: To learn about particle and wave nature of electron

CO2: To get knowledge in colligative properties and dilute solution

CO3: To know about the principles of group theory

CO4: To gain knowledge on Spectroscopy

Programme : UG	Part III : Core
Semester : V&VI	Hours : 03
Subject Code : 17UCHCP3	Credits : 0-

PHYSICAL CHEMISTRY EXPERIMENTS (PRACTICAL)

Course outcomes:

CO1: To acquire knowledge in determination of molecular weight & CST

CO2: To develop skill in phase diagram, viscosity & kinetics

CO3: To gain knowledge in partition coefficient experiments.

CO4: To analysis the skill in conductivity.

Programme : UG	Part III : Core
Semester : V&VI	Hours : 03
Subject Code : 17UCHCP4	Credits : -

GRAVIMETRIC ANALYSIS AND ORGANIC PREPARATION (PRACTICAL)

Course outcomes:

- CO1:** To develop skill in gravimetric analysis
- CO2:** To gain knowledge of various chemical properties
- CO3:** To get knowledge in the separation of mixtures
- CO4:** To analysis the preparation of various organic compounds

Programme : UG	Part III : Core
Semester : V&VI	Hours : 02
Subject Code : 17UCHCP5	Credits : -

ORGANIC ANALYSIS AND ESTIMATION (PRACTICAL)

Course outcomes:

- CO1:** To acquire skill in organic analysis
- CO2:** To identify the functional groups
- CO3:** To analysis the side chain and halogen compounds
- CO4:** To gain knowledge in organic estimation

Programme : UG	Part III : Core Elective
Semester : V	Hours : 04
Subject Code : 17UCHE51	Credits : 04

INORGANIC AND ANALYTICAL CHEMISTRY

Course outcomes:

- CO1:** To learn about Acids, Bases and bio inorganic chemistry.
- CO2:** To study about the analytical and analysis of experimental results.
- CO3:** To learn about the knowledge of solid state
- CO4:** To analysis the knowledge on types of defects

Programme : UG	Part III : Core Elective
Semester : V	Hours : 04
Subject Code : 17UCHE52	Credits : 04

BIOINORGANIC CHEMISTRY

Course outcomes:

- CO1:** To gain knowledge about the role of metal ions in biological system
- CO2:** To understand the theory of enzyme catalysis
- CO3:** To gain knowledge on metals in medicine
- CO3:** To analysis the skills about various agents in medicine

Programme : UG
Semester : V
Subject Code : 17UCHE53

Part III : Core Elective
Hours : 04
Credits : 04

CLINICAL AND MEDICINAL CHEMISTRY

Course outcomes:

- CO1:** To learn about the disinfectants and antiseptics
- CO2:** To understand the important drugs and the mode of actions
- CO3:** To gain knowledge on Enzymes
- CO3:** To analysis the knowledge about Body fluids

Programme : UG
Semester : V
Subject Code : 17UCHS51

Part IV : Skill
Hours : 02
Credits : 02

DRUG CHEMISTRY

Course outcomes:

- CO1:** To acquire knowledge in different systems of medicine
- CO2:** To have the basic idea in chemotherapy and applications
- CO3:** To study about the synthetic drugs
- CO4:** To gain basic knowledge in hormones and vitamins

Programme : UG
Semester : VI
Subject Code : 17UCHC61

Part III : Core
Hours : 05
Credits : 05

ORGANIC CHEMISTRY – III

Course outcomes:

- CO1:** To learn about the knowledge of civetone & Muscone
- CO2:** To have a basic knowledge in molecular rearrangements and heterocyclic compounds
- CO3:** To know about principles of spectroscopy
- CO4:** To gain basic knowledge about Applications of Spectroscopy

Programme : UG
Semester : VI
Subject Code : 17UCHC62

Part III : Core
Hours : 05
Credits : 05

PHYSICAL CHEMISTRY – III

Course outcomes:

- CO1:** To acquire elaborate knowledge in thermodynamics.
- CO2:** To get more knowledge in photochemistry
- CO3:** To learn about electrode and electrolytic cells in electrochemistry
- CO4:** To analysis the basic knowledge in potentiometric titrations

Programme : UG	Part III	:Core
Semester : VI	Hours	: 03
Subject Code : 17UCHCP3	Credits	: 06

PHYSICAL CHEMISTRY EXPERIMENTS (PRACTICAL)

Course outcomes:

CO1: To acquire knowledge in determination of molecular weight & CST

CO2: To develop skill in phase diagram, viscosity & kinetics

CO3: To gain knowledge in partition coefficient experiments.

CO4: To analysis the skill in conductivity.

Programme :UG	Part III	: Core
Semester : VI	Hours	: 03
Subject Code : 17UCHCP4	Credits	: 05

GRAVIMETRIC ANALYSIS AND ORGANIC PREPARATION (PRACTICAL)

Course outcomes:

CO1: To develop skill in gravimetric analysis

CO2: To gain knowledge of various chemical properties

CO3: To get knowledge in the separation of mixtures

CO4: To analysis the preparation of various organic compounds

Programme : UG	Part III	:Core
Semester : VI	Hours	: 02
Subject Code : 17UCHCP5	Credits	: 04

ORGANIC ANALYSIS AND ESTIMATION (PRACTICAL)

Course outcomes:

CO1: To acquire skill in organic analysis

CO2: To identify the functional groups

CO3: To analysis the side chain and halogen compounds

CO4: To gain knowledge in organic estimation

Programme :UG	Part III	: Core Elective
Semester : VI	Hours	: 04
Subject Code : 17UCHE61	Credits	: 04

APPLIED CHEMISTRY

Course Outcomes

CO1: To enable the students to learn about water and sewage treatment,

CO2: To develop the basic skills of match, silicate and petrochemical chemistry

CO3: To gain basic knowledge in lacquer paint

CO4: To analysis the basic skills about fertilizers

Programme :UG
Semester : VI
Subject Code : 17UCHE62

Part III : Core Elective
Hours : 04
Credits : 04

NANO CHEMISTRY

Course Outcomes

- CO1:** To enable the students to learn about the Nanoscale
CO2: To study about the Semiconductors and Quantum dots
CO3: To gain basic knowledge in Nanobiology and Nanosensor
CO4: To gain knowledge in Nanomedicine

Programme : UG
Semester : VI
Subject Code : 17UCHE63

Part III : Core Elective
Hours : 04
Credits : 04

APPLICATIONS OF COMPUTER IN GREEN CHEMISTRY

Course Outcomes

- CO1:** To gain basic knowledge about computer application in chemistry
CO2: To understand the basic concept of Green Chemistry
CO3: To gain basic knowledge of Green Chemistry
CO4: To analysis the knowledge skill in fundamentals of Green Chemistry

Programme :UG
Semester : VI
Subject Code : 17UCHS61

Part IV : Skill
Hours : 02
Credits : 02

MACROMOLECULAR CHEMISTRY

Course outcomes:

- CO1:** To learn about the different mechanisms involved in the polymer preparation
CO2: To learn about the different types of polymerization techniques
CO3: To study in detail about the glass transition temperature
CO4: To gain knowledge in polymer degradation

Programme : UG
Core
Semester : III
Subject Code : 18UCHC31

Part III :
Hours per week : 04
Credit : 04

PHYSICAL CHEMISTRY – I

Course Outcomes:

- CO1:** To study the essentials of gaseous state and colloidal state of matter
CO2: To have the basic idea of chemical kinetics
CO3: To know about the adsorption & catalysis
CO4: To study the kinetics of chemical equation in various fields.

Programme : UG **Part III : Core**
Semester : IV **Hours per week : 02**
Subject Code : 18UCHCP2 **Credit : -**

Major Chemistry Practical –II
Volumetric Analysis (Practical)

(A double titration involving the making up of the solution to be estimated and the preparation of a primary standard.)

Course Outcomes:

CO1: To develop skill in Acidimetric and alkalimetric analysis

CO2: To gain knowledge in redox, iodometry and dichrometry

CO3: To study about the argentimetry and EDTA titration

CO4: To determine the percentage of substance in Industry through volumetric analysis.

Programme : UG **Part IV : NME**
Semester : III **Hours per week : 02**
Subject Code : 18UCHN31 **Credit : 02**

WASTE WATER TREATMENT

Course Outcomes:

CO1: To understand about the soft water and hard water.

CO2: To know about the various external conditional methods.

CO3: To discern on the treatment of boiler feed water.

CO4: It is useful to analyse water and become an analyst.

Programme : UG **Part III : Core**
Semester : IV **Hours per week : 04**
Subject Code : 18UCHC41 **Credit : 04**

INORGANIC CHEMISTRY-II

Course Outcomes:

CO1: To gain the basic knowledge of metallurgy.

CO2: To understand the essentials of co-ordination compounds.

CO3: To learn about the general discussion of p-block elements.

CO4: Metallurgy unit is applicable to go Industry for students.

Programme : UG
Semester : IV
Subject Code : 18UCHCP2

Part III : Core
Hours per week : 02
Credit : 02

Major Chemistry Practical –II
Volumetric Analysis (Practical)

(A double titration involving the making up of the solution to be estimated and the preparation of a primary standard.)

Course Outcomes:

- CO1:** To develop skill in Acidimetric and alkalimetric analysis
- CO2:** To gain knowledge in redox, iodometry and dichrometry
- CO3:** To study about the argentimetry and EDTA titration
- CO4:** To determine the percentage of substance in Industry through Volumetric analysis.

Programme : UG
Semester : IV
Subject Code : 18UCHN41

Part IV : NME
Hours per week: 02
Credit : 02

POLYMER CHEMISTRY

Course Outcomes:

- CO1:** To realize about the Nomenclature of polymers.
- CO2:** To know the classification of polymers.
- CO3:** To study about the synthetic polymers.
- CO4:** To learn as good trainee in industrial level.