



**COURSE OUTCOMES**

**DEPARTMENT OF B.VOC**

**I B. Voc., Environmental Assessment and Remediation**

**SEMESTER 1**

**Subject Name: Communicative English- Paper I      Subject Code: EV22E11/ EV15E1**

<b>CO1:</b>	Provide the vital information required to understand the concepts underlying various communication skills.
<b>CO2:</b>	Cover the several aspects of communication in oral and written modes.
<b>CO3:</b>	Facilitate acquisition of necessary language skills.
<b>CO4:</b>	learn the basic grammar of English language
<b>CO5:</b>	apply knowledge of word power and grammar rules in formal and informal letter writings

**Subject Name: Mathematics – I**

**Subject Code: EV22M11/ EV15M1**

<b>CO1:</b>	understand basic mathematics, data interpretations.
<b>CO2:</b>	learn about effective presentation of data.
<b>CO3:</b>	acquire knowledge about applications of Differentiation
<b>CO4:</b>	enrich the knowledge about methods of data collection
<b>CO5:</b>	demonstrate the Computations

**Subject Name: Value Education**

**Subject Code: U22VE11**

**In this course the students will**

<b>CO1:</b>	Be sensitized towards value formation.
<b>CO2:</b>	Take responsibility with regard to making positive personal and social choices.
<b>CO3:</b>	Choose their own personal, social, moral and spiritual values and be aware of practical methods for developing and deepening them.

**Subject Name: Environmental Science**

**Subject Code: EV22C11**

**On successful completion of the course, the learners will be able to**

<b>CO1:</b>	recognize the importance of environment and role of Individuals in its protection.
<b>CO2:</b>	explain the key concepts of Ecosystem, Food Web and Bio geochemical.
<b>CO3:</b>	apply the right measures for the sustainable use of natural resources.
<b>CO4:</b>	analyze the ethical, cross-cultural, and historical context of environmental issues and the links between Human and Natural Systems.
<b>CO5:</b>	examine the impact of human action on the biological environment



**Subject Name: Environmental Pollution-I**

**Subject Code: EV22C12**

**On successful completion of the course, the learners will be able to**

<b>CO1:</b>	focus the impact and monitoring of Air pollution
<b>CO2:</b>	understand various types of water pollution and analysis of water quality.
<b>CO3:</b>	know the effect of heavy metals and their interactions with soil components.
<b>CO4:</b>	discuss the effect of noise pollutants on human beings.
<b>CO5:</b>	simplify pollution control method

**Subject Name: LAB: Environmental Chemistry**

**Subject Code: EV22CP11**

**In this course the students will**

<b>CO1:</b>	Learn the microbiological laboratory safety procedures.
<b>CO2:</b>	Gain the basic knowledge about the preparation of bacteriological Media – Nutrient Agar, Broth and Slant.

## SEMESTER – II

**Subject Name: Communicative English- Paper II**

**Subject Code: EV22E21/ EV15E2**

**In this course the students will**

<b>CO1:</b>	develop in students the proficiency in speaking and writing for different purposes.
<b>CO2:</b>	demonstrate communication skills in English.
<b>CO3:</b>	understand the nuances of the language.
<b>CO4:</b>	classify the business English
<b>CO5:</b>	use the situational speech

**Subject Name: Mathematics II**

**Subject Code: EV22M21/ EV15M2**

**On successful completion of the course, the learners will be able to**

<b>CO1:</b>	learn about Algebra of matrices, basics of sampling techniques
<b>CO2:</b>	understand basic test of significance
<b>CO3:</b>	Demonstrate the effective presentation of data.
<b>CO4:</b>	define the statistical hypothesis
<b>CO5:</b>	appraise the test of significance



**Subject Name: BASICS OF COMPUTERS FOR REPORTS MAINTENANCE**  
**Subject Code: EV22CS21**

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

<b>CO1:</b>	demonstrate the ability to produce a quality manual.
<b>CO2:</b>	understand the knowledge of certification and accreditation.
<b>CO3:</b>	discuss the knowledge and insight of different quality management systems i.e.
<b>CO4:</b>	appraise the knowledge of auditing and auditing systems.
<b>CO5:</b>	critique the current state of the art in Quality Management

**Subject Name: Water Quality Assessment**                      **Subject Code: EV22C21/EV15T21**

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

<b>CO1:</b>	provide adequate knowledge about water.
<b>CO2:</b>	study the chemical composition of water.
<b>CO3:</b>	get knowledge about control measure of water pollutants
<b>CO4:</b>	define the fundamentals idea about water analysis.
<b>CO5:</b>	demonstrate the water analysis

**Subject Name: Water and wastewater remediation Techniques**

**Subject Code: EV22C22**

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

<b>CO1:</b>	outline adequate knowledge about water treatment process.
<b>CO2:</b>	explain the various methods of sewage treatment.
<b>CO3:</b>	get awareness about natural water purification.
<b>CO4:</b>	understand the fundamentals idea about instrument methods of water analysis.
<b>CO5:</b>	asses the Instrumental method of analysis

**Subject Name: Lab: Water analytical**

**Subject Code: EV22CP21**

In this course the students will

<b>CO1:</b>	Get adequate knowledge about water sampling methods for microbiological analysis.
<b>CO2:</b>	Study the isolation and identification of Microbes from soil and air using air sampler.



## **COURSE OUTCOME**

### **SEMESTER III**

#### **Soft Skills Development**

Subject Code: EV16T31

- To develop effective communication skills, presentation skills, self-confident individuals by mastering inter-personal skills, team management skills, and leadership skills.

#### **Human impact on the Environment**

Subject Code: EV16T32

- To provide plenty knowledge about Human impacts.
- To understand the various pollutants of environment.

#### **Air Quality Assessment & Remediation**

Subject Code: EV16T34

- To understand the various the air quality and measurement and remediation.

#### **Climate change and Carbon Sequestration**

Subject Code: EV16T35

- To provide knowledge about Climate and carbon sequestration.

### **SEMESTER IV**

#### **Remote sensing and GIS**

Subject Code: EV16T41

- This subject explains the basic concepts of Remote Sensing and Geographic Information Systems with its applications.

#### **Air Pollution Control Technologies**

Subject Code: EV16T42

- To understand various components of air pollution
- To study various techniques for controlling air pollution

#### **Hazardous Waste Management**

Subject Code: EV16T43

- To understand medical waste generation and their health and environmental impact.
- To study the various disposal and processing technology of medical waste.
- To understand the various other Hazardous materials and their management techniques.



**VIRUDHUNAGAR HINDU NADARS' SENTHIKUMARA NADAR COLLEGE**

*(An Autonomous Institution Affiliated to Madurai Kamaraj University)*

[Re-accredited with 'A' Grade by NAAC]

Virudhunagar – 626 001.

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### **Bioremediation**

Subject Code: EV16T44

- To impart sufficient scientific understanding of the current environmental tribulations and global concern.
- To focus the process of bioremediation, mechanisms, types, success stories & monitoring strategies.
- To focus the advance molecular techniques to facilitate bioremediation technology.
- To apply the concepts of bioremediation technology to the real time problems.



## **COURSE OUTCOME**

### **SEMESTER V**

#### **Solid Waste Recycling and Processing**

Subject Code: EV16T51

- To study the various waste management and reduction, waste recycling, and discuss the recycling processing

#### **Bioremediation-II**

Subject Code: EV16T52

- To provide plenty knowledge about Bioremediation
- To understand the various pollutants of environment.

#### **Ecotoxicology and Human Health**

Subject Code: EV16T53

- To provide knowledge about Ecotoxicology and Human Health
- To study the various toxic substances and effect on Human health

#### **Circular Economy**

Subject Code: EV16T54

- To provide knowledge on linear and circular economic practices
- To understand the impact of circular economic practices in environment, economic and employment.
- To understand the various emerging business sectors based on Circular Economy

#### **Workplace Hazardous and Occupational Health**

Subject Code: EV16T55

- To know the workplace hazarders and occupational Health on various occasion

### **SEMESTER VI**

#### **Applied Pyrolysis and Gasification**

Subject Code: EV16T61

- To Know the pyrolysis and gasification process, biochemical and high energy producing biomass etc.

#### **Waste to product Conversion Techniques**

Subject Code: EV16T62

- To Know the waste products and Waste Processing Techniques in the form useful products



### **Industrial Hazardous Waste Management**

Subject Code: EV16T63

- To understand Industrial hazardous waste generation and their health and environmental impact.
- To study the various disposal and processing technology of Industrial hazardous waste.
- To understand the various other Industrial Hazardous materials and their management techniques.

### **Natural Resources and Conservation**

Subject Code: EV16T64

- To study the Natural resources and different conservation process

### **Environmental Nanotechnology**

Subject Code: EV16T65

- To understand the concept of nanoscience, nanotechnology and nanomaterials
- To study the various uses of nanostructured materials for environmental applications
- To understand the nano enabled devices for environmental monitoring
- To understand the nano toxicity and common lab safety practices



**COURSE OUTCOMES**

**UNDERGRADUATE**

**III - Year**

**V - Semester**

**Employability Skills**

**Subject Code: U1PS51**

**In this course, the students will**

<b>CO1:</b>	Enrich them with the employability skills like reasoning skills and aptitude skills.
<b>CO2:</b>	Get adequate exposure to various types of competitive examinations.
<b>CO3:</b>	Get enough training in OMR based answer sheet.





**COURSE OUTCOMES**

**UNDERGRADUATE**

**I - Semester**

**Value Education**

**Subject Code: U1VE11**

**In this course, the students will**

<b>CO1:</b>	Learn to choose their own personal moral and spiritual values.
<b>CO2:</b>	Learn to become responsible citizens.
<b>CO3:</b>	Get sensitized to value formation.