COURSE OUTCOMES

DEPARTMENT OF B.VOC

I B. Voc., Environmental Assessment and Remediation

SEMESTER 1

Subject Name: Communicative English- Paper I

Subject Code: EV15E1

In this course the students will

CO1:	Understand the concepts underlying various communication skills.
CO2:	Know the several aspects of communication in oral and written modes.
CO3:	Be facilitated with the acquisition of necessary language skills.

Subject Name: Mathematics – I

Subject Code: EV15M1

In this course the students will

CO1:	Learn basic mathematics, data interpretations.
CO2:	Learn effective presentation of data.
CO3:	Know about the growth curve, generation time, measurement and factors affecting microbial growth.
CO4:	Understand the respiratory metabolism in microbes and photosynthetic accessory pigments.
CO5:	Get knowledge of bacterial photosynthesis, bioluminescence, sporulation in bacteria and fungi.

Subject Name: Value Education **Subject Code: U1VE11**

In this course the students will

CO1:	Be sensitized towards value formation.
CO2:	Take responsibility with regard to making positive personal and social choices.
CO3:	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: EV15T11**

In this course the students will

CO1:	Study the basic of environment.
CO2:	Have adequate knowledge of atmosphere.
CO3:	Get knowledge about eco system and energy flow.

Subject Name: Environmental Pollution-I **Subject Code: EV15T12**

In this course the students will

CO1:	Understand the impact and monitoring of Air pollution.
CO2:	Understand various types of water pollution and analysis of water quality.
CO3:	Know the effect of heavy metals and their interactions with soil components.
CO4:	Discuss the effect of noise pollutants on human beings.

Subject Name: LAB: Environmental Chemistry **Subject Code: EV15P1**
In this course the students will

CO1:	Learn the microbiological laboratory safety procedures.
CO2:	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: EV15E2**

In this course the students will

CO1:	Develop the proficiency in speaking and writing for different purposes.
CO2:	Develop communication skills in English.
CO3:	Understand the nuances of the language.

Subject Name: Mathematics II

Subject Code: EV15M2

In this course the students will

CO1:	Learn about algebra of matrices, basics of sampling techniques.
CO2:	Understand the theoretical distribution.

Subject Name: Basic Computing

Subject Code: EV15C2

In this course the students will

CO1:	Study the basics of computers, Word Processing, Spread Sheet and Power Point Presentation.
CO2:	Acquire the knowledge about Internet and Social Network.

Subject Name: Water Quality Assessment

Subject Code: EV15T21

In this course the students will

CO1:	Gain adequate knowledge about water.
CO2:	Study the chemical composition of water.
CO3:	Get knowledge about control measure of water pollutants.
CO4:	Study fundamentals idea about water analysis.

Subject Name: Water and wastewater remediation Techniques

Subject Code: EV15T22

In this course the students will

CO1:	Gain adequate knowledge about water treatment process.
CO2:	Study the sewage treatment.
CO3:	Get awareness about natural water purification.
CO4:	Study the fundamental idea about instrument methods of water analysis.

Subject Name: Lab: Water analytical Practical- II

Subject Code: EV15P2

In this course the students will

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

II B. Voc., Environmental Assessment and Remediation

Semester – III

Subject Name: Soft Skills Development

Subject Code: EV16T31

In this course the students will

CO1:	Understand the multi dimensional picture of green logistics.
CO2:	Study the relationship between green logistics and environmental sustainability.
CO3:	Develop effective communication skills, presentation skills, self-confident individuals by mastering inter-personal skills, team management skills, and leadership skills.

Subject Name: Human impact on the Environment

Subject Code: EV16T32

In this course the students will

CO1:	Gain knowledge about Human impacts on the environment.
CO2:	Understand the various pollutants of environment.
CO3:	Study the impact of Industrialization and Urbanization on Environment.

Subject Name: Environmental Pollution- II

Subject Code: EV16T33

In this course the students will

CO1:	Study the various symbols of biohazards waste and radiation waste.
CO2:	Study the nearest biomedical waste deposit area.

CO3:	Demonstrate the e-waste into useful products.
CO4:	Study the nearest coastal pollution area.

Subject Name: Air Quality Assessment& Remediation

Subject Code: EV16T34

In this course the students will

CO1:	Understand the various air quality and measurement and remediation.
CO2:	Determine particulate matter from the industrial area by High Volume Sampler/ Settling method.
CO3:	Study the power plant gas used as a Carbon sequestration.

Subject Name: Climate change and Carbon Sequestration

Subject Code: EV16T35

In this course the students will

CO1:	Get knowledge about Climate and carbon sequestration.
CO2:	Study the climate change in Virudhunagar and surrounding cities.
CO3:	Demonstrate that through the burning of fossil fuels (fields as well as forests) humans release additional CO2 into the atmosphere.

Subject Name: Lab: III Air Quality Assessment I

Subject Code: EV16P31

In this course the students will

CO1:	Learn Determination of bacteria in air by open plate method.
CO2:	Learn Determination of fungi in air by open plate method.
CO3:	Assess indoor micro flora by open plate method.

Semester- IV

Subject Name: Remote sensing and GIS

Subject Code: EV16T41

In this course the students will

CO1:	Study various geomorphic and environmental features in the maps.
CO2:	Be able to do case study about GIS and uses in current applications.

CO3:	Study the Remote Sensing Applications in Hydrology & Water Resources Management.
CO4:	Study the future applications of remote sensing and GIS.

Subject Name: Air Pollution Control Technologies

Subject Code: EV16T42

In this course the students will

CO1:	Understand various components of air pollution.
CO2:	Study various techniques for controlling air pollution.
CO3:	Perform comparative analysis of air sampling from clean and polluted area using key parameters.
CO4:	Study the significance of Laminar flow chamber and components.

Subject Name: Hazardous Waste Management

Subject Code: EV16T43

In this course the students will

CO1:	Understand medical waste generation and their health and environmental impact.
CO2:	Study the various disposal and processing technology of medical waste.
CO3:	Develop the Practical knowledge of uses of incinerators.

Subject Name: Bioremediation

Subject Code: EV16T44

In this course the students will

CO1:	Be imparted with sufficient scientific understanding of the current environmental tribulations and global concern.
CO2:	Focus on the process of bioremediation, mechanisms, types, success stories& monitoring strategies.
CO3:	Focus on the advance molecular techniques to facilitate bioremediation technology.
CO4:	Study the Phytoremediation: Mechanisms & techniques of Phytoremediation from one site.

Subject Name: Indoor Environment Monitoring

Subject Code: EV16T45

In this course the students will

CO1:	Study one of closed room and open room air flow condition in our campus.
CO2:	Study the Indoor air chemicals and Indoor air microbiology, health cause to human beings.
CO3:	Be familiar with Review of research on air-conditioning systems and indoor air quality control for human health.

Subject Name: Lab: Air Quality Assessment II

Subject Code: EV16P41

In this course the students will

CO1:	Determine the relative humidity from the atmosphere.
CO2:	Estimate the areal average precipitation/ volume of precipitation.
CO3:	Compare the analysis of air sampling from clean and polluted area using key parameters.

Semester - V

Subject Name: Work place hazarders and Occupational Health

Subject Code: EV16T55
In this course the students will

CO1:	Describe the harmful effects of selected important environmental and workplace hazards on human health.
CO2:	Understand the principles of toxicology.
CO3:	Apply the principles of human toxicology to interpret workplace exposures to chemicals and their potential health effects.

Subject Name: Biodegradation

Subject Code: EV16T52
In this course the students will

CO1:	Acquire knowledge about bacteria capable of degrading contaminants, and the environmental factors necessary for their growth and activity.
CO2:	Know present methods to enhance biodegradation, including design.

CO3:	Design, analyse, and develop suitable mathematical expressions for the rates of biodegradation process.
CO4:	Learn about the critical physical and chemical characteristics of contaminants that affects their biodegradability.

Subject Name: Applied Pyrolysis and Gasification

Subject Code: EV16T61
In this course the students will

CO1:	Understand the fundamentals of Pyrolysis and gasification techniques.
CO2:	Study the effective biomass, Municipal/ Medical waste- Post consumed plastics conversion into energy and fuel.
CO3:	Understand the various Pyrolysis and gasification products and their applications for environments.

Subject Name: Ecotoxicology and Human Health

Subject Code: EV16T53
In this course the students will

CO1:	Understand the effects of toxicants in the environment.
CO2:	Understand and apply basic concepts from environmental toxicology and environmental health.

Semester – VI

Subject Name: Solid Waste Recycling and Processing

Subject Code: EV16T51
In this course the students will

CO1:	Understand the related engineering principles, design criteria, methods and equipment for solid waste recycling.
CO2:	Understand the implications of the production, resource management and environmental impact of solid waste management.
CO3:	Be aware of the significance of recycling, reuse and reclamation of solid wastes.

Subject Name: Environmental impact of engineered nano particles

Subject Code: EV16T65
In this course the students will

CO1:	Get knowledge on basic nanotechnology.
CO2:	Understand the occupational effect of engineered nano particles.
CO3:	Acquire knowledge on environmental impact of engineered nano particles.

Subject Name: Natural Resources and Conservation

Subject Code: EV16T64
In this course the students will

CO1:	Learn the role of agricultural practices in soil degradation.
CO2:	Know the significance for the conservation of forest resources.

Subject Name: Practical VI: Solid Waste Assessment and Remediation
Subject Code: EV16P6
In this course the students will

CO1:	Determine the biomass residual carbon content, ash.
CO2:	Determine the biomass composition by using calorimetric method.

Subject Name: Project & Viva-voce

Subject Code: EV16ISP6
In this course the students will

CO1:	Get the understanding on pursuing research in tentative and computational areas of the subject.