



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Science
Department of Chemistry
Generic Elective Courses
Choice Based Credit System (CBCS)

| COURSE CODE | CATEGORY | COURSE NAME | L | T | P | CREDITS | TEACHING & EVALUATION SCHEME | | | | |
|-------------|----------|---------------------------|---|---|---|---------|------------------------------|---------------|----------------------|-------------------------|----------------------|
| | | | | | | | THEORY | | | PRACTICAL | |
| | | | | | | | END SEM University Exam | Two Term Exam | Teachers Assessment* | END SEM University Exam | Teachers Assessment* |
| GUCH301 | UG | Chemistry and Environment | 4 | 0 | 0 | 4 | 60 | 20 | 20 | 00 | 00 |

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P-Practical; C-Credit; Q/A - Quiz/Assignment/Attendance, MST Mid Sem Test.

*Teacher Assessment shall be based on the following components: Quiz/Assignment/Project/Participation in class (Given that no component shall exceed 10 Marks)


Course Objective:

- To give basic knowledge of the concept of Environmental Chemistry.
- To develop understanding of Plastic Degradation Techniques.


Course Outcomes: -

After completion of this course, the students will be able to demonstrate the following knowledge, skills, and attitudes.

- Theoretical understanding of concept of Environmental Chemistry
- Become aware of different Plastic Degradation Techniques.


Chairperson
Board of Studies
Physical Sciences


Chairperson
Faculty of Studies
Science


Controller of Examinations
SVVV, Indore


Registrar
SVVV, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Science
Department of Chemistry
Generic Elective Courses
Choice Based Credit System (CBCS)

UNIT 1

Environment

Scope of Environmental Chemistry, Environmental Pollution, Biogeochemical cycles in the environment (Oxygen, Carbon and Nitrogen Cycle), Atmosphere and Studies of its layers and composition.

UNIT 2

Atmosphere Pollution: Air Pollution

Introduction to Air Pollution, different sources of Air pollutants, primary and secondary sources, Major Air Pollutants. (Gaseous Pollutants and Particular Pollutants) Harmful Effects of Particulates, and control of Air Pollution.

UNIT 3

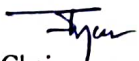
Stratospherical Pollution

Formation and Breakdown of Ozone, Depletion of Ozone Layers, Probing the Ozone Shield, Ozone hole over Antarctica, Acid Rain, adverse effect of Acid Rain, Greenhouse effect and Global warming.

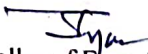
UNIT 4


Vehicular Pollution

Automobile Emissions, Effect of Pollutants, alternative fuels, comparison of CNG and Diesel, Biofuels. Control and prevention of vehicular pollution. Global efforts in reducing vehicular pollution.


Chairperson
Board of Studies
Physical Sciences


Chairperson
Faculty of Studies
Science


Controller of Examinations
SVVV, Indore


Registrar
SVVV, Indore



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Science
Department of Chemistry
Generic Elective Courses
Choice Based Credit System (CBCS)

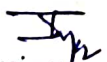
UNIT 5

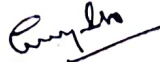
Plastic Recycling Techniques

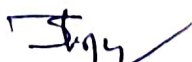
Environment without Plastic, Technologies for Sorting Mixed Plastic Wastes, Different Techniques for Recycling of Plastic- Primary, Secondary and Tertiary recycling, Mechanical Recycling, Incineration and Gasification, Biodegradable Plastics, Recycled Plastic Manufacture and Uses Rules.

List of Textbooks

1. M.H.Fulekar (2005) Environmental Biotechnology Oxford IBH Publishing Cooperation.
2. M.H.Fulekar (2010) Bioremediation Technology Recent Advances, Springer.
3. LynnGoldman,ChristineCoussens,ImplicationsofNanotechnologyforEnvironmenta I Health Research, National Academic Press, Washington, 2007.
4. Matlack, A. S. Introduction to Green Chemistry. Marcel Dekker: New York, 2001.
5. H. Kaur, Environmental Chemistry A PragatiEdition, Eleventh Edition 2017.
6. B.K. Sharma Industrial Chemistry, Goel Publishing House Nineteenth Edition 2016.


Chairperson
Board of Studies
Physical Sciences


Chairperson
Faculty of Studies
Science


Controller of Examinations
SVVV, Indore


Registrar
SVVV, Indore