

GUJARAT TECHNOLOGICAL UNIVERSITY
B.E. SEMESTER : VIII
ENVIRONMENTAL SCIENCE & TECHNOLOGY

Subject Name: Basics of Sustainable Development & Green Chemistry

Subject Code: 183504

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	University Exam(E)	University Exam(P)	Mid Sem Exam(Theory) (M)	Practical (Internal)
3	0	3	6	70	30	30	20

Sr No	Course Contents
1	Principles of sustainable developments, Concepts of green chemistry, atom economy, waste prevention and minimization of waste generation
2	Catalysis and green chemistry, solvent free systems, super critical fluids, ionic liquids, fluoruous biphasic solvents, photochemical reactions and reactors, microwave and sono chemistry. Electrochemical reactions.
3	Evaluation of Reactions at atmospheric temperatures and pressures.
4	Emerging technologies and their techno economic evaluation
5	Role of Cleaner technologies in Sustainable Development

Reference Books:

1. An Introduction to Green Chemistry Matlack A.S., Marcel Dekker, 2001
2. Green Chemistry: Theory and Practice, Anastas P.T. and Wavner J.C.;Oxford University Press, 1998
3. An Introductory Text on Green Chemistry, Lancaster M., Royal Society of Chemistry, Cambridge, 2002
4. Handbook of Green Chemistry and Technology, Clark J.H. and Macquaries, Blackwell Publishers, 2002