Subject Code: 1SC2030413	Subject Title: ANALYTICAL CHEMISTRY -VII
COURSE TYPE: CORE COURSE	

Course Objective: To impart knowledge and training in chemistry at advanced level, make aware with recent analytical technique, Oxidation & Reduction reactions occur in many chemical systems. In the different reactions involve the transfer of electrons from one chemical species to another. Thermal analysis of sample carried out by this analytical technique.

Teaching scheme (hours) per week		Credit		Theory Marks		Practical Marks		Total
Theory	Practical	Theory	Practical	University Assessment	Cont. Assessment	University Assessment	Cont. Assessment	
4	-	4	-	60	40	-	-	100

UNIT	DISCRIPTION IN DETAIL	WEIGHTAGE
I	**Specialized Chromatographic Techniques** Flash chromatography, Counter Current Chromatography, Ito-Coil-Planet Centrifugal Extractor(ICE).	25%
II	**Electro Analytical Techniques** Chemiluminiscence, Flourescence and Phosphorescence.	25%
III	**Thermal Methods of Analysis** Principle, theory, instrumentation and applications of TGA, DTA, DSC.	25%
IV	**Forensic Applications of Analytical Chemistry** Analysis of Narcotic Drugs and Psychotropic Substances such as cocaine, cannabis, barbiturates, benzodiazepines, amphetamines, opiates and hallucinogens. Analysis of Beverages: Alcoholic and non-alcoholic beverages and their composition.	25%

LEARNING OUTCOMES

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- Students should updating the recent developments in the field physical chemistry,thermal analysis of various chemical sample drugs sample. etc
- Analysis of Narcotic drugs, analysis of Beverages:
- Students should updating the recent developments in the field forensic Science. analytical chemistry.

REFERENCE BOOKS:

1. "Analytical Chemistry" by Gary D. Christian, 6th Edition, John Wiley and Sons Inc. New Jersey.
2. Analytical Cromatography by Dr. Gurdeep R . Chatwal
3. Clarke's Analytical forensic Toxicology by Negrusz, Adam: Cooper, Gail
4. Laboratory Techniques in Electroanalytical byChemistry. Marcel Dekker Inc., New York
5. Principles of Instrumental Analysis" 6th ed. Thomson Brooks/Cole Publishing: Belmont, CA 2007.by Skoog, D.A.; Holler, F.J.; Crouch, S.R
6. Electrochemical Methods – Fundamentals and Applications", John Wiley & Sons, New York by Allen J. Bard, Larry R. Faulkner.