DEPARTMENT OF CHEMISTRY				*CLASS: I M.Sc. Chemistry*				
Sem	**Course Type**	**Course Code**	**Course Title**	**Credits**	**Contact Hours/week**	**CIA**	**Ext**	**Total**
I	Major practical	21P1CMP1	Organic qualitative analysis	2	4	40	60	100

Nature of Course				
Knowledge and skill	✓		Employability oriented	
Skill oriented	✓		Entrepreneurship oriented	

Course Objectives*:*The objective of this course is to imparting training in qualitative analysis of organic compounds along with separation of organic mixtures.

EXPERIMENT

Analysis of Organic mixtures: Two compound Systems (Maximum of Five Mixtures). It involves the following steps.

- Separation of organic mixtures
- Elemental analysis
- Functional group(s) identification
- preparation of derivatives
- Physical properties determination (melting point and boiling point)

Books for reference:

1. B. S. Furniss, A.J. Hannaford, P.W.G. Smith, A.R. Tatchell, Vogel's textbook of Practical Organic Chemistry, Pearson, 5th edition, 1989.
2. N.S. Gnanpragasam and G. Ramamurthy, Organic Chemistry Lab Manual, S. Viswanathan Pvt. Ltd.

Web resources:

1. https://www.researchgate.net/profile/SushilMathpati/publication/332029217_Qualitative_analysis_of_organic_mixture_Binary_and_Ternary_chart_for_MSc_organic_students/links/5c9b920292851cf0ae9c629e/Qualitative-analysis-of-organic-mixture-Binary-and-Ternary-chart-for-MSc-organic-students.pdf?origin=publication_detail
2. http://do.chem.uni.wroc.pl/system/files/Preparatory%20classes.pdf

Pedagogy : Providing demonstration of given experiment

Rationale for Nature of the course

This laboratory course helps the students to understand the qualitative analysis of mixtures, the functions of various reagents and reaction mechanisms.

Activities having direct bearing on Skill development/ Employability/Entrepreneurship

Through this course, students will learn basic laboratory technique for analysis. It develops the intellectual and psychomotor skills of students by imparting knowledge in qualitative analysis of organic compounds. By this, students can recall the importance of synthetic organic chemistry and the applications in chemical industries.

Course outcomes: After complete successful of this course, the student will be able

CLOs	CLO statement	Knowledge level
CLO1	To inspect the method for separating the binary organic mixture	Up to K4
CLO2	To apply the basic organic theoretical concepts for analyzing the unknown compound	Up to K3
CLO3	To analyze the elements and functional group present in the individual components	Up to K4
CLO4	To select an appropriate derivative and acquire skills to prepare it	Up to K3
CLO5	To interpret the physical properties of the derivative	Up to K2

Mapping of CLOs with PLOs

#	PLO–1	PLO–2	PLO–3	PLO–4	PLO–5
CLO–1	1	3	1	3	1
CLO–2	1	3	1	3	1
CLO–3	1	3	1	3	1
CLO–4	1	3	1	3	1
CLO–5	1	3	1	3	1

Advance application– 3; Intermediate level–2; Basic level–1

Evaluation:

Continuous Internal Assessment	**:**	**40 Marks**
External Assessment	**:**	**60 Marks**
Total	**:**	**100 Marks**

Formative Assessment:

CIA Components	Marks
Internal Test	20
Observation/Record	10
Continuous class assessment	10
Total Marks	**40**

Summative Assessment:

CLOs	CLO statement	Knowledge level	Marks
CLO 1	To inspect the method for separating the binary organic mixture	Up to K4	**10**
CLO 2	To apply the basic organic theoretical concepts for analyzing the unknown compound	Up to K3	**10**
CLO 3	To analyze the elements and functional group present in the individual components	Up to K4	**15**
CLO 4	To select an appropriate derivative and acquire skills to prepare it	Up to K3	**20**
CLO 5	To interpret the physical properties of the derivative	Up to K2	**5**
Total Marks			**60**

Name of the course Designer

Dr. J. Shanmugapriya