Semester	JAN 2022
Open to semester	2
Course code	**CH1223**
Course title	**General Chemistry Practicals I**
Credits	3 /
Course Coordinator & participating faculty (if any)	Pramod Pillai,* Anirban Hazra, R. Vaidhyanathan, R. Boomi Shankar, V. G. Anand, S. Britto, and B. Gnanaprakasam
Nature of Course	Lab
Pre-requisites	Not Required
Objectives (goals, type of students for whom useful, outcome etc)	This is an undergraduate laboratory course and all BS-MS students will be exposed to basic chemistry experiments. As part of this course, the students will be carrying out regular chemistry experiments in the lab, experience in handling analytical instruments, data analysis, etc.
Course contents (details of topics /sections with no. of lectures for each)	Experimental procedures/details will be given in the first class. Students will be doing 10-12 experiments in general chemistry topics over a period of 4 months. Each class will start with explanation (theory) for 15-30 minutes followed by 2.0 h lab work, and 30 minutes laboratory work-book writing. The tentative list of experiments is given below. 1. Introduction to Chemistry Laboratory and Safety. Acid-Base Titration Experiment. 2. Kinetic Study of Ester (ethyl acetate) Hydrolysis in the Presence of HCl at Room Temperature. 3. Verification of Lambert Beer's Law and simultaneous determination of K2Cr2O7 and KMnO4 with the help of UV Spectrophotometer 4. Study of Optical Activity using a Polarimeter. 5. Estimation of iodine in iodized common salt using iodometry. 6. Cyanotype blue printing. 7. Dye formation: Synthesis of azo dyes. 8. Chemiluminescence: Synthesis of Luminol and its chemiluminescence properties. 9. Synthesis of Aspirin and Recrystallization. 10. Insect repellent: Synthesis and characterization of N,Ndiethyl- 3- methylbenzamide- DEET.

	11. Estimating Calcium in milk powder through EDTA complexometry.
Evaluation /assessment	End-Sem Examination-50% Mid-Sem Examination-50% Others-%
Suggested readings (with full list of authors, publisher, year, edn etc.)	Experimental procedures/details will be given in the first class. You will be doing 10-12 experiments in general chemistry topics over a period of 4 months. Each class will start with explanation (theory) for 15-30 minutes followed by 2.0 h lab work, and 30 minutes laboratory work-book writing. The tentative list of experiments is given below. 1. Introduction to Chemistry Laboratory and Safety. Acid-Base Titration Experiment. 2. Kinetic Study of Ester (ethyl acetate) Hydrolysis in the Presence of HCl at Room Temperature. 3. Verification of Lambert Beer's Law and simultaneous determination of K2Cr2O7 and KMnO4 with the help of UV Spectrophotometer 4. Study of Optical Activity using a Polarimeter. 5. Estimation of iodine in iodized common salt using iodometry. 6. Cyanotype blue printing. 7. Dye formation: Synthesis of azo dyes. 8. Chemiluminescence: Synthesis of Luminol and its chemiluminescence properties. 9. Synthesis of Aspirin and Recrystallization. 10. Insect repellent: Synthesis and characterization of N,Ndiethyl- 3- methylbenzamide- DEET. 11. Estimating Calcium in milk powder through EDTA complexometry.