Birla Institute of Technology & Science, Pilani
Hyderabad Campus

SECOND SEMESTER 2018-2019

Course Handout (Part - II)

Date: 07/01/2019

In addition to part -I (general handout for all courses appended to the time table) this portion gives further specific details regarding the course.

Course Number	CHEM F110
Course Title	CHEMISTRY LABORATORY
Instructor-in-Charge	**Amit Nag**
Team of Instructors	R. Krishnan, K. Sumithra, KVG Chandra Sekhar, Jayanthi Subhalakhshmi, Ramakrishnan G, Chanchal Chakravarthy, Durba Roy, Sounak Roy

1. **Course Description**: This course is based on laboratory experiments in different fields of chemistry. The course is available for first year students.

2. **Scope and Objective:** The main objective of this course is to educate the students with different aspects of experiments in chemistry. The students will carry out a set of experiments that will expose them to various experimental techniques LIKE PREPARATION OF STANDARD SOLUTION, FILTRATION, RECRYSTALLIAZTION, and operating of different scientific instruments for collecting data. Experiments in Organic and Inorganic chemistry will include synthesis and analysis of different compounds. Experiments in Physical chemistry will include pH metry, conductometry, spectrophotometry and chemical kinetics experiments.

3. **Text Book(s): Chemistry Laboratory Manual**

4. **Reference Book:** Reference sources for each experiment will be specified as necessary.

5. **Course Plan:** Students will perform selected experiments in Organic, Inorganic & Physical chemistry.

List of Experiments:

Lab 1	Synthesis and recrystallization of dibenzalacetone
Lab 2	Determination of the concentration equilibrium constant (K_c) of the reaction
Lab 3	Dissociation constant of a weak electrolyte by conductometry
Lab 4	Preparation of potassium copper-bis(oxalate) complex
Lab 5	Preparation of iron acetylacetonate complex; Record the absorption spectra of both the complexes
Lab 6	Synthesis of glucosazone
Lab 7	Determining activation energy of the hydrogen peroxide - potassium iodide clock reaction
Lab 8	Determination of the pH curve of an acid-base titration
Lab 9	Estimation of copper by Iodometry
Lab 10	Determination of unknown strength of an acid solution by conductometric titration
Lab 11	Make up for experiments
Lab 12	Lab exam (practical exam)

6. **Evaluation:**

Component	Duration	Weightage (%)	Date & Time
Lab performance and Calculation and data interpretation *		70	OB Continuous**

Lab exam	90 min	30	Closed book

*__Attendance and Punctuality, Laboratory Conduct, Record maintenance__ will be given due importance in the evaluation.

** All the experiments are evaluated in the lab and are considered open book

7. **Make-up policy:** Make up would be considered only for very **genuine reasons** (***such as institute deputation outside for sports/cultural fest, hospitalization (with appropriate documentary proof), marriage ceremony of own brother/sister (not cousins***)) and any other extreme emergency situations which would be decided by the team of instructors.
8. **Notice**: All notices concerning the course will be displayed on Chemistry Department Notice Board and/or CMS.
9. **Academic Integrity Policy:** It is expected that in compliance with institute rules and regulations, academic integrity should be adhered to in all the evaluation components. No type of academic dishonesty is acceptable and malpractice in any form will have serious implications.
10. **Final grading** will be done on the basis of the overall performance of a student in each of the components as listed in item no. 6. For **mid-semester grading**, progress made by a student up to that point of time would be evaluated.

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structor-in-Charge

Amit Nag