

INSTITUTE	FACULTY OF SCIENCE
PROGRAM	BACHELOR OF SCIENCE (CHEMISTRY)
SEMESTER	5
COURSE TITLE	INTERNSHIP
COURSE CODE	02CY0310
COURSE CREDITS	2

Objective:

- 1 Internship provides hands-on experience in chemistry techniques, research methodologies, and industrial applications, bridging academic knowledge with practical skills for real-world problem-solving.

Course Outcomes: After completion of this course, student will be able to:

- 1 Perform chemistry techniques in laboratory and industrial settings to conduct experiments and analyze sample.
- 2 Implement regulatory and safety guidelines in chemistry research and industrial processes to ensure compliance and best practices.
- 3 Interpret analysis data and experimental results to draw meaningful conclusions in research and diagnostics.
- 4 Evaluate the role of chemistry in diverse applications, such as healthcare, agriculture, and biotechnology, to determine their significance in industry and society.

Pre-requisite of course: Basic awareness of Good Lab Practices (GLP)

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	0	4	0	0	0	50	50

Contents : Unit	Topics	Contact Hours
Total Hours		

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	Statement of Purpose (SOP) Preparation Students will be preparing a statement of purpose (SOP) for their internship. SOP must include the details of their preparedness for working in a medical laboratory. Students must also clearly mention the objectives to join the program and proposed outcomes students wish to gain at the end of the internship. SOP should be duly submitted by the students prior to joining the internship.	7
2	Practical Exposure During Internship Students will carry out their internship at reputed industry, academic institute or research laboratories. During the internship period, students will comply with the rules and standard practices suggested by the institute. Student's internship progress will be reviewed by the department by presentation or short reports.	7
3	Preparation of Internship Report At the end of the internship, students will be required to prepare an internship report as per the format prescribed by Marwadi University. Internship report must include principles, materials and method, results and interpretation of the tests performed during the internship period.	8
4	Viva and Report Presentation Students will be required to prepare a PowerPoint presentation of their internship report and will be presenting the same to the examination committee formed by the department. Based on their report, the examination committee will conduct the viva voce of students.	8
Total Hours		30

Textbook :

- 1 Textbook of Comprehensive Research Methodology, Sanjay Zodpey, Jaypee Brothers Medical Publishers, 2024

References:

- 1 Research Methodology, Research Methodology, Panneerselvam R , Prentice Hall India Learning Private Limited, 2013

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
10.00	20.00	30.00	30.00	10.00	0.00

Instructional Method:

- 1 Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory.
- 2 Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory.
- 3 Use of hazardous/toxic chemicals should be avoided as far as possible in laboratory.
- 4 All students in the laboratory must wear lab coats during lab session.
- 5 During practical and experimental section student must wear shoes to avoid accidents cause by spilling or rush handling of acidic chemicals (Especially during inorganic estimation experiments).

Supplementary Resources:

- 1 NA