



Royal College of Arts Science and Commerce (Autonomous)

Affiliated to University of Mumbai

Program: BSc

Course: Chemistry

Syllabus for Field Project

**Syllabus for Undergraduate Programme as per
National Education Policy (NEP-2020) with effect from
the academic year 2026-2027**

SEMESTER

V

Course/ Paper Title	Field Project(Chemistry)
Course offered as	FP
Course Code	RUSCHF501
Semester	V
No. of Credits	4
Duration	90 hours (Field Work) + 30hours (Orientation, Planning, Discussion, Documentation and Report Writing) : Total - 120 hours

Sr. No.	Course Learning Objectives
CLO1	To foster critical thinking, analytical reasoning, and research motivation.
CLO2	To provide practical exposure to real-world chemical processes in industries, laboratories, or environmental settings.
CLO3	To bridge the gap between theoretical knowledge and its application in field-based situations
CLO4	To develop skills in sample collection, analysis, and interpretation of chemical data
CLO5	Facilitate problem-solving, decision-making, teamwork, and collaboration.
CLO6	To apply fundamental chemistry concepts to real-world natural or industrial phenomena.

Course Outcome:

	After completing the field project, students will be able to:
CO1	Design and execute a scientific investigation or field experiment, identifying key physical principles involved
CO2	Apply fundamental concepts of chemistry to analyze real-life field problems.
CO3	Collect, handle, and analyze samples using appropriate chemical techniques.
CO4	Interpret experimental data and draw meaningful conclusions.
CO5	Utilize advanced laboratory/field instrumentation to acquire accurate measurements
CO6	Identify the environmental, sustainability, or social impact of the physical phenomenon or technology studied.

Orientation and Planning (20 Hours)

Field Project Activities (80 Hours)

Field Project Topics: The areas of field work will be decided by the head of the department in consultation with the faculty of the department. The topic selected for field project must be relevant and important as per core subject (Chemistry) The project can be done individually or in a group of maximum two students

List of Topics:

- Water Analysis
- Effluent Treatments
- Soil Analysis
- Green Chemistry
- Agro Chemicals
- Chemical Preservatives in food products
- Cosmetic Analysis
- Ayurvedic and Unani formulation
- Herbal Analysis
- Extraction techniques
- Plastic Waste Degradation and Environmental Impact Study
- Dyeing and Textile Chemical Processing Analysis

Documentation and Report Preparation (20 Hours)

- Students must maintain field diaries and evidence of attendance of successful completion of activity.
- Prepare a structured project reports with scientific explanation.
- Get feedback from participants and communities wherever relevant.

Report Format

- Title Page (Name, Class, Activity, Mentor Name, Place of Activity)
- Introduction (Objectives)
- Activity Execution (Description of Activity Conducted along with dates of activity)
- Chemistry concepts involved.
- Observations, Data, and Analysis
- Outcome and Learning
- Geo-tagged Photos and Attachments
- Conclusion and Suggestions
- Acknowledgement

Evaluation Scheme



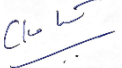
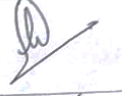

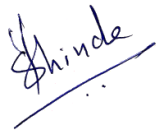


Internal evaluation: 40 marks

Attendance and interaction	20 marks
Weekly Progress Report	20 marks

External evaluation: 60 marks

Content and report	20 marks
Presentation	20 marks
Viva	20 marks

Board of studies in Chemistry (2026-2027)

	Category	Name and Designation	Affiliation	Signature
1	Chairperson (Head of Department)	Dr. Aqeela A. S. Qureshi, Associate Professor	Royal College of Arts, Science and Commerce. Mira Road, Thane	
2	Internal BOS Members	Prof. Kalpana Patankar Jain. Principal	Royal College of Arts, Science and Commerce. Mira Road	
		Dr. Chitralkha Kotian Associate Professor		
		Dr. Gunwanti Negi Assistant Professor		
		Dr. Vibha Bhagat Assistant Professor		
		Dr. Mustaqeem Mohammed - Assistant Professor		
3	External Subject Expert	Prof. Atul Chaska - Professor	Institute of Chemical Technology, Matunga , Mumbai.	
		Prof. Yogita Shinde - Professor	Department of Chemistry, K.C. College, S.N.C. University , Mumbai	
4	Vice-Chancellor Nominee	Prof. Krishnakant T. Waghmode	Ruparel College of Arts, Science & Commerce, Mumbai	
5	Industry Representativ	Shailesh G. Poojary - Chief Manager, Parle Quality Systems, Parle Products	Parle Products VS Khandekar Marg, Vile Parle East Mumbai-400057	
6	Postgraduate meritorious alumnus	Ms. Pratima Rajesh Yadav PhD. Scholar from ICT, Mumbai.	Institute of Chemical Technology , , Nathalal Parekh Marg, Matunga, Mumbai - 400019.	