


Swarnnim Science College
Master of Science in Chemistry
Cross-Cutting Issues

Sr. No.	Semester	Course Name	Syllabus Topic / Unit	Relevant Theme(s)	Reason/Connection
1	1	Analytical Chemistry I	Good Laboratory Practice (GLP)	Professional Ethics, Human Values	Promotes quality, integrity, safety, ethical practice in lab work.
2	1	Analytical Chemistry I	Quality Assurance and Control	Professional Ethics	Ensures responsible and reliable reporting of scientific data.
3	2	Analytical Chemistry II	Sample Preparation (Green Extraction Methods)	Environmental Sustainability	Emphasizes greener, less-polluting lab techniques.
4	2	Analytical Chemistry II	Green sample preparation techniques (from E-resources links)	Environmental Sustainability	Highlights reduced chemical use and safer methods.
5	3	Industrial Chemistry	Good Manufacturing Practice and Laboratory Practice	Professional Ethics	Ethical standards in industry and lab, worker safety, consumer protection.
6	3	Industrial Chemistry	Safety, hazardous, toxic materials management	Professional Ethics, Environmental Sustainability	Ethical responsibility for safe chemical use, preventing pollution.
7	3	Industrial Chemistry	Green chemistry - 12 principles of green chemistry	Environmental Sustainability	Explicit focus on reducing environmental impact in chemical industry.
8	3	Industrial Chemistry	Ionic liquids as green solvent	Environmental Sustainability	Cleaner alternatives to traditional solvents.
9	3	Industrial Chemistry	Green catalysts/reagents	Environmental Sustainability	Environmentally friendly synthesis.
10	3	Industrial Chemistry	Manufacture and uses of Agrochemicals (including plant hormones)	Environmental Sustainability, Human Values	Addresses safe agriculture, food security, sustainability.
11	3	Natural Products & Biomolecules	Biosynthesis studies of natural pigments, vitamins, steroids, etc.	Environmental Sustainability	Emphasizes natural sources, sustainable production.
12	3	Natural Products & Biomolecules	Discussion of essential biomolecules	Human Values	Links to nutrition, health, and well-being.
13	3	Medicinal Chemistry	Synthesis of antibiotics, psychoactive drugs, antimalarial agents	Human Values, Professional Ethics	Addresses health care, safety, ethical drug design and use.
14	All	General Chemistry Teaching Methods (all courses)	Group work with students from diverse cultures, recognizing cultural differences (found in repeated "Teaching & Learning Methodology")	Gender Sensitization, Human Values	Promotes inclusivity, respect for diversity, recognizing different learning needs.


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SWARNNIM SCIENCE COLLEGE
 SWARNNIM STARTUP & INNOVATION UNIVERSITY
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