

Programme outcome for M.Sc. Programme

Two-year M.Sc. Programme

Dempo Charities Trust's, Dhempe College of Arts and Science offers a two-year Master's degree programme in Analytical Chemistry.

This programme intends to blend the theoretical knowledge with practical learning skills with a view to prepare students for careers in industry, notably the pharmaceutical industry which has a predominant presence in Goa.

1. PO-1: Knowledge: Learners are encouraged to apply the knowledge of fundamentals of chemistry in complex problem solving. A student is exposed to a wide range of topics in chemistry and is given intensive training in laboratory related work. The learner is encouraged to develop an ability to be a specialist in Analytical Chemistry.
2. PO-2: Problem Analyses: Learners will be able to conduct research literature survey, identify, formulate and analyze complex problems in Chemistry and reach concrete solutions using fundamental principles. Learners will be able to interpret and analyze results from various experiments and draw suitable conclusions against their supported data acquired.
3. PO-3: Designing Solutions: Learners are trained to design solutions for complex problems and develop a process that can meet specific needs.
4. PO-4: Modern tool usage: As an outcome of PO-1, PO-2 and PO-3, learners are trained to create, select, and apply appropriate techniques, resources and IT tools in the analysis and synthesis of data with an understanding of the limitations.
5. PO-5: Communication Development: With English language being the common mode of communication worldwide, all learners under the programme are encouraged to participate in courses designed to develop English-language proficiency through Written and Spoken English. Learners will be able to communicate effectively on scientific issues with the scientific community and society at large in writing effective reports and designing documentation, make effective presentations and give and receive appropriate instructions.
6. PO-6: Employability: Along with academic excellence, we aim at making our students suitable for employment in industry. In the effort to train our students for industry, we attempt to seek collaboration and co-operation from various industries for organising internship and on-campus interview.
7. PO-7: Ethics: Along with spirit of competitiveness among students, we give importance in developing a strong sense of ethics among learners by

manifesting the impact that science has on social, economic and environmental issues. At the end of this programme students will be able to apply ethical principles and commit to professional ethics and responsibilities and norms of the chemical practice.

8. PO-8: Environment and Sustainability: This programme facilitates understanding of the impact of the professional solutions in societal and environmental contexts through classroom discussions and research projects. At the end of this programme students will be able to identify and analyze problems deterrent to environmental sustainability and provide creative solutions towards the same.
9. PO-9: Individual and team work: Learners are encouraged to function effectively as an individual and as a member or leader in diverse teams, by involving them in seminars, workshops, research projects and other extra-curricular activities.
10. PO-10: Science and Society: As an outcome of PO-1, PO-2 and PO-3, learners are encouraged to apply logical reasoning based on the knowledge, skills, designing solutions to evaluate societal, health, safety issues and the responsibilities that go along with the scientific practice.
11. PO-11: Life-long learning: Learners are encouraged to volunteer and be self-motivated that will enhance society values, active involvement, personality development, self-sustainability, and employability. As such, learners will be able to recognize the need for the preparation and have the ability to engage in independent and life-long learning in every broad context of technological changes.