

POSTGRADUATE PROGRAMME IN DEPARTMENT OF CHEMISTRY

M. Sc. (Analytical Chemistry)

The B. Sc. Programme offered at the College is well-established and renowned for the high standards of teaching and learning since 1962. The Department of Chemistry at the College has evolved as one of the most dynamic departments with highly skilled and experienced faculty, noteworthy collaborations and academic activities. The College has signed MoUs with National institutes such as NIO, NCAOR, ICAR, INSERM – France to enhance research and academic collaborations with scientists. The collaborations with Syngenta Biosciences Pvt. Ltd., Deccan Fine Chemicals and industries under Goa Pharmaceutical Manufacturers' Association helps in training as well as job placements of students.

Every year, about 50-60 students offer specialization in Chemistry. The College has offered one year post graduate course in Industrial and Analytical techniques accredited by Goa Pharmaceutical Manufacturers' Association for last 13 years. It was a multi-disciplinary job oriented course with almost 100% placement in industries. M.Sc. (Analytical Chemistry) is a two year self-financed programme, affiliated to the Goa University, proposed considering the employment opportunities in the industries especially pharmaceuticals. The QA & QC Departments of industries require trained personnel in Analytical chemistry.

Using the experience of the post graduate course in collaboration with industry, now the initiative is to expand the academic footprint in Goa. The Department of Chemistry proposes to introduce a Master's degree programme – M.Sc. (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. For this purpose, the College proposes to set up a state-of-the-art Analytical Chemistry educational laboratory with highly sophisticated instruments. The programme intends to draw expertise from the available pool of highly experienced teachers of Analytical Chemistry, as well as experts from the industrial sector.

Dhempe College of Arts & Science is one of the few colleges in Goa that successfully run Value Added Courses, mainly short duration certificate programmes in areas such as 'Analytical Tools' in association with NIO, Physico- Chemical and microbiological parameters in drinking water, Microbial techniques, Hardware maintenance and Counseling. Department of Computer Science organises professional courses, in Cyber Security & Ethical Hacking in collaboration with

MSME – Technology Development Centre, Government of India, Dream weaver, Blender, PHP, MYSQL, C++, Hadoop and Spoken Tutorials.

The College also organizes guest lectures from academicians as well as technocrats. Industrial visits, internship programmes are also organized. The purpose is to identify and plug skill deficiencies among students and in the process enhance prospects of gainful employment.

SPECIALISATION AND SEAT STRUCTURE

Specialisation: M.Sc. (Analytical Chemistry)

Eligibility Criteria for Admission to PG Courses:

For being eligible for admission to the programme leading to the degree of **Master of Science, (Analytical Chemistry)**, a candidate must have passed the examination of the degree of Bachelor of Science (three year integrated course) in Chemistry (Six/Three units), conducted by Goa University or any other recognized University with a minimum of 40% marks.

Merit List

The merit list shall be prepared on the basis of the marks obtained in the Entrance Test held by the Goa University (100% weight age).

NUMBER OF SEATS : 20

Modes of Assessment as Suggested by Goa University (refer ordinance OA-18 for credit-based masters degree programmes).

In addition to the lectures and practicals organized as per Choice Based Credit System proposed by Goa University, the students will be exposed to industries and guest lectures.

Fees: will be charged according to Goa University fee structure committee recommendation.

M.Sc. (Analytical Chemistry) Programme
Scheme of Instructions (Semester System)
Choice Based Credit System

COURSES (CHA-Analytical Chemistry, CHI-Inorganic Chemistry, CHO-Organic Chemistry, CHP-Physical Chemistry, C- compulsory, O-optional, C-credit)

Semester I & II (Compulsory Courses)		No. of Credits
CHIC - 401	General Inorganic Chemistry	4
CHOC-401	Concepts in Organic Chemistry-I	4
CHPC-401	General Physical Chemistry	4
CHAC-401	Spectroscopic Methods in Chemistry	4
CHIC-402	Laboratory Course in Inorganic Chemistry	2
CHOC-402	Laboratory Course in Organic Chemistry	2
CHPC-402	Laboratory Course in Physical Chemistry	2
CHAC-402	Laboratory Course in Analytical Chemistry	2
Semester I & II (Optional Courses)		
CHIO-401	Selected Topics in Inorganic Chemistry	2
CHIO-402	Environmental Chemistry	2
CHOO-401	Concepts in Organic Chemistry -II	2
CHOO-402	Concepts in Organic Chemistry- III	2
CHPO-401	Selected Topics in Physical Chemistry	2
CHPO-402	Mathematical preparation for Chemistry & Introduction to Computers	2
CHAO-401	Analytical Techniques - I	2
CHAO-402	Analytical Techniques - II	2
CHPO-403	Diffraction Methods	2

Note: The above credit system is subject to change as per Goa University (refer ordinance OA-18 for credit-based masters degree programmes).

Note: The implementation of course is subject to approval from Goa University.