

# Vanita Vishram Women's University

(1<sup>st</sup> Women's University of Gujarat)
Athwagate, Surat, Gujarat, India-395001

(Recognized under the Provisions of Gujarat Private Universities Act, 2009)

## M.Sc. in Chemistry

#### **Introduction of the Course:**

Higher study in chemistry discipline is a current need of the competitive environment. The M.Sc organic chemistry programme provides knowledge and skill based training to the students to flourish in research and in the professional career. The course offers a deep understanding of concept, theory and experiments that make students reach in knowledge of chemistry. The dissertation in the end semester provides a research environment for the student to build a career in the research field.

#### **Program Specific Objectives (PSOs):**

- To motivate critical thinking and analysis skills to solve complex problems to improve human life.
- To impart the basic analytical and technical skills to work effectively in the various fields of chemistry.
- To demonstrate an ability to conduct experiments with mastery of appropriate techniques and proficiency using core chemical instrumentation.
- To provide the professional services to industry, Researchorganization, institutes.
- To provide, value based and ethical leadership in the professional and social life.

#### **Program Specific Outcomes (PSOs):**

- In-depth and detailed functional knowledge of the fundamental theoretical concepts and experimental methods of chemistry.
- Apply/implement interface between on the one hand, the history of chemistry and natural science and, on the other hand, issues pertaining to the areas of modern technology, health, and environment.
- Skills in planning and conducting advanced chemical experiments and
- Skill in examining specific phenomena theoretically and/or experimentally
- Generation of new scientific insights or to the innovation of new applications of chemical research.

### Minimum Eligibility:

Graduate in Chemistry

#### **Duration of the Program:**

Two Year

### Fee Structure:

Semester 1 Rs./-

Semester 2 Rs./-

#### Salient Features of the Program/Course:

- In accordance with the to-be-implemented NEP (National Education Policy, 2020)
- Interdisciplinary as well as multidisciplinary
- Practical-oriented, skill-based and having element of hands on training
- Greater exposure to Chemical synthetic, Research approach, Formulation, Dissertation and Project work etc.
- Mode of teaching shall be hybrid (Online + Offline)
- Qualified & Competent Faculty Members for effective teaching-learning
- Employment-Generating

#### **Course Structure:**

Semester 1	Semester 2
Inorganic Chemistry	Inorganic Chemistry
Organic Chemistry	Organic Reactions-I
Physical Chemistry	Physical Chemistry
Analytical Chemistry	Analytical Chemistry
M.Sc. Sem-I Lab-I A) Inorganic Chemistry B) Organic Chemistry	Mathematics for Chemists OR Biology for Chemists
M.Sc. Sem-I Lab-I A) Physical Chemistry B) Analytical Chemistry	M.Sc. Sem-I Lab-I A) Inorganic Chemistry B) Organic Chemistry
-	M.Sc. Sem-I Lab-I A) Physical Chemistry B) Analytical Chemistry

#### **Job Opportunities:**

- Higher education, Ph.D.
- NET, SET
- Government Jobs in GPSC/ UPSC
- Content Developer
- Entrepreneur
- Research and Development (R&D) Officer
- Analytical Development Lab (ADL) Officer
- Quality Control (QC) & Quality Assurance (QA) department in Industry
- IPR department in Industry
- Synthetic Lab Chemist
- Academics
- Laboratory In-charge
- Online Tutor
- Water treatment industry
- Environment Pollution Control
- Analyst in Nuclear and thermal power plants



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