SECOND-YEAR OF MASTER OF SCIENCE CHEMISTRY REVISED SYLLABUS ACCORDING TO CBCS NEP2020

COURSE TITLE: PHARMACEUTICAL ANALYSIS
SEMESTER-IV
W.E.F. 2024-2025

RECOMMENDED BY THE BOARD OF STUDIES IN CHEMISTRY
AND
APPROVED BY THE ACADEMIC COUNCIL

Devrukh Shikshan Prasarak Mandal's
Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh.
Tal. Sangameshwar, Dist. Ratnagiri-415804, Maharashtra, India

Academic Council Item No:

Name of the Implementing Institute	:	Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh. Tal. Sangameshwar, Dist. Ratnagiri-415804,
Name of the Parent University	:	University of Mumbai
Name of the Programme	:	Master of Science
Name of the Department	:	Chemistry
Name of the Class	:	Second Year
Semester	:	Two
No. of Credits	:	02
Title of the Course	:	Pharmaceutical Analysis
Course Code	:	S614CHT
Name of the Vertical in adherence to NEP 2020	:	Elective
Eligibility for Admission	:	Chemistry Graduate learner seeking Admission to Post Graduate Programme in adherence to Rules and Regulations of the University of Mumbai and Government of Maharashtra
Passing Marks	:	40%
Mode of Assessment	:	Formative
Level	:	PG
Pattern of Marks Distribution for SEE and CIA	:	60:40
Status	:	NEP-CBCS
To be implemented from Academic Year	:	2024-2025
Ordinances /Regulations (if any)		

Syllabus for Second Year of Master of Science in Chemistry

(With effect from the academic year 2024-2025)

SEMESTER-IV **Paper No.- V**

Course Title: Pharmaceutical Analysis **No. of Credits - 02**

Type of Vertical: Elective **Course Code: S614CHT**

Learning Outcomes Based on BLOOM's Taxonomy:

After completing the course, the learner will be able to…		
Course Learning Outcome No.	Blooms Taxonomy	Course Learning Outcome
CLO-01	Understand	Discuss sources , classification ,standardization and test involved in pharmaceutical analysis.
CLO-02	Apply	Explain methods used in analysis of pharmaceutical products .

Syllabus for Second Year of Master of Science in Chemistry

(With effect from the academic year 2024-2025)

SEMESTER-IV **Paper No.- V**

Course Title: Pharmaceutical Analysis **No. of Credits - 02**

Type of Vertical: Elective **Course Code: S614CHT**

COURSE CONTENT			
Module No.	**Content**	**Credits**	**No. of Hours**
1	**UNIT-I: Pharmaceutical Analysis** • General idea regarding the Pharmaceutical Industry, definition and classification of drugs, introduction to pharmaceutical formulations, classification of dosage forms. Role of FDA in pharmaceutical industries. • Sources of impurities in pharmaceutical products and raw materials. • Standardization of finished products and their characteristics, official methods of quality control.	01	15
2	**UNIT-II: Drug** • Analysis of compounds based on functional groups, instrumental methods for analysis of drugs, assays involving chromatographic separations, proximate assays, assays of enzyme containing substances, biological and microbiological assays and tests. • Limit tests, solubility tests, disintegration tests, stability studies, impurity profile of drugs, bioequivalence and bioavailability studies. Polymers in pharmaceuticals and novel drug delivery systems.	01	15
	Total	**02**	**30**

Access to the Course

The course is available for all the students admitted for Second year of Master of Science.

Methods of Assessment

The assessment pattern would be 60:40, 60% for Semester End Examination (SEE) and 40% for Continuous Internal Assessment (CIA). The structure of the SEE and CIA would be as recommended by the Board of Studies and approved by the Board of Examination and the Academic Council of the college.

References:

1. Analytical Biochemistry, David J Holmes and Hazel Peck, Longman, 1983.
2. Bioanalytical Chemistry, Susan R Mikkelesen and Eduardo Cotton, John Wiley and Sons, 2004
3. Encyclopedia of Industrial Chemical Analysis, Foster Dee Snell et al, Interscience Publishers, 1967.
4. Government of India Publications of Food, Drug and Cosmetic Act and Rules.
5. The Handbook of Drug Laws, M L Mehra, University Book Agency, Ahmedabad, 1997.
6. Chemical Analysis of Drugs, Takeru Higuchi, Interscience Publishers, 1995.
7. Text book of Pharmaceutical Analysis, Kenneth Antonio Connors, Wiley, 2001