FIRST-YEAR OF BACHELOR OF SCIENCE CHEMISTRY SKILL COURSE RELATED TO DSC REVISED SYLLABUS ACCORDING TO CBCS NEP2020

COURSE TITLE: PURIFICATION METHODS IN CHEMISTRY
SEMESTER-I
W.E.F. 2023-2024

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: 03 dated 08 July 2023

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	:	Bachelor of Science
Name of the Department	:	Chemistry
Name of the Class	:	First Year
Semester	:	First
No. of Credits	:	02
Title of the Course	:	Purification Methods in Chemistry
Course Code	:	CHSE101
Name of the Vertical in adherence to NEP 2020	:	Skill Enhancement Course (SEC)
Eligibility for Admission	:	Any 12^{th} Pass science learner seeking admission to Degree Programme in adherence to Rules and Regulations of the University of Mumbai and Government of Maharashtra
Passing Marks	:	40%
Mode of Assessment	:	Summative at the end of semester
Level	:	UG
Pattern of Marks Distribution for SEE	:	100 %
Status	:	NEP-CBCS
To be implemented from Academic Year	:	2023-2024
Ordinances /Regulations (if any)		

Syllabus for First Year of Bachelor of Science in Chemistry

(With effect from the academic year 2023-2024)

SEMESTER-I

Course Title: Purification Methods in Chemistry **No. of Credits - 02**

Type of Vertical: Skill Enhancement Courses **COURSE CODE: CHSE101**

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	understand purification techniques for organic compounds.
CLO-02	Apply	determine physical constants of organic compounds.
CLO-03	Create	perform recrystallisation of organic compounds and separation of organic compounds by chromatography.

Syllabus for First Year of Bachelor of Science in Chemistry

(With effect from the academic year 2023-2024)

SEMESTER-I

Course Title: Purification Methods in Chemistry **No. of Credits - 02**

Type of Vertical: Skill Enhancement Courses **COURSE CODE: CHSE101**

COURSE CONTENT			
Sr. No.	**Content**	**Credits**	**No. of Hours**
1	**Organic Chemistry** 1. Purification of any six organic compounds by recrystallization selecting suitable solvent. (Provide 1g.) a) Selection of solvent for recrystallization. b) Determination of yield and melting points of purified compound. Learners should calibrate thermometer before determining melting point. 2. Chromatography (Any three) a) Separation of a mixture of two sugars by ascending paper chromatography. b) Separation of a mixture of o-and p-nitrophenols by thin layer chromatography (TLC).	02	30
	Total	**02**	**30**

Access to the Course

The course is available for all the students admitted for Bachelor of Science.

Methods of Assessment

Vocational Skill Courses, Skill Enhancement Courses and the courses having laboratory sessions shall be assessed at the end of each semester.

Reference Books

1. Mann, F.G. & Saunders, B.C. Practical Organic Chemistry, Pearson Education (2009)

2. Furniss, B.S.; Hannaford, A.J.; Smith, P.W.G.; Tatchell, A.R. Practical Organic Chemistry,5th Ed., Pearson (2012)

3. Vogel, A.I., Tatchell, A.R., Furnis, B.S., Hannaford, A.J. & Smith, P.W.G., Textbook of Practical Organic Chemistry, Prentice-Hall, 5th edition, 1996.