



Savitribai Phule Pune University

(Formerly University of Pune)

Two Year Post-Graduate Program in Chemistry

(Faculty of Science & Technology)

Choice Based Credit System Syllabus (2019 Pattern)
of

M.Sc. (Chemistry) Part-II

Physical Chemistry, Inorganic Chemistry, Organic Chemistry
Drug Chemistry and Analytical Chemistry

for

Colleges Affiliated to Savitribai Phule Pune University

**Implemented from Academic Year
2020-2021**



Title of the Course: M.Sc. (Chemistry) (Part-II)**1. Structure of the Course:**

Basic structure/pattern (Framework) of the proposed postgraduate syllabus for the two years integrated course leading to M.Sc. (Chemistry) in the colleges affiliated to Savitribai Phule Pune University. The general structure for the M. Sc-II year Chemistry (all specializations) is as follows:

Semester - III			
Sr. No.	Paper No	Description	Credit
1	CCTP-7	Core Compulsory Theory Paper	4
2	CCTP-8	Core Compulsory Theory Paper	4
3	CCTP-9	Core Compulsory Theory Paper	4
4	CBOP-3	Choice Based Optional Paper - Theory	4
5	CCPP-3	Core Compulsory Practical Paper	4
Semester-IV			
6	CCTP-10	Core Compulsory Theory Paper	4
7	CCTP-11	Core Compulsory Theory Paper	4
8	CBOP-4	Choice Based Optional Paper - Theory	4
9	CBOP-5	Choice Based Optional Paper – Practical/ Project	4
10	CCPP-4	Core Compulsory Practical Paper	4

Choice of the optional papers: All colleges are encouraged to give the choice of optional papers to the students and conduct the separate classes if 40% or more students opt a different course than 60% or less students.

The specializations are:

1. Physical Chemistry
2. Inorganic Chemistry
3. Organic Chemistry
4. Drug Chemistry
5. Analytical Chemistry
6. Biochemistry

2. Teaching Hours

a) Theory – Each credit of theory is equivalent to 12 teaching hours + 3 tutorial hours. For 1 credit of theory there will be 1 L of 1 hour per week. Thus, 1 theory course will have total 15 weeks of teaching and it will be distributed as of 48 h for teaching and 12 h for tutorials and internal evaluation. In case of theory paper consisting of sections, each section is of 2 credits and time allotted will be 24 h teaching and 6 h for tutorials and internal evaluation.

b) Practical – Each credit of practical is equivalent to 24 teaching hours + 6 tutorial hours. For 1 credit of practical there will 2 L of 1 h per week. Thus, 1 practical course will have total 15 weeks of teaching and it will be distributed as of 96 h for performing practical and 24 h for tutorials and internal evaluation. i) Each experiment will be allotted 4 h time (one practical session) and for 1 course two sessions of 4 h per week should be allotted or ii) In case practical course is extended for one year, then total 30 weeks (15 week per semester) and 4 h

(one practical session) per week should be allotted to one practical course. *There shall not be more than 10 students in one batch of practical.*

3. Examination: Each theory and practical course carry 100 marks equivalent to 4 credits. Each course will be evaluated with Continuous Assessment (CA) and University Assessment (UA) mechanism. Continuous assessment shall be of 30 marks (30%) while university Evaluation shall be of 70 marks (70%). To pass the course, a student has to secure 40% mark in continuous assessment as well as university assessment i.e. 12 marks in continuous assessment and 28 marks in university assessment.


For Continuous assessment teacher must select variety of procedures for examination such as: i) Written test / Mid Semester test (not more than one for each course), ii) Term paper, iii) Viva-Voce, Project / survey / field visits iv) Tutorials v) Group discussion vi) Journal / Lecture / Library notes vii) Seminar presentation, viii) Short quiz ix) assignment x) research project by individual student or group of student xi) An open book test, etc.

Each practical course will be extended over the year and practical examination will be conducted at the end of academic year.



5. M. Sc. (II) Analytical Chemistry
To be Implemented from Academic Year 2020-21

Sr. No.	Paper No. & Code	Course Name	Credit
Semester - III			
1	CCTP-7 CHA-390	Electrochemical and Thermogravimetric Methods of chemical analysis	4
2	CCTP-8 CHA-391	Analytical Method Development and Extraction Techniques	4
3	CCTP-9 CHA-392	Advanced Chromatographic Methods of Chemical Analysis	4
4	CBOP-3 Theory CHA-393	CBOP-3, CHA-393-A: Bioanalytical Chemistry Or CBOP-3, CHA-393-B: Analysis of Food and Controlled Substances	4
5	CCPP-3 CHA-394	Practical I: Basics of Instrumental Methods of Chemical Analysis	4
Semester-IV			
6	CCTP-10 CHA-490	Advanced Analytical Spectroscopic Techniques	4
7	CCTP-11 CHA-491	Chemical Methods of Pharmaceuticals Analysis	4
8	CBOP-4 Theory CHA-492	CBOP-4, CHA-492-A: Laboratory Automation and Environmental Analytical Chemistry Or CBOP-4, CHA-492-B: Analytical Chemistry of agriculture, polymer and Detergents	4
9	CBOP-5 Practical CHA-493	Practical III: CBOP-5, CHA-493-A: Optional Analytical Chemistry Practical OR CBOP-5, CHA-494-B: Project	4
10	CCPP-4 CHA-494	Practical II: Applied Analytical Chemistry Practical	4


PRINCIPAL
 Arts, B.A., B.L., Comm.
 H.J. Science College,
 Chandwad Dist. 431001, M.S.





PROJECT REPORT

ON

“Synthesis of Schiff-Bases and their Metal Complexes using Eugenol ”

by

Mr. Gaikwad Swapnil B.

(M. Sc. II Analytical Chemistry)

Under the guidance

Dr. Rakesh S. Sancheti

(Assistant Professor)

Department of Chemistry

KKHA Arts, SMGL Commerce & SPHJ Science College, Neminagar

Chandwad (Nashik)-423101

Affiliated to University of Pune, Maharashtra (India).

Year 2020-2021



**KKHA Arts, SMGL Commerce & SPHJ Science College, Neminagar
Chandwad (Nashik) - 423101**

DEPARTMENT OF CHEMISTRY

CERTIFICATE

This is to certify that **Mr. Gaikwad Swapnil B.** of M.Sc. II (Analytical Chemistry) class has satisfactorily completed his project work on topic of **“Synthesis of Schiff-Bases and their Metal Complexes using Eugenol ”**

As per the rule laid down by University of Pune, in practical fulfilment of course CH-494B during academic year 2020-2021.

Dr. A.M.Patil

(HOD)

Department of Chemistry
SNJB's K.K.H.A.Arts, S.M.G.L.Commerce
& S.P.H.J.Science College,
Chandwad-423 101 Dist- Nashik

Dr. Sancheti Rakesh

(Project Guide)

External Examiner