



Establishment
27/11/1928

SNJB (Jain Gurukul's)

**K.K.H. Abad Arts, S.M.G. Lodha Commerce & S.P.H. Jain Science College
Neminagar, Chandwad-423101, Dist.-Nashik, Maharashtra**

(Affiliated to Savitribai Phule Pune University) Id. No.PU/NS/AC/015/1970

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• Website : www.acschandwadcollege.com

DST-FIST Funded (2018-19)

UGC-NSQF Courses (B.Voc. & CC)

Best College Award by Savitribai Phule Pune University (2015-16)

MSc. II Analytical Chemistry

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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 sem.) 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.

3. M.Sc. (II) Organic Chemistry

Course Structure

Sr. No.	Paper No. & Course Code	Course Name	Credits
Semester - III			
1	CCTP-7 CHO-350	Organic Reaction Mechanism and Biogenesis	4
2	CCTP-8 CHO-351	Structure Determination of Organic Compounds by Spectroscopic Methods	4
3	CCTP-9 CHO-352	Stereochemistry and Asymmetric Synthesis of Organic Compounds.	4
4	CBOP-3 CHO-353 Theory	CHO-353-A) Protection - De-protection, Chiron approach and Carbohydrate Chemistry	4
		Or	
		CHO-353B) Designing Organic Syntheses and Heterocyclic Chemistry	4
5	CCPP-3 CHO-354	Practical I: Solvent Free Organic Synthesis	4
Semester – IV			
6	CCTP-10 CHO-450	Chemistry of Natural Products	4
7	CCTP-11 CHO-451	Organometallic Reagents in Organic Synthesis	4
8	CBOP-4 CHO-452 Theory	CHO-452 A) Medicinal Chemistry	4
		CHO-452 B) Applied Organic Chemistry	4
9	CBOP-5 CHO-453 Practical	Practical III: Select any two Sections	4
		Section-I: Ternary Mixture Separation	2
		Section-I: Carbohydrates Synthesis and Isolation of Natural Products	2
		Section-I: Project / Industrial Training/ Internships/ Summer Project	2
10	CCPP-4 CHO-454	Practical II: Convergent and Divergent Organic Syntheses.	4

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

**SNJB's KKHA Arts, SMGL Commerce
and SPHJ Science College, Chandwad-
423101**

Grade B (NAAC Re-Accredited) Best College Award-2016

DST-FIST Funded December-2018

Department of Chemistry



SNJB

CERTIFICATE

This is to certify that a project report entitled "***Synthesis of Thymol containing Thiosemicarbazone and its Copper adducts***" submitted by **Ms. Arati Subhash Katkade and Ms. Priti Sandip Jadhav** for the partial fulfillment of degree of Master of Science in Chemistry, specialization with Analytical Chemistry has been carried out under our guidance and supervision at **Department of Chemistry, SNJB's KKHA Arts, SMGL Commerce and SPHJ Science College, Chandwad** during the academic year 2021-2022

Dr. R. S. Sancheti
Project Guide & Head

Dr. G. H. Jain

SNJB's
 KKHA Arts, SMGL Commerce and SPHJ Science College, Chandwad
 Dist- Nashik, Maharashtra- PIN-423 101
 Department of Chemistry
 Project Report-2021-22

Sr. No	Name of Student (s)	Title of project
1	Miss. Varsha Gavali, Ms. Rekha Pagar & Mr. Abhishek Kadam	New Copper adducts of Eugenol containing Thiosemicarbazone
2	Miss. Aarati Katkade & Ms. Priti S. Jadhav	Synthesis of Thymol containing Thiosemicarbazone and its Copper adducts
3	Mr. Vaibhav B. Sonawane	Synthesis and Characterization of Biomediated Silver Nanoparticles
4	Mr. Nikhil Sonawane	Synthesis of (E)-N'-(5-chloro-2-hydroxybenzylidene)-4-methylbenzenesulfonohydrazide and their Copper Complexes
5	Mr. Digamber Tambe	Synthesis of (E)-2-(4-(benzyloxy)-3-methoxybenzylidene)-N-methylhydrazinecarbothioamide and their Copper Complexes
6	Mr. Kiran Nikam & Mr. Dhananjay Shinde	Synthesis & Characterization of Silver nanoparticles: A green approach
7	Mr. Ghodake Tushar Machhindra	p-Tolynsalfonil hydrazide based schiff bases: Synthesis and Characterization
8	Mr. Nikam Swapnil Giri	3,5 Dihydroxyaniline & thiosemicarbazide Based Schiff bases: Synthesis and Characterization
9	Ms. Meghana Santosh Kahdane	Synthesis and Characterization of N,N,O donar ligand their copper adducts
10	Mr. Gavandi Sachin Balasaheb	Thiosemicarbazide based schiff bases: Synthesis and characterization
11	Ms. Surana Khushboo Abhay	Synthesis and Characterization of Aldehyde and Amine Coordination Compounds
12	Ms. More Jayshri Bhausahab	Synthesis and characterization and study of Schiff bases with respect to it's analytical application
13	Mr. Gangurde Gaurav	Thiosemicarbazide based Schiff base synthesis and

	<i>Samadhan</i>	their characterization
14	Ms. Pawar Pranjal Shantaram	Synthesis, Characterization and Study of Schiff Base Ligand with respect to it's Application
15	Mr. Bargal Ritesh Mahendra	2-Aminoethanol, 2-Aminothiazole & Thiosemicarbazide based Schiff bases: Synthesis and Charactrization
16	Ms. Wagh Pratiksha Ganapat	Synthesis, Characterization and Study of Schiff Base Ligand with respect to it's Application
17	Ms. Sonawane Supriya	Studies on Schiff Bases derived from Salicylaldehyde
18	Gauri Sangle	Synthesis and characterization of (z)-N'-Cyano-N(4-Cyclohexylphenyl) (Methylsulphanyl) Methanimidainide
19	Manas Yeole	Synthesis and characterization trifluoromethyl and amide containing intermediate:[4(trifluoromethyl)phenyl]propanamide to synthesize biologically important heterocyclic compounds
20	Neha Pande	Synthesis and characterization of N-(4-Cyclohexylphenyl) propanamide as a valuable intermediate for the preparation of biologically important molecules
21	Ashwini Somvanshi	Synthesis of phenyl) (Methylsulphanyl) Methanimidainide
22	Jaya Pawar	"Synthesis of Novel 4-Cyclohexyl quinoline"
23	Yogesh Pawar	Synthesis and characterisation of Novel 6,6-Spiro amine: 6-chlorospiro[chromane-2,4'-piperidin]-4-one for further derivatisation
24	Jungum Yukta	Synthesis of Novel 4-Cyclohexyl Phenyl propionamide Derivatives
25	Markad Rushikesh	Synthesis of Trifluoromethyl Phenyl amide Derivatives
26	Shinde Pratiksha	Synthesis of Novel 4-Cyclohexyl Phenyl Acetamide Derivatives
27	Deopurkar Aniket	Synthesis of 4- cyclohexyl phenyl substituted chalcone containing derivatives
28	Navle Roshan	Synthesis of 6-chloro-1'-[(cyanoimino)(methylsulfonyl)methyl]-3,4-dihydrospiro[1-benzopyran-2,4'-piperidine]-4-one and its characterization
29	Aher Pratiksha	Synthesis and characterization of novel derivatives of bromo quinolines as potential antibacterial agents

30	Gangurde ashwini	Studies on synthesis and characterization of novel heterocyclic Compounds.
31	Bhavar Prashant	Synthesis and Characterization of some novel triazole containing Pyrimidines
32	Kor Harshada	Synthesis and characterization of novel hydrazone derivatives
33	Thakare Gayatri	Synthesis and Characterization of some novel amino derivatives of Pyrimidine fused triazole
34	Khairnar Bhagyashree	Synthesis characterization of some novel heterocyclic compounds and study of biological activity
35	Shelar Krishna	Synthesis and characterization of novel 1,3,4-triazolo based quinoline derivatives
36	Gaikwad yogesh	Synthesis and Characterization of some novel Pyrimidine derivatives
37	Nikam Vaishali	Synthesis and characterization of novel 4-amino quinoline derivatives as a potential antibacterial agents
38	Jagtap Santosh	Synthesis and Characterization of some novel Pyrimidine derivatives
39	Shelar Vishal	Synthesis and Characterization of some novel triazole Pyrimidine derivatives
40	Bachhav Jidnyasa Bharat	Acid Catalyzed Synthesis and Characterization of Novel Schiff Bases
41	Ahire Dhanashri Sanjay	Synthesis and Characterization of Novel Schiff Bases
42	Deore Ashish Prakash Hire Pawan Kishor Hire Prashant Bhaidas	Evaluation and Comparison between Physicochemical Properties of Different Varieties of Wheat and Wheat Flour

P. S. Sane
HEAD

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