



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

(02556) Off. 252125 Res.252126 Tel. Fax:02556-252125

• P. O. Box No.: 6 • E-mail : alccchandwad@yahoo.co.in

• 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)

List of Documents: M.Sc. II Org. Chem +M.Sc. II Anal. Chem. Field Visit

Sr. No.	Document Name	Page No.
01	Syllabus Copy: Organic Chemistry	02-03
02	Syllabus Copy: Analytical Chemistry	04-05
03	Permission Letters	06-08
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05	Tour Report and Photographs	10-12

University of Pune
Revised Syllabus 2014
M.Sc. II: Organic Chemistry

Semester III

CHO-350	Organic Reaction Mechanism	48 Lectures, 4 Credits
CHO-351	Spectroscopic Methods in Structure Determination	48 Lectures, 4 Credits
CHO-352	Organic Stereochemistry	48 Lectures, 4 Credits
CHO-353	Pericyclic Reactions, Photochemistry and Heterocyclic Chemistry	48 Lectures, 4 Credits

Semester IV

CHO-450	Natural Products	48 Lectures, 4 Credits
CHO-451	Advanced Synthetic Organic Chemistry	48 Lectures, 4 Credits
CHO-452	Carbohydrate and Chiron approach/ Chiral Drugs and Medicinal Chemistry	48 Lectures, 4 Credits
CHO-453	Designing Organic Synthesis and Asymmetric Synthesis	48 Lectures, 4 Credits

M.Sc. II: Organic Chemistry Practical

CHO-347	Single Stage Preparations	6 Credits
CHO-447	Two Stage Preparations	6 Credits
CHO-448	Project/Industrial training/ Green Chemistry and Chemical Biology Experiments	6 Credits



11. o-Nitroaniline → o-Phenylene diamine → Benzimidazole
12. Phthalic acid → Phthalimide → Anthranilic acid
13. Benzyl cyanide → p-Nitrobenzyl cyanide → p-Nitro phenyl acetic acid
14. Hydroquinone → Hydroquinone diacetate → 2,5-Dihydroxy acetopheneone
15. Cyclohexanone → Enamine → 2-Acetyl cyclohexanone
16. α -Pinene → Disiamyl borane → Pinanol

CHO-448: Project/Industrial training/Green Chemistry and Chemical biology experiments (any Twelve) [6 Credits]

1. Preparation of acetanilide from aniline and acetic acid using Zn dust
2. Base catalyzed aldol condensation using LiOH.H₂O as a Catalyst.
3. Bromination of *trans*-stilbene using sodium bromide and sodium bromate
4. [4+2] cycloaddition reaction in aqueous medium at room temperature
5. Benzil Benzilic acid rearrangement under solvent free condition
6. Thiamine hydrochloride catalyzed synthesis of benzoin from benzaldehyde
7. Clay catalyzed solid state synthesis of 7-hydroxy-4-methylcoumarin
8. Ecofriendly nitration of phenols and its derivatives using Calcium nitrate
9. Bromination of acetanilide using ceric ammonium nitrate in aqueous medium
10. Green approach for preparation of benzopinacolone from bezopinacol using iodine catalyst
11. Preparation of 1, 1-bis-2-naphthol under grinding at room temperature.
12. Solvent free aldol condensation between 3,4-dimethoxybenzaldehyde and 1-indanone
13. Solvent free quantitative solid phase synthesis of azomethines from substituted anilines and substituted benzaldehydes.
14. Sucrose to ethyl alcohol (Baker's yeast)
15. Asymmetric reduction of EAA by using Baker's yeast

Note: i) Project/Industrial training students have to perform 6 practical from the above experiments.

ii) 20% students should be given project or industrial training.

Reference:

1. Comprehensive Practical Organic Chemistry by V.K. Ahluwalia and Renu Aggarwal
2. Monograph on Green Chemistry Laboratory Experiments by Green Chemistry Task Force Committee, DST



University of Pune
Revised Syllabus
M. Sc.-II Analytical Chemistry
Applicable from 2014-15

Semester-III		
Paper	Sections	Name of Paper
CHA-390	I & II	Electro analytical and Radio analytical methods of analysis
CHA-391	I & II	Pharmaceutical Analysis
CHA-392	I & II	Advanced analytical Techniques
CHA-380	Any Two Sections from following	
	I	Analytical Method development & validation
	II	Geochemical and alloy analysis
	III	Laboratory Automation and Sensor Based Techniques
Semester-IV		
Paper	Sections	Name of Paper
CHA-481	I & II	Analytical Toxicology and Food Analysis
CHA-490	I & II	Analytical spectroscopy
CHA-491	I & II	Analytical methods for analysis of fertilizers, detergents, water and Polymer, Paint and pigment
CHA-492	Method of Analysis and Applications : Any Two Sections from following	
	I	Pollution Monitoring and Control
	II	Analysis of body fluid
	III	Carbon Nanostructures and Applications of Nanotechnology
Practical Courses		
<i>Minimum 20% students must have complete Project work in leave of Practical course III</i>		
CHA-387	<i>Analytical chemistry Practical Course –I</i>	
CHA-487	<i>Analytical Chemistry Practical Course-II</i>	
CHA-488	<i>Analytical Chemistry Practical Course-III</i>	

Industrial Tour and Report writing is compulsory



CHA-387: Practical Course-I: Analysis of materials (6 Credits)

Experiment No	Name of experiment
1	Analysis of Bronze with respect to Copper and Tin
2	Determination of aluminium and magnesium from Magnalium alloy
3	Analysis of Dolomite ore for Ca, Mg and Silicate material
4	Analysis of bauxite ore
5	Analysis of Cement with respect to SiO ₂ , Calcium, Iron, Magnesium and Aluminium
6	Analysis of Zn-Chrome pigment for Cr and Zn
7	Spectrophotometric determination of lead in leaves using dithizone-chelating agent
8	Determination of alcohol from given sample by Spectrophotometrically
9	Determination of Nitrogen from Fertilizer sample
10	Estimation of Iron from syndent
11	Limit Tests: i) Iron from CaCO ₃ ii) Sulphate and Chloride from Paracetamol, Dextrose or any pharmaceutical Preparation
12	Analysis of Salbutal sulphate from asthma inhaler by UV spectrophotometry.
13	Estimation of Cu and Fe(III) by spectrophotometric titration. (Standardization of EDTA is expected).
14	Determination of Phosphate from fertilizer sample by volumetric method.
15	Removal of dyes on activated charcoal by column chromatography
16	Determine amount of magnesium from given talcum powder
17	Determination of COD from waste water
18	Analysis of water with respect to sulphate & Chloride
19	To analyse given sample of Magnalium alloy and determine percentage of aluminium gravimetrically and magnesium complexometrically.
20	Determination of calcium from given sample of plaster of Paris
21	Analysis of nicrome alloy with respect to nickel and chromium
22	Determination of cation exchange capacity of cation exchange resin or anion exchange capacity of anion exchange resin
23	Determination of organic carbon in soil
24	Determination of total cation concentration in waste water sample by cation exchange resin.
25	Analysis of copper ferrite (CuFe ₂ O ₄) and determine amount of copper and iron volumetrically
26	To determine phosphoric acid in cold drink by molybdenum blue method.
27	Determination of Titanium from pigment/raw material

Perform any 22 experiments [11 Experiments per Semester]

Industrial Tour and Report writing is Compulsory



Shri Neminath Jain Brahmacharyashram (Jain Gurukul's)



**KARMVEER KESHAVLALJI HARAKCHANDJI ABAD ARTS,
SHRIMAN MOTILALJI GIRIDHARILALJI LODHA COMMERCE & SHRIMAN P. H. JAIN SCIENCE (SR.)
AND SHRIMAN PEMRAJAJI DALICHANDJI SURANA ARTS, COMMERCE & SCIENCE (JR.) COLLEGE**

NEMINAGAR, CHANDWAD - 423 101 (DIST. NASHIK)

☎ : (02556) Off. 252125 Tele Fax : (02556) 252125
P. O. Box No. 6 E-mail : alccchandwad@yahoo.co.in

Junior College Code No. 13.01.002
Senior College Code No. 088

SNJB

(Affiliated to University of Pune) Id. No. PU/NS/AC/015/1970
Website : acschandwadcollege.com (NAAC - RE-ACCREDITED - 'B')

Best College Award - 2015-16 of Savitribai Phule Pune University, Pune

Dr. G. H. Jain
Principal

M.Sc., A.D.C.S.A & A, Ph.D.
Member - B.O.S. (Physics) University of Pune

Outward No. : 784 / ALSJ / 2018-19

Date : 12/03/2019

To,

**Administrative Officer,
SNJB's Jain Gurukul
Chandwad, Nashik**

इनवर्ड नंबर: 602 दिनांक: 12/3/19
स्वाक्षरी :
प्रशासकीय कार्यालय,
एसएनजेबी, नैमिनगर, ज.नाशिक

Subject: Academic/ Scientific Visit at IISER Pune.

Respected Sir,

We are happy to inform you that our Department of Chemistry wish to organize Academic/ Scientific visit at renowned institute, IISER, Pune. Consequently, we have also communicated with IISER Pune in advance. As in the syllabus of M.Sc. Chemistry course which is laid by the Savitribai Phule Pune, University, Pune contains compulsory visit to various industries or national academic institutes to strengthen theoretical & practical knowledge of students. With this context we request you to permit for aforesaid. Total thirty (30) students of M.Sc Organic and Analytical chemistry final year and four (04) faculty members will be the part of this visit.

We also planned to go to Mahabaleshwar on next day of visit and return back to Chandwad.

We hope for positive response.

Visiting date-13/03/2019 to 14/03/2019

Faculty members- Mr.P.B.Thete, Mr.K.R.Pagar, Mrs.N.B.Magar, Miss.P.S.Kunde.

Thanking You!

Head
Department of Chemistry

Visited to
chemistry Dept
IISER PUNE
13/03/19

Dr. G. H. Jain

PRINCIPAL
K.K.H.A. Arts SMGL Comm. & SPHJ
Science (Senior) & S.P.D.S. Arts,
Comm. & Science (Junior) College,
Chandwad, Dist. Nashik - 423 101



P.T.O →

R/ Principal

- 1) Ensure Sr. Staff accompanies
- 2) Adequate numbers of Gents & Ladies staff must accompany
- 3) Do not take students near water or on hill tops
- 4) Staff and Students must be in their college uniforms with identity cards
- 5) State Transportation buses to be hired for tour
- 6) One Medical Officer Should accompany
- 7) Written Permission from the concerned competent authorities must be obtained
- 8) Strict discipline to be observed
- 9) Written consent of parents need to be obtained
- 10) Ensure that parents are called at the terminal point for taking their children after the tour gets over
- 11) Necessary rules procedures stipulated from time to time by the competent authorities must be followed
- 12) If travel is by train in that case do not allow students to get down on railway stations, to avoid mishaps, e.g. boarding the trains while it has already began etc.

R. Salunke
12/3/2019

प्रशासकीय अधिकारी
श्री. नेमिनाथ जैन ब्रह्मचर्याश्रम (जैन गुरुकुल)
मेदिनार, चांदवड-423 101, जि. नाशिक

इनेबर्ड नंबर	दिनांक
स्वाक्षरी	
प्रशासकीय अधिकारी, मेदिनार, जि. नाशिक	
एस.ए.पी.सी., मेदिनार, जि. नाशिक	



To,
Principal,
KKHA Arts, SMGL Commerce
& SPHJ Science College, Chandwad

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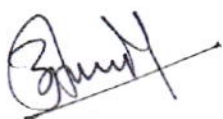
Visiting date-13/03/2019 to 14/03/2019

Faculty members- Mr.P.B.Thete, Mr.K.R.Pagar, Mrs.N.B.Magar, Miss.P.S.Kunde.

Thanking You!


NAAC


PRINCIPAL
K.K.H.A. Arts SMGL Comm. & SPHJ
Science (Senior) & S.P.D.S. Arts
Comm. & Science (Junior) College,
Chandwad, Dist. Nashik - 431 001


Head
Department of Chemistry



**KKHA Arts SMGL Commerce SPHJ Science College, Chandwad,
Nasik**

(Department of Chemistry)

Organic and Analytical chemistry student list

Industrial visit to IISER, Pune, Dist-Pune, Maharashtra.

Date-13th and 14th March 2019 (Wednesday & Thursday)

Sr NO.	Name of student	Age	Date of Birth	Contact No.	Signature
1	Deore Ritesh P	23	08/03/1996	8237840138	<i>Ritesh P Deore</i>
2	Alai Pankaj R	22	17-08-1996	9766626101	<i>Pankaj R Alai</i>
3	Vishal K. Kulkarni Biraris Gitanjali B	23	04/11/1996	9767151715	<i>Gitanjali B Biraris</i>
4	Sonawane Pallavi D	22	29/01/1997	901624889	<i>Pallavi D Sonawane</i>
5	Sawant Sandhya B	23	1-9-1996	9623787320	<i>Sandhya B Sawant</i>
6	Sonawane Sarvesh	23	1-12-1996	8623854142	<i>Sarvesh Sonawane</i>
7	Khairnar Akshada S	22	27-12-96	8421799886	<i>Akshada S Khairnar</i>
8	Kingaonkar Paris V	24	24-09-95	8446484078	<i>Paris V Kingaonkar</i>
9	Kulkarni Omkar R	24	25/02/1996	8483906629	<i>Omkar R Kulkarni</i>
10	Mali Sagar V	24	15-7-95	8329289227	<i>Sagar V Mali</i>
11	Pagar Vishal L	23	2-10-96	888661625	<i>Vishal L Pagar</i>
12	Mali Bhagyashri S	22	26/8/1996	8390808898	<i>Bhagyashri S Mali</i>
13	More Arjun R	24	05/06/1994	8421254627	<i>Arjun R More</i>
14	Gawali Sunil R	23	16/10/1995	8668586288	<i>Sunil R Gawali</i>
15	Deore Nikita K	22	29/07/1996	9561465450	<i>Nikita K Deore</i>
16	Gawali Amol B	23	19-2-96	7875226681	<i>Amol B Gawali</i>
17	Khatal Ashwini M	22	9-7-96	8809163492	<i>Ashwini M Khatal</i>
18	Jadhve Rohini G	24	13/12/1995	9637926728	<i>Rohini G Jadhve</i>
19	Mankar Pooja	22	19-10-1996	7350949518	<i>Pooja Mankar</i>
20	Shinde Ashwini S	22	31-5-1997	8149912821	<i>Ashwini S Shinde</i>
21	Biraris Kmlsh	22	4-16-1996	8007055903	<i>Kmlsh Biraris</i>
22	Jadhve Monali B	21	11/10/1996	9075715199	<i>Monali B Jadhve</i>
23	Pagar Kallyani N	23	6/1/1996	9503070362	<i>Kallyani N Pagar</i>

Staff Members

1	Dr.A.M.Patil			7588086769	
2	Mr.P.B.Thete			8975729959	
3	Mrs.N.B.Magar			8788490674	
4	Mr.S.B.Chaudhari			9404984408	



Department of Chemistry

Academic / Scientific Visit (2018-2019)

Department of Chemistry organized a scientific visit of two days for M.Sc Final year Chemistry students (Analytical and Organic Chemistry) during 13rd to 14th March, 2019 and visited to IISER (Indian Institute of Science Education & Research), Pune on 13rd March, 2019. The scientists from IISER explored the complete information about various instruments like ¹H NMR, FTIR, UV-Visible, CHNS Analyser, etc. During this visit students enjoyed much by keeping keen interest in learning the skills of instrument handling and working processes. We were accompanied by 23 students and 4 staff members out of which one lady staff with us. On next day we all went to visit Mahabaleshwar. It was memorable experience and students enjoyed a lot.



IISER Pune



^1H NMR Laboratory, IISER Pune



Mendeleev (Research) Laboratory, IISER, Pune





Mendeleev (Research) Laboratory, IISER, Pune



Mahabaleshwar

