

Arts, Science and Commerce College, Indapur, Dist. Pune  
TEACHING AND EVALUATION PLAN

Name of the teacher: Prof Gound K.B

Semester: III

Year: 2019-2020

Subject: Analytical Chemistry

CHA-392

Class: M.Sc II

Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Rem
1	Aug 2019	1&2	10	8	1) Atomic spectroscopy (12L) Theory, source, burner, atomic theory of emission spectra, atomic absorptionspectra, AAS, AES, ICPAES, Cold vapour techaqniue, standard addition, FES.	8	1) Atomic spectroscopy (12L) Theory, source, burner, atomic theory of emission spectra, atomic absorptionspectra, AAS, AES, ICPAES, Cold vapour techaqniue, standard addition, FES.	Nil	--
2	Aug 2019	3&4	11	8	Solid phase micro-extraction (6 L) Introduction, theoretical considerations, experimental, Methods of analysis: SPMEGC, Methods of analysis: SPME-HPLC-MS, Automation of SPME, New development in micro extraction (liquid micro extraction, membrane micro	8	Solid phase micro-extraction (6 L) Introduction, theoretical considerations, experimental, Methods of analysis: SPMEGC, Methods of analysis: SPME-HPLC-MS, Automation of SPME, New development in micro extraction (liquid micro extraction, membrane micro	Nil	--

3	Sept 2019	1&2	10	8	<b>3) classical Approach for Aqueous Extraction (6L)</b> Introduction, principle of liquid - liquid extraction, theory, purge and trap volatile aq.sample <b>4) Supercritical Fluids Extraction (3L)</b> Introduction, Instrumentation,	8	<b>3) classical Approach for Aqueous Extraction (6L)</b> Introduction, principle of liquid - liquid extraction, theory, purge and trap volatile aq.sample <b>4) Supercritical Fluids Extraction (3L)</b> Introduction, Instrumentation,	Nil	--
4	Sept 2019	3&4	11	8	Application. <b>5) Atomic Mass spectrometry (6L)</b> <b>6) Microwave assisted Extraction (3L)</b> Introduction, Instrumentation,	8	Application. <b>5) Atomic Mass spectrometry (6L)</b> <b>6) Microwave assisted Extraction (3L)</b> Introduction, Instrumentation,	Nil	--
5	Oct 2019	1&2	10	8	Application. <b>7) Solid Phase Extraction (6L)</b> Introduction,types ,SPE format and Apparatus,SPE media, method of Operation, factor affecting SPE,Automation of online SPE.	8	Application. <b>7) Solid Phase Extraction (6L)</b> Introduction,types ,SPE format and Apparatus,SPE media, method of Operation, factor affecting SPE,Automation of online SPE.	Nil	--
6	Oct 2019	3&4	11	8	<b>AtomicIonization and laser based-Enhanced Ionization: (Ref-1) (6 L)</b> Atomic Fluorescence Spectroscopy (AFS): Atomic fluorescence, apparatus for AFS, EMR source for AFS, LASERS, Cells for AFS, Plasmas, Wavelength selection for AFS, Detectors for AFS, Theory of AFS, Analysis with AFS, Interference With AFS.	8	AtomicIonization and laser based-Enhanced Ionization: (Ref-1) (6 L) Atomic Fluorescence Spectroscopy (AFS): Atomic fluorescence, apparatus for AFS, EMR source for AFS, LASERS, Cells for AFS, Plasmas, Wavelength selection for AFS, Detectors for AFS, Theory of AFS, Analysis with AFS, Interference With AFS.		

Semester IV

CHA -481

Year : 2019-2020

Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Rem
1	Jan 2020	1&2	11	8	Toxicology: (10 L) Isolation, identification and determination of following 1) Narcotics- heroin and cocaine. 2) Stimulants-caffeine and amphetamines. 3) Depressants- Barbiturates, Benzodiazepines	8	Toxicology: (10 L) Isolation, identification and determination of following 1) Narcotics- heroin and cocaine. 2) Stimulants-caffeine and amphetamines. 3) Depressants- Barbiturates, Benzodiazepines	Nil	--
2	Jan 2020	3&4	11	8	4) Barbiturates Benzodiazepine Determination of food preservatives (06 L) Definition, SO <sub>2</sub> legislation and determination by Tanners method, Nitrate and nitrites legislation and determination, boric acid legislation and determination, Benzoic acid legislation and determination, 4-hydroxybenzoate legislation and determination, ascorbic acid legislation and	8	4) Barbiturates Benzodiazepine Determination of food preservatives (06 L) Definition, SO <sub>2</sub> legislation and determination by Tanners method, Nitrate and nitrites legislation and determination, boric acid legislation and determination, Benzoic acid legislation and determination, 4-hydroxybenzoate legislation and determination, ascorbic acid legislation and	Nil	--

					determination. Sweeteners: Saccharine identification		determination. Sweeteners: Saccharine identification		
3	Feb 2020	1&2	12	8	Narcotics and Psychotropic substances Act.(4 L) Def – addict, cannabis ( hemp), Coca derivative, coca leaf, Manufacture medicinal cannabis, narcotic drug, opium , opium derivative, opium poppy, poppy straw, psychotropic substance, Illicit traffic, Prohibition control regulation offence and penalties Analysis of Lipids: (04 L) Estimation oil seeds, Estimation of free fatty acids, Saponification value of oils, iodine value, Determination of acid value of Fatty acid, peroxide value	8	<b>Narcotics and Psychotropic substances Act.(4 L)</b> Def – addict, cannabis ( hemp), Coca derivative, coca leaf, Manufacture medicinal cannabis, narcotic drug, opium , opium derivative, opium poppy, poppy straw, psychotropic substance, Illicit traffic, Prohibition control regulation offence and penalties <b>Analysis of Lipids: (04 L)</b> Estimation oil seeds, Estimation of free fatty acids, Saponification value of oils, iodine value, Determination of acid value of Fatty acid, peroxide value	Nil	--
4	Feb 2020	3&4	12	8	Diagnosis of acute poisoning, Treatment of acute poisoning, The role of the clinical toxicology laboratory (5L) Milk (02) Analysis of milk and milk products: Composition of milk, analysis of milk with respect to	8	<b>Diagnosis of acute poisoning, Treatment of acute poisoning, The role of the clinical toxicology laboratory (5L)</b> Milk (02) Analysis of milk and milk products: Composition of milk, analysis of milk with respect to	Nil	--





5	March 2020	1&2	12	8	<p>Carbohydrates: (05 L) Definition, classification, and functions, Analysis of carbohydrates from food sample by different method i) volumetric determination by Fehling's solution, ii) Colorimetric analysis of carbohydrates by Folin Wu method, Nelson Somyogi method, iii) total carbohydrates by Anthrone method, iv) Estimation of starchanthronemethodv)Determination of amylase, vi) Estimation of pectic substances (gravimetric and colorimetric method), vii)Estimation of crude fibbers</p> <p>Proteins (05 L) Definitions and functions, Analysis of proteins by Kjedadhl's method, ana</p>	8	<p><b>Carbohydrates: (05 L)</b> Definition, classification, and functions, Analysis of carbohydrates from food sample by different method i) volumetric determination by Fehling's solution, ii) Colorimetric analysis of carbohydrates by Folin Wu method, Nelson Somyogi method, iii) total carbohydrates by Anthrone method, iv) Estimation of starchanthronemethodv)Determination of amylase, vi) Estimation of pectic substances (gravimetric and colorimetric method), vii)Estimation of crude fibbers</p> <p><b>Proteins (05 L)</b> Definitions and functions, Analysis of proteins by Kjedadhl's method, ana</p>	Nil	--
6	March 2020	3&4	10	8	<p>n of amino acids by colorimetric method, Estimation of food grain for methioninecontent,Proteindigestibility in vitro, Protein efficiency and net protein ratio, Determination ofnetprotein utilisation</p> <p>Laboratory management and Practice, Color Test, Pretreatment of sample, Thin layer chromatography, Ultraviolet and visible spectrophotometry.(7L)</p>	8	<p>n of amino acids by colorimetric method, Estimation of food grain for methioninecontent,Proteindigestibility in vitro, Protein efficiency and net protein ratio, Determination ofnetprotein utilisation</p> <p><b>Laboratory management and Practice, Color Test, Pretreatment of sample, Thin layer chromatography, Ultraviolet and visible spectrophotometry.(7L)</b></p>		

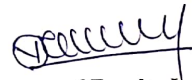
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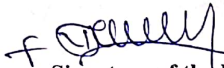
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- 3 The second copy must be retained by the teacher and submitted at the end of the term. Part second of the plan i. e. columns 7 to 10 must be filled up progressively the end of every week.

  
Signature of Teacher

  
Signature of Head of Department  
Head of Chemistry  
Arts, Science & Commerce  
College, Indapur, Dist. Pune

  
Signature of Faculty In-charge  
Incharge  
Science Faculty  
Arts, Science & Commerce  
College, Indapur, Dist. Pune

  
Signature of the Principal  
PRINCIPAL  
Arts, Science & Commerce  
College, Indapur, Dist. Pune  
INDAPUR-413106 DIST-PUNE

Arts, Science and Commerce College, Indapur, Dist. Pune  
TEACHING AND EVALUATION PLAN

Time of the teacher: Prof Gound K.B Year: 2019-2020 Semester: II  
Subject: Analytical Chemistry CHA-380 Class: M.Sc II

Part I : Teaching Plan					Part II : Evaluation of Plan			
2	3	4	5	6	7	8	9	10
Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
Aug 2019	1&2	10	4	1)Analysis of Geological materials: (8 L) Dolomite (For silicate, Mg and Ca content), Ilmenite (for silicate, Ti and Fe content), Monazite (for rare earth metals), Hematite and Magnetite (silicate and Fe content) Pyrolusite (for silicate and Mn content) and bauxite (for Al and Silicate content)	4	1)Analysis of Geological materials: (8 L) Dolomite (For silicate, Mg and Ca content), Ilmenite (for silicate, Ti and Fe content), Monazite (for rare earth metals), Hematite and Magnetite (silicate and Fe content) Pyrolusite (for silicate and Mn content) and bauxite (for Al and Silicate content)	Nil	--
Aug 2019	3&4	11	4	matite and Magnetite (silicate and Fe content) Pyrolusite (for silicate and Mn content) and bauxite (for Al and Silicate content)	4	matite and Magnetite (silicate and Fe content) Pyrolusite (for silicate and Mn content) and bauxite (for Al and Silicate content)	Nil	--
Sept 2019	1&2	10	4	2)Analysis of Alloys: (8 L) Stainless Steel (for Fe, Cr, Ni, Co, Cu, Mn, W, Si, V, Mo, Ti, Pb and Zr) Bronze and Gun metal ( Cu, Sn), , Brass (Cu, Zn, Sn,	4	2)Analysis of Alloys: (8 L) Stainless Steel (for Fe, Cr, Ni, Co, Cu, Mn, W, Si, V, Mo, Ti, Pb and Zr) Bronze and Gun metal ( Cu, Sn), , Brass (Cu, Zn, Sn,	Nil	--

				Pb),		Pb),		
Sept 2019	3&4	11	4	Solder (Pb and Sn), Nichrome (Fe, Ni, Cr), analysis of nickel Silver (Sn, pb, Cu, Fe, Ni and Zn) and Aluminium based alloy	4	Solder (Pb and Sn), Nichrome (Fe, Ni, Cr), analysis of nickel Silver (Sn, pb, Cu, Fe, Ni and Zn) and Aluminium based alloy	Nil	--
Oct 2019	1&2	10	4	Analysis of Soil: (8 L) i. Sampling, ii) Carbonate, Organic carbon, and organic matter, iii) Total nitrogen, ammonia and nitrates, iv) Total determination of major soil constituents by fusion analysis, v) silica and total combined oxides of iron	4	Analysis of Soil: (8 L) i. Sampling, ii) Carbonate, Organic carbon, and organic matter, iii) Total nitrogen, ammonia and nitrates, iv) Total determination of major soil constituents by fusion analysis, v) silica and total combined oxides of iron	Nil	--
Oct 2019	3&4	11	4	aluminium, and titanium, vi) Determination Ca, Mg, Na, K, phosphate, boron, Co, Cu, Zn, vii) Exchangeable cations vii) Cation exchange capacity, viii) chemical analysis as a measure of soil fertility	4	aluminium, and titanium, vi) Determination Ca, Mg, Na, K, phosphate, boron, Co, Cu, Zn, vii) Exchangeable cations vii) Cation exchange capacity, viii) chemical analysis as a measure of soil fertility	Nil	



Semester IV

CHA -481

Year : 2019-2020

## Part I : Teaching Plan

## Part II : Evaluation of Plan

2	3	4	5	6	7	8	9	10
Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
Jan 2020	1&2	11	4	3) Determination of vitamins in body fluid: (8L) Classification of vitamins with example, Each vitamin must be explained with respect of functions, deficiency diseases, daily requirement, and analytical method i) Retinol (determination of retinol and serum carotene in serum using TFA). Vit D3 (cholecalciferol), Vitamin E (Tocopherols, Determination of serum tocopherol by spectrophotometry by dipyrindyl method), Vitamin B1 (thiamine determination by flurometry), Vitamin B2 (riboflavin, Photofluorometric method), Vitamin B6 (Pyidoxine, Fluorometric determination of Xanthuric acid), Nicotinic acid and Niacin: determination by fluorometry, Ascorbic acid (vitamin -c) Volumetric method using 2,6 dichlorophenol method, colorimetric	4	3) Determination of vitamins in body fluid: (8L) Classification of vitamins with example, Each vitamin must be explained with respect of functions, deficiency diseases, daily requirement, and analytical method i) Retinol (determination of retinol and serum carotene in serum using TFA), Vit D3 (cholecalciferol), Vitamin E (Tocopherols, Determination of serum tocopherol by spectrophotometry by dipyrindyl method), Vitamin B1 (thiamine determination by flurometry), Vitamin B2 (riboflavin, Photofluorometric method), Vitamin B6 (Pyidoxine, Fluorometric determination of Xanthuric acid), Nicotinic acid and Niacin: determination by fluorometry, Ascorbic acid (vitamin -c) Volumetric method using 2,6 dichlorophenol method, colorimetric	Nil	--

				determination of leucocyte ascorbate		determination of leucocyte ascorbate		
Jan 2020	3&4	11	4	Spectrophotometry by dipyrindyl method), Vitamin B1 (thiamine determination by flurometry), Vitamin B2 (riboflavin, Photofluorometric method), Vitamin B6 (Pyidoxine, Fluorometric determination of Xanthuric acid), Nicotinic acid and Niacin: determination by fluorometry, Ascorbic acid (vitamin -c) Volumetric method using 2,6dichlorophenol method, colorimetric determination of leucocyte ascorbate	4	Spectrophotometry by dipyrindyl method), Vitamin B1 (thiamine determination by flurometry), Vitamin B2 (riboflavin, Photofluorometric method), Vitamin B6 (Pyidoxine, Fluorometric determination of Xanthuric acid), Nicotinic acid and Niacin: determination by fluorometry, Ascorbic acid (vitamin -c) Volumetric method using 2,6dichlorophenol method, colorimetric determination of leucocyte ascorbate	Nil	--
Feb 2020	1&2	12	4	Collection of Specimens: (02L) Blood: Collection of Blood specimens, storage and preservation, Urine: Collection of Urine, physical characteristics of urea, preservation and storage, Faeces: Collection and preservation. Organ function test (2L) Liver function tests and kidney function test	4	Collection of Specimens: (02L) Blood: Collection of Blood specimens, storage and preservation, Urine: Collection of Urine, physical characteristics of urea, preservation and storage, Faeces: Collection and preservation. Organ function test (2L) Liver function tests and kidney function test	Nil	--

Feb 2020	3&4	12	4	Analysis of Blood and urine: (06L) Determination of blood and plasma glucose by glucose oxidase method, Determination of urine for glucose, Determination of ketone bodies in blood, Oral Glucose tolerance test, Determination of serum creatinin, estimation of serum bilirubin, Estimation of serum cholesterol, determination of blood hemoglobin, Urate: determination of serum urate, Determination of urea in urine by urease method and by direct colorimetry, Estimation of Na, K, Ca by flame photometry, inorganic phosphate	4	Analysis of Blood and urine: (06L) Determination of blood and plasma glucose by glucose oxidase method, Determination of urine for glucose, Determination of ketone bodies in blood, Oral Glucose tolerance test, Determination of serum creatinin, estimation of serum bilirubin, Estimation of serum cholesterol, determination of blood hemoglobin, Urate: determination of serum urate, Determination of urea in urine by urease method and by direct colorimetry, Estimation of Na, K, Ca by flame photometry, inorganic phosphate	Nil	--
March 2020	1&2	12	4	Determination of urea in urine by urease method and by direct colorimetry Estimation of Na, K, Ca by flame photometry, inorganic phosphate Immunoanalytical Techniques: (06 L) Radioimmunoassay, its principle and applications, instrumentation for radio bioassay, clinical application of the radioimmunoassay of insulin, Estrogen and progesterone, receptor technique	4	Determination of urea in urine by urease method and by direct colorimetry Estimation of Na, K, Ca by flame photometry, inorganic phosphate Immunoanalytical Techniques: (06 L) Radioimmunoassay, its principle and applications, instrumentation for radio bioassay, clinical application of the radioimmunoassay of insulin, Estrogen and progesterone, receptor technique	Nil	--
March 2020	3&4	10	4	breast cancer. Enzyme- linked immunosorbent assay (ELISA), Types of ELISA, principles, practical aspects, applications.	4	breast cancer. Enzyme- linked immunosorbent assay (ELISA), Types of ELISA, principles, practical aspects, applications.	Nil	--

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Signature of Teacher

Signature of Head of Department  
Department of Chemistry,  
Arts, Science & Commerce  
College, Indapur, Dist. Pune

Signature of Faculty In-charge

Incharge  
Science Faculty  
Arts, Science & Commerce  
College, Indapur, Dist. Pune

Signature of the Principal

PRINCIPAL  
ARTS, SCIENCE AND  
COMMERCE COLLEGE  
INDAPUR, DIST. PUNE



## TEACHING AND EVALUATION PLAN

Name of the teacher: Prof. Mane Pranjali Suryakant  
 Subject: Organic Chemistry  
 Paper: CHO-391 (Pharmaceutical Analysis)  
 Year: 2019-2020  
 Semester: I  
 Class: M.Sc II Year

Part I : Teaching Plan					Part II : Evaluation of Plan				
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Aug 2018	3 & 4	12	4	Analysis of vegetable drug	6	Analysis of vegetable drug	2	Extra lecture done on sunday
2	Sep 2018	1 & 2	12	4	Sources of Impurities in pharmaceutical raw materials and finished products	4	Sources of Impurities in pharmaceutical raw materials and finished products	Nil	—
3	Sep 2018	3 & 4	11	4	Self life of pharmaceutical products	6	Self life of pharmaceutical products	2	Extra lecture done on sunday
4	Oct 2018	1 & 2	11	4	Standardization and quality control of different raw materials and dosage form	4	Standardization and quality control of different raw materials and dosage form	Nil	—

*Pranjali*  
 Signature of Teacher  
 Principal

*Pranjali*  
 Signature of Head of Department  
 Head  
 Department Of Chemistry  
 Arts, Science & Commerce  
 College, Indapur, Dist. Pune

*Pranjali*  
 Signature of Faculty In-charge  
 Incharge  
 Science Faculty  
 Arts, Science & Commerce  
 College, Indapur, Dist. Pune

*Pranjali*  
 Signature of the  
 PRINCIPAL  
 ARTS, SCIENCE AND  
 COMMERCE  
 COLLEGE  
 INDAPUR, DIST. PUNE



# TEACHING AND EVALUATION PLAN

Name of the teacher: Prof. Mane Pranjali Suryakant	Year: 2019-2020	Semester: I
Subject: Organic Chemistry	Paper: CHO-150 (Basic Organic Chemistry)	Class: M.Sc I Year

Part I : Teaching Plan					Part II : Evaluation of Plan				
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Aug 2018	3 & 4	12	4	Structure, stability and Reactions of Reactive Intermediates	4	Structure, stability and Reactions of Reactive Intermediates	Nil	--
2	Sep 2018	1 & 2	12	4	Rearrangement Reactions	6	Rearrangement Reactions	2	Extra lecture done on sunday
3	Sep 2018	3 & 4	11	4	Ylides: Phosphorus, Nitrogen and Sulphur	4	Ylides: Phosphorus, Nitrogen and Sulphur	Nil	--
4	Oct 2018	1 & 2	11	4	Oxidation and reduction reactions	6	Oxidation and reduction reactions	2	Extra lecture done on sunday

*Mane Pranjali*  
Signature of Teacher

*Mane Pranjali*  
Signature of Head of Department

*Mane Pranjali*  
Signature of Faculty In-charge

*Mane Pranjali*  
Signature of the

Head  
Department Of Chemistry  
Arts, Science & Commerce  
College, Indapur, Dist. Pune

Incharge  
Science Faculty  
Arts, Science & Commerce  
College, Indapur, Dist. Pune

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**Arts, Science and Commerce College, Indapur, Dist. Pune**  
**TEACHING AND EVALUATION PLAN**

Name of the teacher: Prof. Mane Pranjali Suryakant  
Subject: Organic Chemistry  
Year: 2019-2020  
Semester: IV  
Paper: CHO-451 (Organometallic Reagent in Organic Synthesis)  
Class: M.Sc II Year

Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	Part II : Evaluation of Plan			Remarks
						7	8	9	
						No. of periods engaged	Topics taught	Deviation in periods	
1	Dec 2020	3 & 4	9	8	Transition metal complexes in organic synthesis: Ligand and % mole concepts.	8	Transition metal complexes in organic synthesis: Ligand and % mole concepts.	Nil	--
2	January 2021	1 & 2	12	8	C-C, C-N, C-O bond formation reactions with catalytic cycle.	8	C-C, C-N, C-O bond formation reactions with catalytic cycle.	Nil	--
3	January 2021	3 & 4	11	8	C=C bond formation reactions: Shapiro..	8	C=C bond formation reactions: Shapiro..	Nil	--
4	Feb 2021	1 & 2	11	8	Multi component reactions, Ring formation reactions, Click chemistry.	8	Multi component reactions, Ring formation reactions, Click chemistry.	Nil	--
M	January 2021	3 & 4	12	8	Metathesis: ROM, RCM, OCM Use of Boron and silicon reagent in organic synthesis.	8	Metathesis: ROM, RCM, OCM Use of Boron and silicon reagent in organic synthesis.	Nil	--

Arts, Science and Commerce College, Indapur, Dist. Pune

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College, Indapur, Dist. Pune

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Principal  
ARTS, SCIENCE AND  
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INDAPUR-413106 DIST. PUNE



Teacher name: Sachin D.Kharat Year : 2019-2020 Class: M.Sc. Org-II Semester I Paper: CHO-351: Spectroscopic Methods in Structure Determination

Part I : Teaching Plan						Part II : Evaluation of Plan			
1 Sr. No.	2 Month	3 Week	4 No. of working days	5 No. of periods available	6 Topics to be taught	7 No. of periods engaged	8 Topics taught	9 Deviation in periods	10 Remarks
1	July 2019	3 & 4	11	7	1H NMR Spectroscopy	7	1H NMR Spectroscopy	Nil	--
2	Aug 2019	1 & 2	12	8	13C NMR spectroscopy	8	13C NMR spectroscopy	Nil	
3	Aug 2019	3 & 4	12	6	2D NMR Techniques	6	2D NMR Techniques	Nil	--
4	Sep 2019	1 & 2	12	8	Mass Spectrometry	6	Mass Spectrometry	Nil	--
5	Sept 2019	1 & 2	12	8	Problems based on joint application of UV, IR, PMR, CMR, and Mass.	8	Problems based on joint application of UV, IR, PMR, CMR, and Mass.	Nil	
6	Oct 2019	1,2&3	18	12	Problems based on joint application of UV, IR, PMR, CMR, and Mass.	16	Problems based on joint application of UV, IR, PMR, CMR, and Mass.	4	Extra lectures was conducted

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INDAPUR-413106 DIST-PUNE



## TEACHING AND EVALUATION PLAN

Name of the teacher: Prof. Yogesh Vilas Zagade

Year: 2019-20

Semester: I

Subject: Organic Stereochemistry and Asymmetric synthesis

Paper: CHO-352

Class: M.Sc.- II

Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Oct 2019	1 & 2	10	8	Confirmation of polysubstituted cyclohexane	8	Confirmation of polysubstituted cyclohexane	Nil	--
2	Oct 2019	3 & 4	12	10	Stereochemistry of fused and Bridged ring system	10	Stereochemistry of fused and Bridged ring system	Nil	--
3	Nov 2019	1 & 2	13	7	Determination of configuration by cams rule and Different model	9	Determination of configuration by cams rule and Different model	2	Extra lecture was conducted on sunday
4	Nov 2019	3&4	11	8	ASymmetric synthesis chiral pool strategy	8	ASymmetric synthesis chiral pool strategy	Nil	--
5	Dec 2019	1&2	12	8	Asymmetric organic catalysis to a Asymmetric hydrogenations	8	Asymmetric organic catalysis to a Asymmetric hydrogenations	Nil	--



Semester II

Paper: IV CHO- 453 Designing Organic Synthesis

Year : 2019-20

Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Dec 2019	4	6	2	Basic Concepts in Retrosynthesis	2	Basic Concepts in Retrosynthesis	Nil	--
2	Jan 2020	1 & 2	12	5	Protection , Deprotection in Organic Synthesis	5	Protection , Deprotection in Organic Synthesis	3	Extra lecture was conducted
3	Jan 2020	3 & 4	12	8	Umploung of Reactivity	9	Umploung of Reactivity	1	Extra lecture was conducted
4	Feb 2020	1 & 2	12	8	Retrosynthesis of different functional group	9	Retrosynthesis of different functional group	1	lecture was conducted
5	Feb 2020	3 & 4	12	6	Linear and Convergent synthesis	6	Linear and Convergent synthesis	nil	-

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Signature of Head of Department

Department Of Chemistry  
Arts, Science & Commerce  
College, Indapue, Dist. Pune

Signature of Faculty In-charge

Incharge  
Science Faculty  
Arts, Science & Commerce  
College, Indapue, Dist. Pune

Signature of the Principal

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