

21. Comprehensive Practical Organic Chemistry (Preparation and Qualitative Analysis) by V.K. Ahluwalia and Renu Agrawal, Orient Longman.
22. Practical Physical Chemistry: Palit and De.
23. Practical Physical Chemistry: Yadao.
24. Practical Physical Chemistry: Khosla.
25. Advanced Practical Inorganic Chemistry by Gurdeep Raj, Goel Publishing House, Meerut.

Weblink to Equivalent MOOC on SWAYAM if relevant:

Weblink to Equivalent Virtual Lab if relevant:

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:



Sant Gadge Baba Amravati University, Amravati

Syllabus Prescribed for three Year UG/PG Programme

Programme: B.Sc. with Chemistry

Semester 3

Code of the Course/Subject	Title of the Course/Subject (Laboratory/Practical/practicum/hands-on/Activity)	(No. of Periods/Week)
CHE(3S)PR	Chemistry 3S	Total 26 per Semester

COs: At the end of Lab/Practical course, students will be able to -

1. estimate different metals using a variety of methods.
2. skilfully prepare solution of different concentrations.
3. determine molecular weight of an organic molecule.
4. determine thermodynamic parameters associated with a physical phenomenon and state.
5. use methods of determination of partition coefficient.

*** List of Practical/Laboratory Experiments/Activities etc.**

Exercise-1 Inorganic	
1	Estimation of Ba^{2+} as BaSO_4 .
2	Estimation of Fe^{3+} as Fe_2O_3 using china and silica crucible.
3	Estimation of Ni^{2+} as Ni-DMG using sintered glass crucible.
4	Estimation of copper (II) in commercial copper sulphate sample by iodometric titration.
5	To determine the percentage of calcium carbonate in precipitated chalk.
6	To determine volumetrically the amounts of sodium carbonate and sodium hydroxide present together in the given solution
7	Preparation of standard solution of an acid (oxalic acid) & a base (sodium bicarbonate) by weighing and calculation of concentrations in terms of strength, normality, molarity, molality, formality, % by weight, % by volume, ppm, ppb and mole fraction.
8	Preparation of standard solution of hydrochloric acid by dilution and calculation of concentrations in terms of strength, normality, molarity, molality, formality, % by weight, % by volume, ppm, ppb and mole fraction.

	Exercise II: Physical Chemistry Experiments
9	Determination of molecular weight of solute by Rast's method
10	To determine activation energy of a reaction between $K_2S_2O_8$ and KI.
11	Determination of thermodynamic values (ΔS° , ΔH° , and ΔG°) from the dissociation of a weak acid.
12	To determine transition temperature of $MnCl_2 \cdot 4H_2O$.
13	To study critical solution temperature (CST) of phenol water system.
14	To determine the partition coefficient of CH_3COOH between H_2O and CCl_4
15	To determine the partition coefficient of Benzoic acid between H_2O and toluene.

Note:

Distribution of Marks for Practical Examination

Time : 04 hours (One Day Examination)

Total Practical Marks 50, Duration of Exam 04 Hours			
Internal Practical Exam (25 Marks)		External Practical Exam* (25 Marks)	
Attendance, Students Performance, Activity,		Experiment 1 Performance / Demonstration :	10
Practical Record Book / Laboratory Manual/Journal		Experiment 2 Performance / Demonstration :	10
Report : 20		External Viva (by External and Internal Examiner: 05	
Internal Viva/Assignment/Quiz/Test : 05			
Total :	25	Total :	25

*Note: One practical from respective exercise



Sant Gadge Baba Amravati University, Amravati
Syllabus Prescribed for three Year UG/PG Programme

Programme: B.Sc. with Chemistry

Semester 4

Code of the Course/Subject	Title of the Course/Subject (Laboratory/Practical/practicum/hands-on/Activity)	(No. of Periods/Week)
CHE(4S)PR	Chemistry 4S	Total 26 per Semester

COs: At the end of Lab/Practical course, students will be able to -

1. prepare soap from available oil or fat and determine its different parameters.
2. extract different constituents of milk.
3. prepare glucose from cane sugar
4. use advanced instruments like pH-meter, potentiometer, conductometer, etc.
5. determine electrode potential of a metal.
6. determine pH of given soil sample.

*** List of Practical/Laboratory Experiments/Activities etc.**

Exercise-1 organic	
1	To prepare glucose from cane sugar.
2	To determine the iodine value of the given Oil or Fat.
3	Determination of equivalent weight of an organic acid.
4	Determination of equivalent weight of an ester by saponification.
5	Preparation of soap from oil or fat.
6	Determination of properties of soaps (at least two samples) with respect to pH, Foam, interaction with oil, and hard water test.
7	Isolation of casein from milk.
8	Isolation of lactose from milk.
Exercise II: Physical Chemistry Experiments	
9	Determination of standard electrode potential of Cu/Cu^{+2} or Zn/Zn^{+2} electrodes potentiometrically.
10	To determine dissociation constant of weak acid by conductometry.
11	To determine dissociation constant of weak acid by potentiometry.
12	To determine dissociation constant of dibasic acid by pH-metry.
13	To determine solubility and solubility product of sparingly soluble salts conductometrically.
14	To study strong acid and strong base titration by pH-metry.
15	To determine pH of a soil sample by pH-meter.
16	To verify Beer's Lambert's law using $\text{KMnO}_4/\text{K}_2\text{Cr}_2\text{O}_7$.
17	To determine solubility of benzoic acid at different temperature and heat of solution.

Note:

Distribution of Marks for Practical Examination

Time : 04 hours (One Day Examination)

Total Practical Marks 50, Duration of Exam 04 Hours	
Internal Practical Exam (25 Marks)	External Practical Exam* (25 Marks)

Attendance, Students' Performance, Activity,	Experiment 1 Performance / Demonstration : 10
Practical Record Book / Laboratory Manual/Journal	Experiment 2 Performance / Demonstration : 10
Report : 20	External Viva (by External and Internal Examiner: 05
Internal Viva/Assignment/Quiz/Test : 05	
Total : 25	Total : 25

*Note: One practical from respective exercise



Sr. No	Subject	Subject Code	Teaching & Learning Scheme						Duration of Exams Hrs.	Examination & Evaluation Scheme						Minimum Passing Marks Grade				
			Teaching Period Per week				Credits			Maximum Marks										
			L	T	P	Total	Theory/ Tutorial	Practical		Total	Theory + M.C.Q Ext.	Skill Enhancement Module (SEM) Int.	Practical		Total Marks					
													Internal	External						
1	Mathematics, (DSC-13)		5	-	-	5 L	3.75	--		3.75		3	60	15	-	-	75	30	P	
2	Mathematics (DSC-14)		4	1*	---	4 L + 1 Tutorial*	3.75	--		3.75		3	60	15	-	-	75	30	P	
3	Science Subject1 excluding Mathematics (DSC-15)		6	-	-	6	4.5	-		4.5		3	80	20	-	-	100	40	P	
4	Practical for Science Subject 1 (DSC-15) excluding Mathematics (DSC-16)		-	-	6	6		2.25		2.25		3	-	-	25	25	50	25	P	
5	Science Subject 2 excluding Mathematics (DSC-17)		6	-	-	6	4.5	-		4.5		3	80	20	-	-	100	40	P	
6	Practical for Science Subject 1 (DSC-17) excluding Mathematics (DSC-18)		-	-	6	6		2.25		2.25		3	-	-	25	25	50	25	P	
7	Environmental Studies-I (AEC)		2	-	-	2	1.5	--		1.5		2	Internal Assessment by college/institute/departement				50	25	P	
8	Open Elective Course Optional		GIC/MOOC/Skill Course																	
	Total									22.5							500			

L: Lecture, T: Tutorial, P: Practical

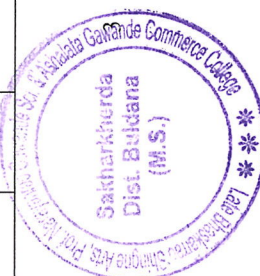
Note :1. Internship /Field Work / Work Experience will be conducted after I semester till Vth semester in vacations for minimum 120 hrs, cumulatively entailing 4 Credits. It's credits and grades will be reflected in final semester VI credit grade report.



Scheme of Teaching, Learning, Examination and Evaluation (B.Sc. -Mathematics) (Semester-IV)

Scheme of Learning, Teaching, Examination and Evaluation (DSC - Mathematics) (SEMESTER-IV)																		
Teaching & Learning Scheme					Duration of Exams Hrs.		Examination & Evaluation Scheme											
Sr. No	Subject	Subject Code	Teaching Period Per week				Credits			Theory/ Tutorial	Practical	Total	Duration of Exams Hrs.	Maximum Marks				Minimum Passing Marks
			L	T	P	Total	Theory/ Tutorial	Practical	Total					Theory + M.C.Q Ext.	Skill Enhancement Module (SEM) Int.	Internal	Practical	
1	Mathematics, (DSC-19)		5	--	--	5 L	3.75	--	--	3.75	3	60	15	-	-	75	30	P
2	Mathematics (DSC-20)		4	1*	--	4 L + 1 Tutorial*	3.75	--	--	3.75	3	60	15	-	-	75	30	P
3	Science Subject 1 excluding Mathematics (DSC-21)		6	-	-	6	4.5	-	-	4.5	3	80	20	-	-	100	40	P
4	Practical for Science Subject 1 (DSC-21) excluding Mathematics (DSC-22)		-	-	6	6	2.25	2.25	-	2.25	3	-	-	25	25	50	25	P
5	Science Subject 2 excluding Mathematics (DSC-23)		6	-	-	6	4.5	-	-	4.5	3	80	20	-	-	100	40	P
6	Practical for Science Subject 1 (DSC-23) excluding Mathematics (DSC-24)		-	-	6	6	2.25	2.25	-	2.25	3	-	-	25	25	50	25	P
7	Environmental Studies-II (AEC)		2	-	-	2	1.5	-	-	1.5	3	70	30	-	-	100	40	P
8	Open Elective Course		GIC/MOOC/Skill Course															
	Optional																	
	Total															22.5		550

L: Lecture, **T:** Tutorial, **P:** Practical



Note : 1. Internship /Field Work / Work Experience will be conducted after I semester till Vth semester in vacations for minimum 120 hrs, cumulatively entailing 4 Credits. It's credits and grades will be reflected in final semester IV credit grade report.

2. OEC (Optional) can be studied (through SWAYAM/MOOC, etc.) during semester I to VI, Its credits and grades will be reflected in final semester VI credit grade report

3. Teaching period in the various subjects in the faculty of science shall be as prescribed by the executive council dated 1/2-4-1977, 11-7-1977 Appendix- P

4. If DSC (excluding Mathematics) is Physics, then 1 Tutorial be added.

5. In Tutorial for Mathematics, * indicates that for the subject Mathematics, the strength of a batch of Tutorials for UG classes shall be 16 (Sixteen) with an addition of 10 percent with the permission of the Honourable Vice Chancellor (As amended by the Executive Council dated 27/28-4-1979).



Three Years (Six Semesters) Degree Programme under Choice Based Credit System (CBCS)
Scheme of Teaching, Learning, Examination and Evaluation (B.Sc. -Excluding Mathematics) (Semester-III)

			Teaching & Learning Scheme				Duration of Exams		Examination & Evaluation Scheme								
Sr. No	Subject	Subject Code	Teaching Period Per week				Credits		Hrs.	Maximum Marks					Minimum Passing Marks		
			Total			Practical	Total	Theory + M.C.Q Ext.		Skill Enhancement Module (SEM) Int.	Practical		Total Marks				
			L	T	P						Internal	External					
1	(DSC-13)		6	-	-	6	4.5	-	4.5	3	80	20	-	-	100	40	P
2	Practical for (DSC-13), DSC-14		-	-	6	6	-	2.25	2.25	3	-	-	25	25	50	25	P
3	(DSC-15)		6	-	-	6	4.5	-	4.5	3	80	20	-	-	100	40	P
4	Practical for (DSC-15), (DSC-16)		-	-	6	6	-	2.25	2.25	3	-	-	25	25	50	25	P
5	(DSC-17)		6	-	-	6	4.5	-	4.5	3	80	20	-	-	100	40	P
6	Practical for (DSC-17)-(DSC-18)		-	-	6	6	-	2.25	2.25	3	-	-	25	25	50	25	P
7	Environmental Studies-I (AEC)		2	-	-	2	1.5	-	1.5	2	College Level examination				50	20	P
8	Open Elective Course Optional		GIC/MOOC/Skill Course														
	Total								21.75						500		

L: Lecture, T: Tutorial, P: Practical

Note : 1. Internship/Field Work / Work Experience will be conducted after I semester till Vth semester-in vacations for minimum 120 hrs, cumulatively entailing 4 Credits. It's credits and grades will be reflected in final semester IV credit grade report.



Three Years (Six Semesters) Degree Programme under Choice Based Credit System (CBCS)

Scheme of Teaching, Learning, Examination and Evaluation (B.Sc. -Excluding Mathematics) (Semester-IV)

Sr. No		Subject	Subject Code	Teaching & Learning Scheme				Duration of Exams	Examination & Evaluation Scheme						Minimum Passing			
				Credits					Hrs.	Maximum Marks				Total Marks				
				Teaching Period Per week				Theory/ Tutorial		Practical	Total	Theory + M.C.Q Ext.	Skill Enhancement Module (SEM) Int.		Practical		Internal	External
L	T	P	Total															
1		(DSC-19)		6	-	-	6	4.5	-	4.5	3	80	20	-	-	100	40	P
2		Practical for (DSC-19), DSC-20		-	-	6	6	-	2.25	2.25	3	-	-	25	25	50	25	P
3		(DSC-21)		6	-	-	6	4.5	-	4.5	3	80	20	-	-	100	40	P
4		Practical for (DSC-21), (DSC-22)		-	-	6	6	-	2.25	2.25	3	-	-	25	25	50	25	P
5		(DSC-23)		6	-	-	6	4.5	-	4.5	3	80	20	-	-	100	40	P
6		Practical for (DSC-23)-(DSC-24)		-	-	6	6	-	2.25	2.25	3	-	-	25	25	50	25	P
7		Environmental Studies-II (AEC)		2	-	-	2	1.5	-	1.5	3	70	30	-	-	100	40	P
8		Open Elective Course Optional		GIC/MOOC/Skill Course														
		Total								21.75						550		

L: Lecture, T: Tutorial, P: Practical



Note : 1. Internship /Field Work / Work Experience will be conducted after I semester till Vth semester in vacations for minimum 120 hrs, cumulatively entailing 4 Credits. It's credits and grades will be reflected in final semester IV credit grade report.

2. OEC (Optional) can be studied (through SWAYAM/MOOC, etc.) during semester I to VI, Its credits and grades will be reflected in final semester VI credit grade report

3. Teaching period in the various subjects in the faculty of science shall be as prescribed by the executive council dated 1/2-4-1977, 11-7-1977 Appendix- P

4. If DSC (excluding Mathematics) is Physics, then 1 Tutorial be added.



General Model Scheme

Sant Gadge Baba Amravati University Amravati

Scheme of teaching, learning & Examination leading to the Degree Master of Science (Choice Based Credit System) (Two Years ... Four Semesters Degree Course- C.B.C.S)

(M.Sc. Part-I) Semester- I, Subject: Chemistry/Industrial Chemistry

S r . N o	Subjects	Subject Code	Teaching & Learning Scheme				Duration of Exams Hrs.	Examination & Evaluation Scheme									
			Teaching Period Per week		Credits			Maximum Marks				Minimum Passing					
L	T	P	Total	Theory L/T	Internal	Practical	Total	Theory + M.C. Q External	Theory Internal	Practical Internal	Practical External	Total Marks	Marks	Grade			
1	DSC-I (Inorganic Chemistry)	CY101	04	--	--	04	04	--	04	03	80	20	-	-	100	40	P
2	DSC-II (Organic Chemistry)	CY102	03	--	--	03	03	--	03	03	80	20	-	-	100	40	p
3	DSC-III (Physical Chemistry-I)	CY103	04	--	--	04	04	--	04	03	80	20	-	-	100	40	p
4	DSC-IV (Analytical Chemistry-I)	CY104	04	--	--	04	04	--	04	03	80	20	-	-	100	40	p
5	AEC-I on DSC-II (Structural Chemistry)	CY105		01		01	01	--	01	01		25	--	--	25	10	P



6	Lab-I (Physical Chemistry)	CY106			09	09			4.5	4.5	06		--	20	80	100	50	p
7	Lab-II (Organic Chemistry)	CY107			09	09			4.5	4.5	06			20	80	100	50	p
8	#Internship/Field Work/Work Experience@ Open elective/GIC/Open skill/MOOC*																	
	Total		15	0	18	34	16		09	25						625		

- L: Lecture, T: Tutorial, P: Practical
- # Students may complete their internship/field work/work experience in first or second or third semester of M.Sc. (Chemistry/Industrial) according to their convenience; @denotes non-examination credit
- Note: Internship/Apprenticeship/field work/work experience (During vacations of semester I to semester III) for duration of minimum 60 hours to maximum 90 hours mandatory to all the students, to be completed during vacations of semester I to III. This will carry 2 credits for learning of 60 hours or 3 credits for learning of 90 hours. Its credits and grades will be reflected in final semester IV credit grade report.
- OEC (optional) can be studied during semester I to IV.

Suggested Activities for assessment for AEC:

Mini-project, internal evaluation: Class test or surprise test, Demonstration of task or activity assigned, assignment, seminar, or any other innovative pedagogical method.



APPENDIX – A-1,A-2

General Model Scheme

Sant Gadge Baba Amravati University Amravati

Scheme of teaching, learning & Examination leading to the Degree Master of Science (Choice Based Credit System) (Two Years ... Four Semesters Degree Course- C.B.C.S)

(M.Sc. Part-I) Semester- II , Subject : Chemistry/Industrial Chemistry

S r . N o	Subjects	Subject Code	Teaching & Learning Scheme				Duration of Exams Hrs.	Examination & Evaluation Scheme								
			Teaching Period Per week					Credits			Maximum Marks			Minimum Passing		
L	T	P	Total	Theory L/T	Internal	Practical	Total	Theory + M.C. Q External	Internal	Practical	Total Marks	Marks	Grade			
1	DSC-V (Advance Inorganic Chemistry)	CY201	04	--	04	04	--	04	03	80	20	--	--	100	40	P
2	DSC-VI (Organic Reaction Mechanism)	CY202	03	--	03	03	--	03	03	80	20	--	--	100	40	p
3	DSC-VII (Physical Chemistry-II)	CY203	04	--	04	04	--	04	03	80	20	--	--	100	40	p
4	DSC-VIII (Analytical Chemistry-II)	CY204	04	--	04	04	--	04	03	80	20	--	--	100	40	p
5	AEC- II on DSC-VI (Acid and Bases and Virtual Lab)	CY205	--	01	--	01	01		01	--	25	--	--	25	10	P



6	Lab-III (Physical Chemistry)	CY206			09	09			4.5	4.5	06		20	80	100	50	p
7	Lab-IV (Inorganic Chemistry)	CY207			09	09			4.5	4.5	06		20	80	100	50	p
8	#Internship/Field Work/Work Experience@																
9	Open elective/GIC/OpenSkill/MOOC*																
	Total		15	0	18	34	16		09	25					625		

• L: Lecture, T: Tutorial, P: Practical

• # Students may complete their internship/field work/work experience in first or second or third semester of M.Sc. (Chemistry/Industrial) according to their convenience; @denotes non-examination credit

• Note: Internship/Apprenticeship/field work/work experience (During vacations of semester I to semester III) for duration of minimum 60 hours to maximum 90 hours mandatory to all the students, to be completed during vacations of semester I to III. This will carry 2 credits for learning of 60 hours or 3 credits for learning of 90 hours. Its credits and grades will be reflected in final semester IV credit grade report.

• OEC (optional) can be studied during semester I to IV.

Suggested Activities for assessment for AEC:

Mini-project, internal evaluation: Class test or surprise test, Demonstration of task or activity assigned, assignment, seminar, or any other innovative pedagogical method.



General Model Scheme
Sant Gadge Baba Amravati University Amravati
 Scheme of teaching, learning & Examination leading to the Degree Master of Science (Choice Based Credit System) (Two Years ... Four Semesters Degree Course- C.B.C.S.)
(M.Sc. Part-II) Semester- III , Subject : Chemistry/Industrial Chemistry

Examination & Evaluation Scheme															
Teaching & Learning Scheme										Duration of Exams Hrs.		Minimum Passing			
Credits										Maximum Marks					
Teaching Period Per week				Theory L/T			Internal Assess.			Practical		Total Marks		Grade	
				Theory			Practical			Total					
				Theory			Practical			Total					
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	CY304(i) to CY304(v))																				
5	Lab-V based on DSE (Any one based on the specialization from CY305(i) to CY305(v))	CY305							09	09			4.5	4.5	06	--	20	80	100	50	p
6	Lab-VI Research Project Phase-I ^s	CY306							09	09			4.5	4.5	-	-	100	-	100	50	p
7	#Internship/Field Work/Work Experience@ Open elective/GIC/Open skill/MOOC*																				
	Total		16						18	35	16		09	25					600		

- L: Lecture, T: Tutorial, P: Practical
- # Students may complete their internship/field work/work experience in first or second or third semester of M.Sc. (Chemistry/Industrial) according to their convenience; @denotes non-examination credit
- Note: Internship/Apprenticeship/field work/work experience (During vacations of semester I to semester III) for duration of minimum 60 hours to maximum 90 hours mandatory to all the students, to be completed during vacations of semester I to III. This will carry 2 credits for learning of 60 hours or 3 credits for learning of 90 hours. Its credits and grades will be reflected in final semester IV credit grade report.
- OEC (optional) can be studied during semester I to IV.

5. **Research Project Phase I:** It should be based on rigorous literature survey, finding research gaps, preparation of research proposal to be executed in the next semester. There is a presentation on the topic selected for the research project. Students need to submit the synopsis of the proposed research work.



General Model Scheme

Sant Gadge Baba Amravati University Amravati

Scheme of teaching, learning & Examination leading to the Degree Master of Science (Choice Based Credit System) (Two Years ... Four Semesters Degree Course- C.B.C.S)

(M.Sc. Part-II) Semester- IV , Subject : Chemistry/Industrial Chemistry

		Teaching & Learning Scheme				Duration of Exams Hrs.	Examination & Evaluation Scheme							
S r . N o	Subjects	Subject Code	Credits				Maximum Marks					Minimum Passing		
			Teaching Period Per week			Theory + M.C. Q External	Theory Internal	Practical		Total Marks				
			L	T	P			Total						
									Theory L/T		Int. Ass.		Practical	
04	--	--	04	04	03	80	20	--		100		40		P
2	DSC –XI (Spectroscopy-II)	CY401	04	--	--	04	04	03	80	20	--	100	40	P
	DSC-XII (Selected topics in Chemistry-II)	CY402	04	--	--	04	04	03	80	20	--	100	40	P
3	DSE-III (Any one based on the specialization) from CY403 (i) to CY403 (v)	CY403	04	--	--	04	04	03	80	20	--	100	40	P
4	DSE-IV (Any one based on the specialization) from CY404 (i) to CY404 (v)	CY404	04	--	--	04	04	03	80	20	--	100	40	P
5	(SEC) Lab-VII (Any one based on the specialization) from CY405 (i) to CY 405 (v)	CY405		09	09	4.5	4.5	06		-	20	80	100	P
6	Lab-VIII (Research Project Phase - II) ^s	CY406		09	09	4.5	4.5	03			20	80	100	P



[illegible]

- L: Lecture, T: Tutorial, P: Practical
- # Students may complete their internship/field work/work experience in first or second or third semester of M.Sc. (Chemistry/Industrial) according to their convenience; @denotes non-examination credit
- Note: Internship/Apprenticeship/field work/work experience (During vacations of semester I to semester III) for duration of minimum 60 hours to maximum 90 hours mandatory to all the students, to be completed during vacations of semester I to III. This will carry 2 credits for learning of 60 hours or 3 credits for learning of 90 hours. Its credits and grades will be reflected in final semester IV credit grade report.
- OEC (optional) can be studied during semester I to IV.

§. The project/dissertation must be submitted in the hardbound copy to the University Department/College/Institute. For internal evaluation, the students shall have to give a presentation of the project/dissertation in a given Semester. Further, for external examination, Project/Dissertation shall be evaluated by the concerned teacher/supervisor/guide in the University Department/College / Institute as an Internal Examiner along with an External Examiner appointed by the University.



Sant Gadge Baba Amravati University, Amravati
Syllabus Prescribed for Two Year PG Programme
Programme: MSc Chemistry (Choice Based Credit System)
Semester III

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
CY-305 (ii)	(Lab-V based on DSE) Organic Chemistry Special	90 hrs (9 hrs/week)

Course Outcomes: Upon successful completion of a course the students will be able to:

1. Acquire knowledge of safe laboratory practices, including the handling and disposal of hazardous reagents, proper use of personal protective equipment
2. Learn about the selection of starting materials, reaction conditions, purification techniques and characterization methods.
3. They will learn to consider factors such as reaction compatibility, yield optimization and the use of protecting groups.
4. Invent new reaction condition by understanding the principles, techniques and strategies involved in multistage.
5. Students will develop skills in analyzing and interpreting estimation data.
6. Plan and design multistage synthesis routes to target specific organic compounds.
7. Students will gain practical hands-on experience in performing estimation techniques.

A Multistage Preparations (minimum- 8)

Perform the stepwise synthesis, include reaction mechanisms, theoretical and practical % yields. Assess the yield, melting point, TLC and predict spectral data for each step either by using instrument or by using chemistry software.

1. Preparation of p-nitroaniline from aniline
2. Preparation of p-bromoaniline from aniline
3. Benzaldehyde → Chalcone → Chalcone Epoxide
4. Synthesis of Flavone
5. Synthesis of Coumarin
6. Fischer Indole Synthesis
7. Skraup-Quinoline Synthesis
8. Synthesis of Carbohydrates (any one)
9. Hippuric Acid → Azalactone → 4-Benzylidene 2-phenyl Oxazol-5-one
10. Benzophenone → Benzopinacol → Benzopinacolone
11. Benzoin → Benzil → Benzilic Acid (By Green Synthesis)
12. Acridone from Anthranilic Acid

B Estimations (minimum-6)

1. Nitrogen estimation
2. Halogen estimation
3. Sulphur estimation
4. Soxhlet extraction of oil from oil seeds and determination of saponification value and iodine value of the same oil
5. Soxhlet extraction of piperine from black pepper
6. Spectrophotometric/UV estimations of Caffeine
7. Spectrophotometric/UV estimations of Cholesterol
8. Analysis of Lindane in BHC powder
9. Analysis of some common pesticides, insecticides, plastics, and detergents



Examination: CY305 (ii) Organic Chemistry special (Lab 05)

Time : 6-8 Hrs. (One day Examination)

Total Marks : 100

A.	Exercise-I	30
B.	Exercise-II	30
C.	Viva (External + Internal)	20
E.	Internal assessment*	20
Total		100

*- Internal assessment will be continuous and based on the performance of a student throughout the session along with satisfactory submission of the term work

Books Suggested:

1. Modern Experimental Organic Chemistry - Royston M. Robert, John C. Gilbert, Lyu B. Rodewald, S.
2. Experimental Organic Chemistry - L. M. Harwood, C. I. Moody
3. Semi-microqualitative Organic analysis - N. D. Cheronis, J. B. Entrikin, E.M. Wodnett
4. The Systematic identification of Organic compounds - R.L. Shrine, D.Y. Curtin
5. Quantitative Chemical analysis - A.I. Vogel
6. Vogel's textbook of quantitative analysis (Revised) - J. Bassett, R.C. Denney, G.H. Jeffery, and J.
7. Experiment and technique in Organic chemistry - D. Pasto, C. Johnson, and M. Miller
8. Handbook of organic analysis - qualitative and quantitative - H. Clark, Edward Arnold.

Web link

1. Synthetic Pages (<https://www.syntheticpages.org/>) Synthetic Pages is an online database that provides practical protocols and procedures for organic synthesis. It offers a collection of validated synthetic procedures contributed by researchers in the field.
2. Organic Syntheses (<https://www.orgsyn.org/>) Organic Syntheses is a website that provides detailed, peer-reviewed procedures for the synthesis of a wide range of organic compounds. It offers step-by-step protocols, experimental details, and characterization data.
3. Organic Chemistry Portal (<https://www.organic-chemistry.org/>) The Organic Chemistry Portal offers a variety of resources for organic chemistry, including synthetic methods and practical procedures. It provides articles, reactions, and experimental protocols contributed by the organic chemistry community.
4. ChemTube3D (<https://www.chemtube3d.com/>) ChemTube3D is a website that offers interactive 3D animations and tutorials for various organic chemistry topics. It includes visualizations of reaction mechanisms, structures, and laboratory techniques relevant to organic synthesis.
5. Master Organic Chemistry (<https://www.masterorganicchemistry.com/>) Master Organic Chemistry is a comprehensive online resource that provides tutorials, study guides, and practical information for organic chemistry. It covers topics such as reaction mechanisms, functional group transformations, and laboratory techniques.
6. ChemSpider (<http://www.chemspider.com/>) ChemSpider is a free chemical structure database that offers access to millions of compounds. It provides information on chemical properties, structures, and spectral data, which can be useful for designing synthetic routes and planning organic synthesis experiments.



*- Internal assessment will be continuous and based on the performance of a student throughout the session along with satisfactory submission of the term work

List of Books-

1. Practical Engineering by S. S. Dara.
2. Laboratory Preparation of Microchemistry by E. M. M. Jeffrey, McGraw Hill.
3. Methods of testing for petroleum and petroleum products. IS 1448-1960 Part I to Part IV. ISI NewDelhi
4. IP Stands for Petroleum and products Published Applied Service Publisher Ltd. London, 33rd Edition 1974.
5. 5.American Stds. For testing Materials, New York 1967.
6. Industrials Chemicals, Faith et. al. Wiley Inter science New York
7. Textbook of Practical Organic Chemistry by Vogel.
8. Industrial Organic Chemistry by Hans Arpe.



**Syllabus Prescribed for Two Year PG Programme
Programme: MSc Chemistry (Choice Based Credit System)
Semester III**

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
CY-306	(Lab-VI) Research Project Phase-I	90 hrs (9 hrs/week)

Course Outcome: On completion of this course, the student should be able to:

1. Identify a research problem and carry out literature survey
2. Analyse the research gap and formulate the problem
3. Interpret the data and synthesize research findings

Research Project Phase I: It should be based on rigorous literature survey, finding research gaps, preparation of research proposal to be executed in the next semester. There will be a presentation on the topic selected for the research project. Students need to submit the synopsis of the proposed research work.

Modalities:

1. Individual or group projects can be taken up
2. Involve in literature survey in the chosen field.
3. Use Science/Engineering principles to solve identified issues.
4. Adopt relevant and well-defined / innovative methodologies to fulfill the specified objective
5. Submission of scientific report in a specified format

Examination: CY306 Research project Phase I (Lab 06) Max Marks 100

A.	Submission of Research proposal synopsis	50
B.	Presentation on the research proposal synopsis	50
	Total	100

Syllabus Prescribed for Two Year PG Programme
Programme: MSc Chemistry (Choice Based Credit System)
Semester IV

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
CY-405 (ii)	(Lab-VII (SEC) Organic Chemistry Special	90 hrs (9 hrs/week)

Course Outcomes: Upon successful completion of a course the students will be able to:

1. apply various techniques and tests used for the identification of organic compounds.
2. acquire the ability to interpret test results and deduce the presence of specific functional groups or compounds.
3. execute the principles and limitations of different extraction techniques and how to optimize conditions for efficient extraction.
4. Gain practical hands-on experience in performing isolation and extraction techniques in the laboratory.
5. Understand the principles behind tests such as solubility, precipitation, color reactions, and functional group-specific tests.
6. calibrate instruments and prepare standard solutions for quantitative analysis.

A) Qualitative Organic Analysis: (minimum-6)

Separation, Purification and identification of **ternary mixture**:

1. Sample Preparation:

- a. Label the ternary mixture with a unique identifier for reference.
- b. Take an appropriate amount of the mixture for analysis.

2. Separation:

- a. Choose an appropriate separation technique based on the properties of the components, such as extraction, distillation, or chromatography.
- b. Perform the selected separation technique to obtain individual components.
- c. Note down the procedure and observations during the separation process.

3. Purification:

- a. Take each separated component and assess its purity through visual inspection and solubility tests.
- b. Purify the components using techniques like recrystallization, filtration, or distillation, depending on their physical properties.
- c. Collect the purified samples in separate labeled containers.

4. Analysis of Individual Components:

- a. Perform qualitative tests on each purified component to determine their characteristics:
 - i. Physical appearance, color, and odor.
 - ii. Solubility tests in different solvents (water, acid, base, organic solvents).
 - iii. Flame test to observe any characteristic color changes.
 - iv. Functional group tests specific to the compound class (if applicable).
- b. Record the observations for each component and compare them with known data or reference compounds.

5. Detection of Elements:

- a. Perform elemental analysis tests, such as the Lassaigne's test or combustion analysis, on each purified compound.
- b. Observe any color changes or formation of specific compounds to identify the elements present.
- c. Record the observations and correlate them with known data or reference compounds.

6. Determination of Melting or Boiling Points:

- a. Measure the melting or boiling points of the purified compounds using suitable apparatus.
- b. Compare the obtained values with known data or reference compounds to aid in identification.

7. Preparation of Derivatives:

- a. Select an appropriate derivative formation method based on the functional groups present in each compound.
- b. Carry out derivatization reactions by reacting the compounds with suitable reagents.
- c. Collect the derivatives obtained and store them in labelled containers.

8. Identification:



- a. Perform thin-layer chromatography (TLC) on the purified compounds and their derivatives.
- b. Identify the compounds present in each mixture based on the R_f (retention factor) values or other characteristic features (Melting Point and Boiling Point).

B) Miscellaneous Experiments (minimum-8)

Compare the stereochemistry (if applicable) and yield of the product obtained with the previous method, Isolate and purify the product. Assess the yield and characterize the compound using spectral data obtained from instrument or using software.

Experiment 1: Reduction Reaction of 3-Nitroacetophenone

Objective: Stereo-selective synthesis of 3-aminoacetophenone through reduction reactions.

(i) Reduction with Tin and Hydrochloric Acid:

(ii) Reduction with Sodium Borohydride:

Experiment 2: Synthesis of 5,5-Diphenylhydantoin

Objective: Synthesis of 5,5-diphenylhydantoin, an anticonvulsant, from benzil.

(i) Reaction of benzil with urea to form 5,5-diphenylhydantoin.

Experiment 3: Extraction of Limonene from Orange by Steam Distillation

Objective: Extraction of limonene, an essential oil, from oranges using steam distillation.

(i) Set up a steam distillation apparatus and extract limonene from orange peels.

Experiment 4: Synthesis of Benzocaine

Objective: Synthesis of benzocaine, a local anaesthetic drug.

(i) Perform the synthesis of benzocaine using appropriate starting materials and reactions.

Experiment 5: Synthesis of 6-Methyl Uracil

Objective: Synthesis of 6-methyl uracil, an anticancer drug.

(i) Carry out the synthesis of 6-methyl uracil using suitable starting materials and reactions.

Experiment 6: Synthesis of α -Acetylamino cinnamic Acid from Glycine

Objective: Synthesis of α -acetylamino cinnamic acid from glycine.

(i) Perform the necessary chemical transformations to convert glycine into α -acetylamino cinnamic acid.

Experiment 7: Estimation of Phenol by KBr/KBrO₃

Objective: Quantitative estimation of phenol using the KBr/KBrO₃ method.

(i) Perform the titration of phenol with KBr/KBrO₃ solution.

Experiment 8: Estimation of Carbonyl Compound by Hydrazone Formation

Objective: Quantitative estimation of a given carbonyl compound by hydrazone formation.

(i) React the carbonyl compound with a suitable hydrazine derivative to form a hydrazone.

(ii) Measure the absorbance or conductance of the hydrazone and determine the concentration or percentage of the carbonyl compound.

Experiment 9: Estimation of Aspirin (Potentiometric/Conductometric)

Objective: Quantitative estimation of aspirin using either potentiometric or conductometric methods.

(i) Perform a titration or conductometric measurement to determine the concentration of aspirin in a given sample.

Experiment 10: Estimation of Streptomycin (Colorimetric)

Objective: Quantitative estimation of streptomycin using a colorimetric method.

(i) Utilize a colorimetric reaction specific to streptomycin and measure the absorbance of the resulting complex.

(ii) Determine the concentration of streptomycin in the sample.

Experiment 11: Estimation of Vitamin B₁₂ (Colorimetric)

Objective: Quantitative estimation of vitamin B₁₂ using a colorimetric method.

(i) Employ a colorimetric reaction specific to vitamin B₁₂ and measure the absorbance of the complex formed.

Experiment 12: Assay of Diazepam by UV-Vis Spectrophotometry

Objective: Assay of diazepam using UV-Vis spectrophotometry.

(i) Prepare standard solutions of diazepam and measure their absorbance at a specific wavelength.

Experiment 13: Assay of Riboflavin by UV-Vis Spectrophotometry

Objective: Assay of riboflavin using UV-Vis spectrophotometry.

(i) Prepare standard solutions of riboflavin and measure their absorbance at a specific wavelength.

Experiment 14: Estimation of Blood Sugar, Calcium, Total Nitrogen, and Non-Protein Nitrogen in Blood

Objective: Biochemical estimation of blood sugar, calcium, total nitrogen, and non-protein nitrogen.



(i) Perform the required biochemical tests to estimate blood sugar levels, calcium concentration, total nitrogen content, and non-protein nitrogen content.

Experiment 15: Retrieval of 3D-structure of proteins/enzymes associated with two different diseases from internet and plotting their Ramchandran Plot using software.

(Note: The student will report the importance and role of protein for the disease/organism, FASTA sequence of amino acid residues, information about bound native ligand, and interpretation of Ramchandran plot. (At least 02 proteins per disease i.e total 4 proteins))

C. Structure determination using combined spectral data (UV, IR, NMR , Mass spectral data) (minimum 10 problems)

Examination: CY405 (ii) Organic Chemistry special (Lab 07)

Time : 6-8 Hrs. (One day Examination)

Total Marks : 100

A.	Exercise-I (Qualitative Organic Analysis)	30
B.	Exercise-II (Miscellaneous Experiments)	20
C.	Exercise -III (Structure determination using spectral data)	10
D.	Viva (External + Internal)	20
E.	Internal assessment*	20
Total		100

*- Internal assessment will be continuous and based on the performance of a student throughout the session along with satisfactory submission of the term work

Books Suggested:

1. Textbook of Practical Organic Chemistry Qualitative and Quantitative Analysis (Vol I & II) - A.I. Vogel.
2. Elementary Practical Organic Chemistry Small Scale Preparation (Langman) - A.I. Vogel.
3. A Handbook of Organic Analysis - H.T. Clark.
4. Systematic Qualitative Organic Analysis - H. Middleton.
5. Advanced Practical Organic Chemistry - N.K. Vishnoi.
6. Small Scale Organic Preparation - P.J. Hill.
7. Practical Organic Chemistry - H. Dupont Durst & George W. Gokal.
8. Experimental Organic Chemistry Part I & II - P.R. Singh, D. S. Gupta & K.S. Bajpai.
9. Vogel's Textbook of Practical Organic Chemistry - A.R. Tatchell.

Web link :



Programme: MSc Chemistry (Choice Based Credit System)
Semester IV

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
CY-406	(Lab-VIII) Research Project Phase-II	90 hrs (9 hrs/week)

Research Project Phase II:

The project/dissertation must be submitted in the hardbound copy to the University Department/College/Institute. For internal evaluation, the students shall have to give a presentation of the project/dissertation in a given Semester. Further, for external examination, Project/Dissertation shall be evaluated by the concerned teacher/supervisor/guide in the University Department/College / Institute as an Internal Examiner along with an External Examiner appointed by the University.

Examination: CY305 (ii) Organic Chemistry special (Lab 05)

Time : 6-8 Hrs. (One day Internal Examination)

Total Marks : 100

A.	Internal Assessment	20
B.	Submission of Research project	30
C.	VIVA (Internal and External Examiner)	50
	Total	100



- iv) Use of Computer - Chem Draw or Chem-Sketch or ISIS-Draw or KingDraw: Draw the structure of product synthesized. Get the correct IUPAC name and interpret of its ¹H NMR as obtained from software.

Part-C

Qualitative Organic Analysis: (Minimum 8 Mixtures)

Separation, purification and identification of binary mixtures by Chemical and physical methods.

The two components may be solid-solid, solid- liquid and liquid-liquid (volatile/nonvolatile). The water soluble solid/liquid should also be given. Student should purify separated compounds from the mixture and prepare a suitable derivative of the two compounds to confirm.

Examination: CHE 105 Organic Chemistry Laboratory (Lab 01)

Time : 6-8 Hrs. (One day Examination)

Total Marks : 100

A.	Exercise-I (preparation)	20
B.	Exercise-II (Separation and identification)	20
C.	Viva (External + Internal)	10
E.	Internal assessment*	50
Total		100

*- Internal assessment will be continuous and based on the performance of a student throughout the session along with satisfactory submission of the term work

Course Material/Learning Resources:

1. Experiments and technique in organic experiments- D. Pasto, C. Johnson and M. Miller prentice Hall.
2. Macro- scale and micro-scale organic experiments-K.L. Williaman, D. C. Heath.
3. Systematic quantitative organic analysis – H. Middleton, Edward Arnold.
4. Vogel's Textbook of practical organic chemistry Fifth Edition-Brain S. Furniss, Antoy J. Hannaford, Peter W.G. Smith, Austin R. Tatchell.
5. Qualitative organic Chemical analysis-A.I. Vogel.
6. Experiment organic chemistry Vol.I&II –P.R. Singh, D. S. Gupta and K.S. Bajpai.
7. The Golden book of chemistry experiments- Robert Brent

Web resources:

1. Detection of functional group: <https://vlab.amrita.edu/index.php?sub=2&brch=191&sim=345&cnt=1>
2. Detection of element: <https://vlab.amrita.edu/index.php?sub=2&brch=191&sim=344&cnt=1>
3. Procedure for synthesis : <http://orgsyn.org/Default.aspx>



11. Determine the solubility and solubility product of an insoluble salt, AgX ($\text{X}=\text{Cl}, \text{Br}$ or I) potentiometrically.
12. Determine the mean activity coefficient ($\gamma_{\pm}$) of 0.01 M hydrochloric acid solution potentiometrically.
13. Study the titration phosphoric acid potentiometrically against sodium hydroxide.
14. Find the composition of the zinc ferrocyanide complex by potentiometric titration.
15. Determination of thermodynamic constants ΔG , ΔH , ΔS for $\text{Zn}^{+2} + \text{H}_2\text{SO}_4 \rightarrow \text{ZnSO}_4 + 2\text{H}^+$ by emf measurement
16. Titrate potentiometrically solutions of mixture of $\text{KCl} + \text{KBr} + \text{KI}$ and determine the composition of each component in the mixture.
17. Verify the Debye-Hückel theory through the solubility of ionic salts.
18. To determine equivalent conductance of strong electrolyte at several dilution and hence verify Onsagar equation.
19. Determine the dissociation constant of acetic acid potentiometrically.

CHE 106 Physical Chemistry (Lab 02)

Time : 6-8 Hrs. (One day Examination)

Total Marks : 100

(1) Exercise-1 (Part A)	20 Marks
(2) Exercise-2 (Part B)	20 Marks
(3) Viva-Voce	10 Marks
(4) Internal *	50 Marks

Total -100 Marks

*- Internal assessment will be continuous and based on the performance of a student throughout the session along with satisfactory submission of the term work.

Course Material/Learning Resources:

1. J. B. Yadav, Practical Physical Chemistry
2. Das and Behra, Practical Physical Chemistry
3. Carl W. Garland, Joseph W. Nibler and David P. Shoemaker, Experiments in Physical Chemistry, Mc-Graw Hill, 8th Edition, 2009.
4. Farrington Daniels, Joseph Howard Mathews, John Warren Williams, Paul Bender, Robert A. Alberty, Experimental Physical Chemistry, Mc-Graw Hill, Fifth Edition, 1956.
5. John W. Shriver and Michael George, Experimental Physical Chemistry, Lab Manual and Data Analysis, The University of Alabama in Huntsville, Fall 2006
6. Jahgirdar D.V: Experiments In Chemistry



संत गाडगे बाबा अमरावती विद्यापीठ
SANT GADGE BABA AMRAVATI UNIVERSITY

वाणिज्य व व्यवस्थापन विद्याशाखा
(FACULTY OF COMMERCE AND MANAGEMENT)

पसंतीवर आधारित श्रेयांक पद्धती (CBCS) अभ्यासक्रम २०२३-२४

अभ्यासक्रमिका
वाणिज्य स्नातक
सत्र ३ व ४
मराठी (द्वितीय भाषा)

PROSPECTUS
OF

B.COM.

SEMESTER - 3 & 4

MARATHI (LANG-II)

SUBJECT CODE :- Sem. 3- BC - 32

Sem. 4- BC - 42



संत गाडगे बाबा अमरावती विद्यापीठ, अमरावती

पसंतीवर आधारित श्रेयांक पद्धती (CBCS) अभ्यासक्रम २०२३-२४

बी.कॉम. भाग- २ मराठी (द्वितीय भाषा)
सत्र ४ थे

गुण विभागणी

एकूण गुण - ५०
लेखी परीक्षा गुण - ४०
वेळ - २ तास
कौशल्य विकासावर आधारित अंतर्गत मूल्यमापन -१०

अभ्यासक्रमासाठी नेमलेले पाठ्यपुस्तक-

'अक्षरलेणी' भाग-२ (सत्र-३ व सत्र-४) (संपादित)

प्रकाशकाचे नाव: राघव पब्लिशर्स अँड डिस्ट्रीब्युटर्स, नागपूर
(विभाग 'अ', 'ब' आणि 'क' साठी)

'उपयोजित मराठी' - संपादक डॉ.केतकी मोडक, संतोष शेणई, सुजाता शेणई - पद्मगंधा प्रकाशन, पुणे या पुस्तकातील

(विभाग- 'ड' साठी)

प्रकरण १४ वे -टिपणी लेखन- डॉ.लतिका जाधव

प्रकरण १७ वे -प्रसारमाध्यमांसाठी लेखन - संतोष शेणई

विभाग - अ	वैचारिक	-	१२ गुण
विभाग - ब	ललित	-	१० गुण
विभाग - क	कविता	-	०९ गुण
विभाग - ड	उपयोजित मराठी	-	०९ गुण

प्रश्ननिहाय गुणविभागणी :-

प्रश्न १	वैचारिक विभाग	:- दीर्घोत्तरी एक प्रश्न	०६ गुण
प्रश्न २	वैचारिक विभाग	:- लघुत्तरी एक प्रश्न	०३ गुण
प्रश्न ३	ललित विभाग	:- दीर्घोत्तरी एक प्रश्न	०५ गुण
प्रश्न ४	ललित विभाग	:- लघुत्तरी एक प्रश्न	०२ गुण
प्रश्न ५	कविता विभाग	:- दीर्घोत्तरी एक प्रश्न	०५ गुण
प्रश्न ६	कविता विभाग	:- लघुत्तरी एक प्रश्न	०२ गुण
प्रश्न ७	उपयोजित मराठी	:- दीर्घोत्तरी एक प्रश्न	०५ गुण
प्रश्न ८	उपयोजित मराठी	:- लघुत्तरी एक प्रश्न	०२ गुण
(वरील सर्व प्रश्नांना अंतर्गत पर्याय राहतील.)			

३० गुण



वस्तुनिष्ठ प्रश्न - उपरोक्त अभ्यासक्रमातील विभाग 'अ' व 'ब' यावर प्रत्येकी

१० गुण

०३ प्रश्न आणि विभाग 'क' व 'ड' यावर प्रत्येकी ०२ प्रश्न

वस्तुनिष्ठ स्वरूपाचे असे एकूण १० बहुपर्यायी प्रश्न विचारले

जातील. प्रत्येक प्रश्नास ०१ गुण याप्रमाणे हा प्रश्न १० गुणांचा असेल.

विभाग 'ड' साठी संदर्भ ग्रंथ म्हणून उपयोजित मराठी - संपादक डॉ.केतकी मोडक, संतोष शेणई, सुजाता शेणई - पद्मगंधा प्रकाशन, पुणे या पुस्तकातील प्रकरण १४ वे टिपणी लेखन व प्रकरण १७ वे प्रसारमाध्यमांसाठी लेखन या प्रकरणावर ०४ गुणांचा ०१ दीर्घोत्तरी व ०३ गुणांचा ०१ लघुत्तरी प्रश्न विचारल्या जाईल.

कौशल्य विकासावर आधारित अंतर्गत मूल्यमापन :-

- १० गुण

• गुण विभागणी

१) घटक चाचणी (Class Test)- ०१

- ०५ गुण

२) स्वाध्याय (Home Assignment)

- ०५ गुण

सूचना :- (१) महाविद्यालयातील सांस्कृतिक कार्यक्रमाची वृत्तपत्र, आकाशवाणी, दूरचित्रवाणीसाठी बातमी तयार करा



Sant Gadge Baba Amravati University Amravati
Scheme of teaching, learning & Examination leading to the Degree Bachelor of Commerce (Accounting & Finance) (Three Years -Six Semesters Degree Course- C.B.C.S)B. Com Part-I (Accounting & Finance)Semester- I

Teaching & Learning Scheme										Examination & Evaluation Scheme									
Sr. No	Subjects	Subject Code	Teaching Period Per week				Credits			Duration of Exams Hrs.	Maximum Marks				Minimum Passing Marks	Grade			
			L	T	P	Total	Theory/ Tutorial	Practical	Total		Theory + M.C.Q External	Skill Enhancement Module Internal	Practical				Total Marks		
													Internal	External					
1	English (DSC)	BAF-01	04	-	-	04	04	-	04	03	60+20	20	-	-	100	40	p		
2	Business Communication Skill in English (AEC)	BAF-02		1	-	01*	01	-	01	-	-	-	25	-	25	10	p		
3	LANG-II (DSC)	BAF-03	03	-	-	03	03	-	03	03	60+20	20	-	-	100	40	p		
4	Business Communication Skill in Language-II (AEC)	BAF-03	-	1	-	01	01	-	01	-	-	-	25	-	25	10	p		
5	Financial Accounting –I (DSC)	BAF-04	05	-	-	05	04	-	04	03	60+20	20	-	-	100	40	p		
6	Investment Management (DSC)	BAF-05	05	-	-	05	04	-	04	03	60+20	20	-	-	100	40	P		
7	Business Economics (DSC)	BAF-06	05	-	-	05	04	-	04	03	60+20	20	-	-	100	40	P		
8	Generic Open Elective Course (GEOC)	BAF-07	02	-	-	02	02	-	02	College Level Evaluation							50	20	P
11	Induction Programme	30 Hrs (one Week) at the beginning semester one only								01									
	Total					26			24									600	

L: Lecture, T: Tutorial, P: Practical

* Regular Teaching for Compulsory English-04 period/wk, 01 Tutorial /wk for a batch of 20 students



Sant Gadge Baba Amravati University Amravati
Scheme of teaching, learning & Examination leading to the Degree Bachelor of Commerce (Accounting & Finance) (Three Years ... Six Semesters Degree Course- C.B.C.S.) B. Com Part-I (Accounting & Finance) Semester-II

Sr. No	Subjects	Subject Code	Teaching & Learning Scheme					Duration of Exams Hrs.	Examination & Evaluation Scheme								
			Teaching Period Per week				Credits		Maximum Marks								
			Theory/ Tutorial				Practical		Total	Theory + M.C.Q External	Skill Enhancement Module Internal	Practical		Total Marks	Minimum Passing		
			L	T	P	Total						Internal	External		Marks	Grade	
1	English (DSC)		BAF-11	04	-	-	04	04	03	60+20	20	-	-	100	40	p	
2	Business Communication Skill in English (AEC)		BAF-11	-	1	-	01	01	-	-	-	--	25	-	25	10	p
3	LANG-II (DSC)		BAF-12	03	-	-	03	03	03	60+20	20	-	-	100	40	p	
4	Communication Skill in LANG-II (AEC)		BAF-12	-	1	-	01	01	-	--	-	-	25	-	25	10	p
5	Financial Accounting II (DSC)		BAF-13	05	-	-	05	04	03	60+20	20	---	----	100	40	p	
6	Business Mathematics (DSC)		BAF-14	05	-	-	05	04	03	60+20	20	--	--	100	40	p	
7	Business Environment (DSC)		BAF-15	05	-	-	05	04	03	60+20	20	-	-	100	40	p	
10	Generic Open Elective II- (GOEC)		BAF-27	2	-	-	2	2	College Level Evaluation					50	20	p	
Total			26				23						600				

L: Lecture, T: Tutorial, P: Practical

1. Regular Teaching for Compulsory English-04 periods/wk, 01 Tutorial /wk for a batch of 20 students



Scheme of teaching, learning & Examination leading to the Degree Bachelor of Commerce

Information System Management

(Three Years - Six Semesters Degree Course- C.B.C.S)

(B. Com Part-I) Semester- I

Sr. No	Subjects	Subject Code	Teaching & Learning Scheme				Duration of Exams Hrs.	Examination & Evaluation Scheme											
			Teaching Period Per week					Credits		Maximum Marks				Minimum Passing					
			L	T	P	Total		Theory/ Tutorial	Practical	Total	Theory + M.C.Q External	Skill Enhancement Module Internal	Practical		Total Marks				
													Internal			External			
1	English (DSC)		BCE-11	04	-	-	04	03	-	03	03	60+20	20	-	-	100	40	p	
2	Business Communication Skill in English (AEC)		BCE-11		1	-	01*	01	-	01	-	-	-	25	-	25	10	p	
3	LANG-II (DSC)		BCE-12	03	-	-	03	03	-	03	03	60+20	20	-	-	100	40	p	
4	Communication Skill in Language-II (AEC)		BCE-12	-	1	-	01	01	-	01	-	-	-	25	-	25	10	p	
5	Basics of Accounting (DSC)		BCE-13	05	-	-	05	04	-	04	03	60+20	20	-	-	100	40	p	
6	Principles of Business management (DSC)		BCE-14	05	-	-	05	04	-	04	03	60+20	20	-	-	100	40	P	
7	Information System		BCE-15	04	-	-	04	04	-	04	03	60+20	20	-	-	100	40	P	
8	Business Communication		BCE-16	03	-	-	03	03	-	03	03	40+20	-	-	-	60	24	P	
9	Computer Fundamental & Operating System I (DSC)		BCE-16	-	-	1	01	-	01	01	-	-	-	-	40	40	16	P	
10	Computer Fundamental & Operating System I (Practical) (DSC)		BCE-16	-	-	1	01	-	01	01	-	-	-	-	40	40	16	P	
11	Generic Open Elective Course (GEOC)		BCE-17	02	-	-	02	02	-	02	College Level Evaluation						50	20	P
12	Induction Programme	30 Hrs (one Week) at the beginning of semester one only																	
	Total																	700	



Scheme of teaching, learning & Examination leading to the Degree Bachelor of Commerce in Information System Management
(Three Years ... Six Semesters Degree Course- C.B.C.S)
(B. Com Part-I)Semester-II

Teaching & Learning Scheme										Duration of Exams Hrs.	Examination & Evaluation Scheme						
Sr. No	Subjects	Subject Code	Teaching Period Per week				Credits			Theory + M.C.Q External	Skill Enhancement Module Internal	Practical		Total Marks	Minimum Passing		
			L	T	P	Total	Theory/Tutorial	Practical	Total			Marks	Grade				
1	English (DSC)	BC-21	04	-	-	04	04	04	--	04	60+20	20	-	-	100	40	p
2	Business Communication Skill in English (AEC)	BC-21	-	1	-	01*	01	01	-	-	-	--	25	-	25	10	p
3	LANG-II (DSC)	BC-22	03	-	-	03	03	03	-	03	60+20	20	-	-	100	40	p
4	Communication Skill in LANG-II (AEC)	BC-22	-	1	-	01	01	01	-	01	--	-	25	-	25	10	p
5	Banking Practices	BCE-23	05	-	-	05	04	04	-	04	60+20	20	---	----	100	40	p
6	Banking Technology	BCE-24	05	-	-	05	04	04	-	04	60+20	20	--	--	100	40	p
7	Business Economics	BCE-25	04	-	-	04	04	04	-	04	60+20	20	-	-	100	40	p
8	Introduction of E-Business (DSC)	BCE-26	03	-	-	03	03	03	-	03	40+20	-	-	-	60	24	p
9	Introduction To Programming (python) (DSC)	BCE-26	-	-	1	01	01	01	01	--	--	--	-	40	40	16	p
10	Introduction To Programming (python) Practical (DSC)	BCE-26	-	-	1	01	01	01	01	--	--	--	-	40	40	16	p
11	Generic Open Elective II- (GOEC)	BCE-27	2	-	-	2	2	2	--	2	College Level Evaluation			50	20	p	
	Total					29									700		



Syllabus Prescribed for three Year UG/PG Programme
Programme: B.Sc. with Chemistry
Semester 1

Code of the Course/Subject	Title of the Course/Subject (Laboratory/Practical/practicum/hands-on/Activity)	(No. of Periods/Week)
CHE(1S)PR	Chemistry 1S	Total 26 per Semester

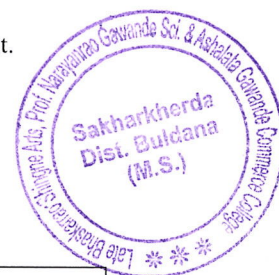
COs

At the end of Lab/Practical course, students would be able to

1. Synthesise different types of organic compounds.
2. Perform the process of filtration, crystallization, melting point, waste management.
3. Understand the effect of orientation effect of a group
4. Skilfully determine the surface tension, viscosity of liquid.
5. Predict the endothermic or exothermic process from heat of solution of a salt.

*** List of Practical/Laboratory Experiments/Activities etc.**

1	Preparation of Acetyl derivative of aromatic primary amine (aniline or toluidine).
2	Preparation of Benzanilide (Benzoylation).
3	Preparation of Benzoic acid from Benzamide (Hydrolysis).
4	Preparation of Benzoic acid from benzaldehyde (Oxidation).
5	Preparation of phenyl-azo- β -naphthol dye (Diazotisation)
6	Base catalysed Aldol Condensation (Synthesis of dibenzal propanone).
7	Preparation of p-nitroacetanilide from acetanilide.
8	Determination of surface tension of a given liquid using Stalagmometer
9	Determination of the parachor value of $-\text{CH}_2-$ group (methylene) using Stalagmometer
10	Determination of coefficient of viscosity of aqueous solution of ethanol or polymer at room temperature
11	Determination of unknown percentage composition of given glycerol solution from standard 2%, 4%, 6%, 8% and 10% solutions of glycerol
12	Determination of the heat of solution of KNO_3 (5% solution)



Note:

- Student should perform the single stage preparation with the help of given procedure.
- Melting point and percentage yield should be reported.
- The sample should be submitted.
- Students should recrystallize the sample with suitable solvent.
- Students should know the reaction and its mechanism of given single stage preparation.

Distribution of Marks for Practical Examination**Time: 4 hours (One Day Examination) Marks: 50****Exercise-I 18****Exercise-II18****Viva-Voce07****Record 07****Total: 50****Syllabus Prescribed for Three Year UG/PG Programme****Programme: B.Sc. with Chemistry****Semester 2**

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
CHE(2S)T	Chemistry 2S	84

COs

By the end of this course, the students would be able to:

- apply the knowledge gained by studying types of bonding, solvation, hybridization and molecular geometries.
- Draw the correct molecular structures, bond order and bond length.
- synthesize commercially important compounds of varying carbon backbone.
- Choose correct synthetic approach to prepare derivatives of industrially important molecules.
- Solve numerical problems related to crystalline state.
- Acquire skills to use chemical kinetics to develop mechanism of chemical reactions.

Unit	Content
Unit I	A) Ionic bonding: Definition of ionic bond. Factors affecting ionic bond formation (energetic of ionic bond formation ionization energy, electron affinity and lattice energy). Born-Haber's cycle to determine lattice energy. Solvation and solvation energy, factors affecting solvation energy. B) Polarization: Definition, polarizing power, polarizability, effect of polarization on nature of bond. Fajan's rules of polarization and its applications. C) Valence bond theory: Directional nature of covalent bond. Hybridization, types of hybridization to explain geometries of BeCl_2, BF_3, CH_4, PCl_5, SF_6 and IF_7 Periods: 14

Syllabus Prescribed for three Year UG/PG Programme

Programme: B.Sc. with Chemistry

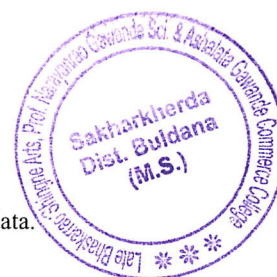
Semester 2

Code of the Course/Subject	Title of the Course/Subject (Laboratory/Practical/practicum/hands-on/Activity)	(No. of Periods/Week)
CHE(2S)PR	Chemistry 2S	26 per Semester

COs

At the end of Lab/Practical course, students would be able to -

1. Analyse the given organic compound qualitatively by different tests.
2. Prepare the derivative of the provided substance.
3. Illustrate the practical skills in volumetric analysis.
4. Differentiate types of titrations e.g. acid-base, redox, etc.
5. Comprehend the kinetics of reactions and interpret the experimental data.
6. Calculate, communicate and analyse the result.



*** List of Practical/Laboratory Experiments/Activities etc.**

	Complete analysis of simple organic compounds (like urea, thiourea, benzoic acid, Salicylic acid, oxalic acid, glucose, naphthalene, para-toluidine, benzamide, etc.) containing one or two functional groups involving following steps. i) Preliminary examination ii) Detection of elements iii) Detection of functional groups iv) Determination of melting point v) Preparation of derivative and determination of its melting point vi) Performance of spot test, if any
1	Qualitative analysis of compound-1
2	Qualitative analysis of compound-2
3	Qualitative analysis of compound-3
4	Qualitative analysis of compound-4
5	Qualitative analysis of compound-5
6	To determine the strength of oxalic acid by titration with KMnO_4 .

7	To determine strength of FAS by titration with KMnO_4 using internal indicator.
8	Determination of temporary hardness of water sample.
9	To determine the strength of oxalic acid by titration with KMnO_4 .
10	To determine strength of FAS by titration with KMnO_4 using internal indicator.
11	Determination of order of reaction of hydrolysis of methyl acetate by an acid.
12	To study kinetics of saponification of ethyl acetate by NaOH .

Distribution of Marks for Practical Examination

Time: 4 hours (One Day Examination) Marks: 50

Exercise-I 18

Exercise-II18

Viva-Voce07

Record 07

Total: 50



Sant Gadge Baba Amravati University, Amravati
FACULTY: Humanities

Scheme of Teaching, Learning, Examination & Evaluation leading to Two Years PG Degree Master of Arts (Sociology)
(Two Years- Four Semesters Master's Degree Programme- CBCS 2022)

M. A. (Sociology) Second Year Semester- III

Teaching & Learning Scheme				Duration of Exam Hours		Examination & Evaluation Scheme													
S. N.	Subject	Type of Course	Subject Code	Teaching Period Per Week				Credits			Maximum Marks			Total Marks	Minimum Passing				
				L	T	P	Total	L/T	Practical	Total	Theory		Practical						
											Theory Internal	Theory +MCQ External	Internal			External			
1	DSC 1	Th-Major		4			4	4			4	3	20	80		100	40	P	
2	DSC 2	Th-Major		4			4	4			4	3	20	80		100	40	P	
3	DSE 3 (A/B)	Th-Major Elective		4			4	4			4	3	20	80		100	40	P	
4	DSE 4 (A/B)	Th-Major Elective		4			4	4			4	3	20	80		100	40	P	
5	RP (Research Project)				4	2	6	4	1	5			60 Research Report			40 Viva	100	40	P
6	SEC 1				2		2	2		2			50 Assignment				50	25	P
7	SEC 2				2		2	2		2			50 Assignment				50	25	
8	Internship/ Work Experience Related to Major @ during vacations cumulatively	ACC – Mandatory Related to DSC		60 hrs to 90 hrs max. cumulatively during vacations of Semester I and Semester II								(2/3)					Non Exam	-	P
9	OEC (Open Elective Course) – GIC/skill Courses	ACC – Optional		Cumulatively From Sem I to Sem IV								(Max. 5)					Exam / Non Exam As per syllabus	-	P
10	Co-curricular/Extra Curricular Courses: As per direction 5/7/2022, Dt. 22.9.2022	ACC – Generic Optional		Cumulatively From Sem I to Sem IV								(Max. 5)					Non Exam	-	P
TOTAL												25					600		

L: Lecture, T: Tutorial, P: Practical

Note:

- ACC (Ancillary Credit Courses) can be studied as per the direction 5/7/2022, Dt. 22.9.2022 and provisions in the syllabus.
- Internship/Field Work/Work Experience will be conducted after 1 semester till IV semester in vacations for minimum 60 hrs. to maximum 90 hours. It's credits and grades will be reflected final semester IV credit grade report.



Sant Gadge Baba Amravati University, Amravati
FACULTY: Humanities

Scheme of Teaching, Learning, Examination & Evaluation leading to Two Years PG Degree Master of Arts (Sociology)
(Two Years- Four Semesters Master's Degree Programme- CBCS 2022)

M. A. (Sociology) Second Year Semester- IV

S. N.	Subject	Type of Course	Subject Code	Teaching & Learning Scheme							Duration of Exam Hours	Examination & Evaluation Scheme						
				Teaching Periods Per Week					Credits			Maximum Marks			Total Marks	Minimum Passing		
				L	T	P	Total	L/T	Practical	Total		Theory		Practical				
												Theory Internal	Theory +MCQ External	Internal				External
1	DSC 1	Th-Major		4			4	4			4	3	20	80		100	40	P
2	DSC 2	Th-Major		4			4	4			4	3	20	80		100	40	P
3	DSE 3 (A/B)	Th-Major Elective		4			4	4			4	3	20	80		100	40	P
4	DSE 4 (A/B)	Th-Major Elective		4			4	4			4	3	20	80		100	40	P
5	RP (Research Project)				4	2	6	4	1	5			60 Research Report		40 Viva	100	40	P
6	SEC 1				2		2	2		2			50 Assignment			50	25	P
7	SEC 2				2		2	2		2			50 Assignment			50	25	
8	Internship/ Work Experience Related to Major @ during vacations cumulatively	ACC – Mandatory Related to DSC		60 hrs to 90 hrs max. cumulatively during vacations of Semester I and Semester II						(2/3)						Non Exam	-	P
9	OEC (Open Elective Course) – GIC/Skill Courses	ACC – Optional		Cumulatively From Sem I to Sem IV						(Max. 5)						Exam / Non Exam As per syllabus	-	P
10	Co-curricular/Extra Curricular Courses: As per direction 57/2022, Dt. 22.9.2022	ACC – Generic Optional		Cumulatively From Sem I to Sem IV						(Max. 5)						Non Exam	-	P
	TOTAL									25						600		

Note: L: Lecture, T: Tutorial, P: Practical

1) ACC (Ancillary Credit Courses) can be studied as per the direction 57/2022, Dt. 22.9.2022 and provisions in the syllabus.

2) Internship/Field Work/Work Experience will be conducted after 1 semester till IV semester in vacations for minimum 60 hrs. to maximum 90 hours. Its credits and grades will be reflected final semester IV credit grade report.



विभाग ब (Part – B)

वाङ्मय पारंगत (मराठी) / एम. ए. (मराठी) अभ्यासक्रम (NEPv23)

एम. ए. (मराठी) : सत्र पहिले



अक्र.	अभ्यासपत्रिका प्रकार	अभ्यासपत्रिका संकेतांक	अभ्यासपत्रिका शीर्षक	तास	श्रेयांक
१	RM and IPR	MS11	संशोधन पद्धती आणि बौद्धिक संपदा अधिकार	६०	४
२	DSC-I.1	MS12	मराठी साहित्याची सांस्कृतिक व सामाजिक पार्श्वभूमी (आरंभ ते १८१८)	६०	४
३	DSC-II.1	MS13	साहित्यविचार	६०	४
४	DSC-III.1	MS14	लोकसाहित्य	६०	४
५	DSE-I A	MS15	संतसाहित्य	६०	४
	DSE-I B	MS16	महानुभाव साहित्य		
	DSE-I C	MS17	विशेष वाङ्मयप्रकार कथा		
	DSE-I D	MS18	विशेष वाङ्मयप्रकार कादंबरी		
	DSE-I E	MS19	विशेष वाङ्मयप्रकार नाटक		
६	DSC-III.1 – Tutorial	MS111	प्रशिक्षण व कार्यानुभव	३०	२
७	On Job Training, Internship/ Apprenticeship, Field projects	MS112	अभ्यासक्रमाशी संबंधित सेवाधीन प्रशिक्षण, सेवानुभव, क्षेत्रप्रकल्प	१२०	--
					२२

सूचना :

- १) DSC अभ्यासपत्रिका अनिवार्य राहिल.
- २) DSE अभ्यासपत्रिका ऐच्छिक स्वरूपाची असून गट ५ मधील कोणतीही एक अभ्यासपत्रिका निवडावी लागेल.
- ३) DSC-III.1 - Tutorial :
अभ्यासक्रमानुसार प्रशिक्षण व कार्यानुभव पूर्ण करावे लागेल.
- ४) सत्र १ आणि सत्र २ सुट्टीच्या कालावधीत एकूण १२० तास अभ्यासक्रमाशी संबंधित सेवाधीन प्रशिक्षण, सेवानुभव, क्षेत्रप्रकल्प पूर्ण करणे बंधनकारक राहिल. हे कार्य पूर्ण झाल्यानंतर त्याचे ४ श्रेयांक विद्यार्थ्यास मिळतील.

On Job Training, Internship/ Apprenticeship, Field projects:

अक्र.	प्रकार	स्वरूप	तास	श्रेयांक
१	सेवाधीन प्रशिक्षण (On Job Training), सेवानुभव (Internship/ Apprenticeship)	३) विविध संस्था-कार्यालयांमध्ये उदा. वृत्तपत्रे, आकाशवाणी, टीव्ही चॅनेल्स, माहिती कार्यालय, जनसंपर्क कार्यालय, प्रकाशन संस्था, साहित्यविषयक कार्य करणाऱ्या संस्था इ. ठिकाणी मराठीविषयक लेखनाची सेवा देणे किंवा लेखन-संपादन इत्यादी विषयक कार्यानुभव घेणे. ४) विविध ग्रंथालयांसाठी, संशोधनमंडळांसाठी किंवा अभ्यासनांसाठी ग्रंथसूची / लेखसूची अशा प्रकारचा कार्यानुभव घेणे इत्यादी. ५) साहित्यिकासाठी लेखनिक म्हणून कार्य करणे. ६) अभ्यासकांसाठी अभिवाचक म्हणून सेवा देणे. ७) भाषांतरप्रक्रियेत सहभाग घेणे. ८) मजकूराचे संगणकीकरण कार्यात सेवा देणे.		
	क्षेत्रप्रकल्प (Field Projects)	साहित्यविषयक अभ्यासपत्रिकांच्या अनुषंगाने क्षेत्रप्रकल्प पूर्ण करता येईल. उदा. १) विशिष्ट बोलीचे स्वरूप उदा. वऱ्हाडी बोली २) शालेय/महाविद्यालयीन विद्यार्थ्यांच्या मराठी भाषेच्या क्षमतेची पाहणी. ३) वऱ्हाडी म्हणी व वाक्प्रचार ४) मराठीवरील इंग्रजी किंवा अन्य भाषेचा परिणाम ५) परिसरातील सत्यशोधकी साहित्य इत्यादी. ६) परिसरातील मराठी लेखक व त्यांचे साहित्य ७) लोककथा, लोकगीते यांचे संकलन. ८) लोकदैवते, लोकविधी यांच्या नोंदी. ९) परिसरातील वाङ्मयीन संस्कृती - संमेलने/उपक्रम यांचे दस्तऐवजीकरण. १०) वार्षिक प्रकाशित साहित्य - कोश / सूची	१२०	४

सत्र १ आणि सत्र २ सुट्टीच्या कालावधीत एकूण १२० तास अभ्यासक्रमाशी संबंधित सेवाधीन प्रशिक्षण, सेवानुभव, क्षेत्रप्रकल्प पूर्ण करणे बंधनकारक राहिल. हे कार्य पूर्ण झाल्यानंतर त्याचे ४ श्रेयांक विद्यार्थ्यास मिळतील.



लेखी परीक्षा - प्रश्नपत्रिकेचे स्वरूप

लेखी परीक्षा - प्रश्नपत्रिकेचे स्वरूप आणि अंतर्गत परीक्षेचे स्वरूप (सत्र २)	❖ प्रत्येक अभ्यासपत्रिका १०० गुणांसाठी असेल. ❖ अभ्यासपत्रिकेच्या १०० गुणांचे विभाजन पुढीलप्रमाणे राहिल आ) ७० गुणांसाठी लेखी परीक्षा ब) ३० गुणांसाठी अंतर्गत परीक्षा ❖ लेखी परीक्षेचे स्वरूप - प्रश्नपत्रिका एकूण ७० गुण आ) दीर्घोत्तरी प्रश्न - ५६ गुण (१४ गुणांचा एक याप्रमाणे ४ दीर्घोत्तरी प्रश्न (पर्यायासह) राहतील.) ब) वस्तुनिष्ठ प्रश्न - १४ गुण (२ गुणांचा एक याप्रमाणे ७ वस्तुनिष्ठ प्रश्न) ❖ अंतर्गत परीक्षेचे स्वरूप - एकूण गुण ३० ९) अंतर्गत परीक्षेसाठी विषयानुरूप शोधनिबंध / लघुशोधप्रकल्प / कोशनोंद-लेखन किंवा विकिपिडियासाठी लेखन / सूचीनिर्मिती / ब्लॉगनिर्मिती / मुलाखत / सर्वेक्षण इत्यादी प्रकारचे कार्य सत्रकालावधीत पूर्ण करणे अपेक्षित राहिल. - गुण १५ १०) विषयानुरूप मौखिक परीक्षा / सादरीकरण आवश्यक राहिल. - गुण १५
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BA PART-II EXAMINATION
Compulsory English
SEMESTER – III
(Distribution of Marks)



TIME : 3 HOURS

MAXMARKS THEORY:80 MARKS

MINPASSING MARKS :32 MARKS

MAXMARKS INTERNALASSESSMENT:20MARKS

MINPASSINGMARKS: 08 MARKS

Unit - I

A) Prose

- i) The students will have to answer THREE out of FOUR short answer questions of 2 marks each. **6 Marks**
ii) The students will have to answer ONE out of THREE long answer questions of 6 marks. **6 Marks**

Unit - II

B) Poetry

- i) The students will have to answer THREE out of FOUR short answer questions of 2 marks each. **6 Marks**
ii) The students will have to answer ONE out of THREE long answer questions of 6 marks. **6 Marks**

Unit - III

Basics of Communication Skills in English

I) Noun

6 Marks

- i) Students will have to answer 6 questions of 1 mark each on identification of various types of Noun

II) Pronoun

6 Marks

- i) Students will have to answer 6 questions of 1 mark each on identification of various types of Pronoun

Unit - IV

Basics of Communication Skills in English

I) Tenses

8 Marks

- i) Students will have to answer 4 questions of 1 mark each on identification of tense
ii) Students will have to answer 4 questions of 1 mark each on Conversion of tense
II) Question Tag
i) Students will have to answer 4 questions of 1 mark each on making Question Tag

Unit - V

Communication Skills

- I) Answering the Telephone and asking for someone.

4 Marks

- II) Taking and leaving messages.

4 Marks

- III) Asking for Time and Date

4 Marks

Multiple Choice Questions

The Student will have to answer 10 MCQs based on Unit I, II, III and IV
(each MCQ carries 2 Mark)

20 Marks

Internal Assessment

- I) Assignment

10 Marks

- II) Class Test

10 Marks

Part – B

Sant Gadge Baba Amravati University, Amravati.

Faculty: Humanities

Two Years - Four Semester Master's Degree Programme-NEPv23

M A Sociology

Semester I

Sr. No	Code of the Course/Subject	Title of the Course/Subject	(Total Number of Period)	Credit
1	RM and IPR	Research Methodology	60	4
2	DSC – I.1	Classical Sociological Thinker's (CST)	75	5
3	DSC - II.1	Cultural Anthropology and Tribal Studies (CAT)	75	5
4	DSC - III.1	Sociology of Religion (SOR)	60	4
5	DSE - I.A Or DSE - I.B	Social Movement in India (SMI) Or Rural Society in India (RSI)	60	4
6	On Job Training, Internship/ Apprenticeship, Field Projects	Field Work	120 Hours	

M A Sociology

Semester II

Sr. No	Code of the Course/Subject	Title of the Course/Subject	(Total Number of Period)	Credit
1	DSC - I.2	Classical Sociological Thought's (CST)	75	5
2	DSC - II.2	Methodology of Social Research (MSR)	60	4
3	DSC - III.2	Urban Society in India (USI)	75	5
4	DSE - II.A Or DSE - II.B	Health and Society (HES) Or Perspective of Indian Society (PIS)	60	4
5	On Job Training, Internship/ Apprenticeship, Field Projects	Field Work	120 Hours	



Sant Gadge Baba Amravati University, Amravati.
Faculty: Humanities
Two Years - Four Semester Master's Degree Programme-NEPv23
M A Sociology
Semester I
Credit - 4

Code of the Course/Subject	Title of the Course/Subject	Total Number of Periods
RM and IPR Sociology Paper I	Research Methodology and Intellectual Property Right	60

COs

1. Through this paper, students know about fundamental and advance methodology in research.
2. The main objective of the IPR is to make the students aware of their rights for the protection of their invention done in their project work.
3. To get registration in our country and foreign countries of their invention, designs and thesis or
4. Theory written by the students during their project work and for this they must have knowledge of
5. Patents, copy right, trademarks, designs and information Technology Act.
6. Different types of IPR's.

Unit	Content	Period
Unit I	Social Research: A) Meaning & Objective B) Scientific method: Meaning of Characteristics C) Importance & utility of Social Research	12
Unit II	Major steps in Scientific Research: A) Formulation of Research Problems: Selection of the Problems B) Hypothesis: Sources of Hypothesis, Characteristics of usable Hypothesis C) Research Design: Exploratory Research Design, Descriptive Research Design Diagnostic Research Design. Experimental Research Design. D) Sampling Design: Types of Sampling	12
Unit III	Data Collection : A) Primary and Secondary sources of data B) Tools of Data Collection i) Observation: Meaning and types ii) Questionnaire: Meaning, Nature and features of good Questionnaire iii) Interview: Main Steps of Interview Techniques, Types, Qualities of good interviewer. iv) Schedule: Meaning and Types of Schedule, Process of Preparing Schedule	12
Unit IV	A) Scaling Techniques : i) The Bogardus social distance scale, Sociometric Scale. ii) Validity & reliability in Social Research B) Problems of Study in Social Research : i) Nature of social phenomena ii) Objectivity: meaning, importance & difficulties in objectivity iii) Subjectivity iv) Issues of Measurement in Social Science Research	12
Unit V	Intellectual Property Rights: i) Introduction to IPR :-	12



संत गाडगे बाबा अमरावती विद्यापीठ, अमरावती
SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

मानव विज्ञान विद्याशाखा
(FACULTY OF HUMANITIES)

पसंतीवर आधारित श्रेयांक पद्धती (CBCS) अभ्यासक्रम २०२३ - २४

अभ्यासक्रमिका

वाङ्मय स्नातक

सत्र ३ व ४

मराठी (आवश्यक) द्वितीय भाषा DSC-2

आणि

मराठी वाङ्मय (ऐच्छिक) DSC-3

PROSPECTUS
OF
BACHELOR OF ARTS
SEMESTAR – 3 & 4
MARATHI (Compulsory Second Language)
&

LITERATURE OF THE MODERN LANGUAGE - MARATHI (MLT)



अ.क्र. (Sr. No.)	घटक (Topic)	अध्यापन तासिका (Teaching Hours)
विभाग - अ	वैचारिक	
१)	संस्कृती आणि साहित्य - साने गुरुजी	१५ तासिका
२)	सावित्रीबाई फुले आणि ताराबाई शिंदे - सदानंद मोरे	
३)	सुधारक वृत्तीचा जाणता राजा - अरुणा ढेरे	
विभाग - ब	ललित	
१)	लढे हा विदर्भ - मधुकर केचे	१५ तासिका
२)	सांबराचे लोटण - मारुती चितमपल्ली	
३)	महालूट - सदानंद देशमुख	
विभाग - क	कविता	
१)	संतवाणी अ) ताटीचे अभंग - संत मुक्ताबाई, ब) फुलाचे अंगा सुवास असे - संत चोखामेळा	१५ तासिका
२)	अखंड - म. जोतीराव फुले	
३)	धनी गेला ! - पां. श्रा. गोरे	
४)	जमाना - नारायण कुळकर्णी कवठेकर	
५)	स्टेज - वाहरू सोनवणे	
६)	गुढी - आत्माराम किसन सोनोने	
विभाग- ड	कौशल्य विकास आधारित अभ्यासक्रम (उपयोजित मराठी)	
	मराठी भाषिक कौशल्ये विकास : संपादक - डॉ. पृथ्वीराज तौर, अथर्व पब्लिकेशन्स, धुळे, या पुस्तकातील पुढील दोन घटकांचा समावेश केला आहे. १) मराठी भाषा कौशल्ये आणि व्यवसायाच्या संधी - सुनीता सांगोले २) अहवाल लेखन - स्वाती दामोदरे	१५ तासिका
		एकूण ६० तासिका



- ७) ललित लेखनाचे सादरीकरण व निवेदनकौशल्ये विद्यार्थ्यांना प्राप्त होतील.
- ८) नेमलेल्या साहित्यकृतीच्या आधारे ललित लेखनाच्या घटकांचे आकलन होऊन ललित लेखनाची प्रेरणा मिळेल.

ब) कथावैभव (अर्वाचीन कालखंडातील निवडक कथा)

- १) कथावैभव या संपादित पुस्तकाच्या सूक्ष्म अभ्यासातून विद्यार्थ्यांना कथेच्या विविध प्रकारांची माहिती होईल.
- २) कथांच्या आकलन, आस्वाद व मूल्यमापनातून विद्यार्थ्यांना समकालीन सांस्कृतिक, सामाजिक पर्यावरणाचे ज्ञान होईल.
- ३) कथांचा अभ्यास विद्यार्थ्यांना सामाजिक मूल्यांची जाणीव देणारा ठरेल.
- ४) सामाजिक प्रश्नांची जाणीव कथा साहित्याच्या माध्यमातून होईल.
- ५) कथा लेखनाचे तंत्र विद्यार्थ्यांना आत्मसात करता येतील.
- ६) कथात्म साहित्यातून वाचन, लेखन, श्रवण ही कौशल्ये आत्मसात करता येतील.
- ७) कथेचे सादरीकरण व निवेदनकौशल्य विद्यार्थ्यांना प्राप्त होतील.
- ८) कथांमधून प्रत्यक्ष अप्रत्यक्षपणे व्यक्त झालेल्या लोकशाही मूल्याचा संस्कार विद्यार्थ्यांच्या मनावर होईल.
- ९) नेमलेल्या साहित्यकृतीच्या आधारे कथा घटकांचे आकलन होऊन कथा लेखनाची प्रेरणा मिळेल.

अ.क्र.	अभ्यासपत्रिकेचे घटक	अध्यापन तासिका (Teaching Periods)
१	मन निरभ्र व्हावं : डॉ. आ. ह. साळुंखे, लोकायत प्रकाशन, सातारा.	एकूण – ७५ तासिका
२	कथावैभव (अर्वाचीन कालखंडातील निवडक कथा) संपादक - डॉ. गणेश मालटे, डॉ. गजानन मुंदे, डॉ. राजेश मिरगे राघव पब्लिशर्स अँड डिस्ट्रीब्युटर्स, नागपूर. (‘कथावैभव’ मधील क्रमांक ७ ते १२ या कथा अभ्यासक्रमात राहतील.)	
३	‘मन निरभ्र व्हावं’ व ‘कथावैभव’ यावर आधारित कौशल्य विकास (Skill Enhancement Module)	

