



Bharatiya Vidya
Bhavan

**BHAVAN'S VIVEKANANDA COLLEGE OF SCIENCE, HUMANITIES AND COMMERCE,
SAINIKPURI, SECUNDERABAD.**

Autonomous College

Affiliated to OSMANIA UNIVERSITY, Hyderabad.

(Accredited with 'A' grade by NAAC)

Department of Chemistry

Structure of Academic planner (2019-20)

SEM	PAPER	CODE	COURSE TITLE	NAME OF THE FACULTY
I	I	CT135	CHEMISTRY -I	1.Ms.Prerana Loomba 2.Ms.Moumita
II	II	CT235	CHEMISTRY -II	1.Dr.Aruna Priya Lakkadi 2.Ms.Moumita
III	III	CT325	ORGANIC AND GENERAL CHEMISTRY -II	1.Ms.D Rajeshwari 2. Ms.Prerana
IV	IV	CT435	INORGANIC AND PHYSICAL CHEMISTRY -II	1.Ms.D Rajeshwari 2. Ms.Prerana Loomba
V	V	CT535	ORGANIC, PHYSICAL AND GENERAL CHEMISTRY-III	1.Ms.Mary Nygi Kurian 2. Mr.GV Ramana Murthy
V	VI	CT535A	PHYSICO CHEMICAL METHODS OF ANALYSIS, MOLECULAR SPECTROSCOPY AND CATALYSIS	.Dr.Madhumita B
VI	VII	CT635A	ORGANIC, PHYSICAL AND GENERAL CHEMISTRY-IV	Ms.Mary Nygi Kurian
III*	I	SE335	SAFETY IN CHEMISTRY LABORATORY AND PREPARING LAB REAGENTS	Mr.GV Ramana Murthy
IV*	II	SE435	GREEN METHODS IN CHEMISTRY	Dr.Aruna Priya Lakkadi
V*	III	SE535	BASIC ANALYTICAL CHEMISTRY	Ms.D Rajeshwari
VI*	IV	SE635	CHEMINFORMATICS	IICT-CSIR, HYD
V*	I	GE535	ORGANIC FARMING	Ms.Mary Nygi Kurian
VI*	II	GE635	CHEMISTRY OF COSMETICS AND PERFUMES	Ms.Mary Nygi Kurian

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Academic Planner: 2019-20

Department Of Chemistry

Program: B Sc (MbGC, BtGC, MbBcC)

Course Title: CT135: Chemistry

Year: I

No. of classes per week: 4

Semester: 1

PAPER I

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
JUNE(5)	Principles of Inorganic qualitative analysis	5	5
JULY(21)	Principles of Inorganic qualitative analysis Structural inorganic chemistry s-block elements Organometallic chemistry p-block elements-I	1 4 2 4 1	21
AUGUST(10) + 3 extra classes	p-block elements-I Structural theory in Organic Chemistry	4 9	13
SEPTEMBER(17) + 7 extra classes	Stereochemistry of carbon compounds Acyclic hydrocarbons Gaseous state Liquid state	8 7 5 4	17+ 7 extra classes
OCTOBER(6)	Solutions	4+1Extra class	3+3 extra classes

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Name of the Faculty:

1. Ms.Prerana Loomba

2. Ms.Moumita .B




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Academic Planner: 2019-20

Department Of Chemistry

Program: B Sc (MbGC, BtGC, MbBcC)

Course Title: CT235: Chemistry

Year: I

No. of classes per week: 4

Semester: II

PAPER I1

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
NOVEMBER(6)	p-block elements-II	6	6
DECEMBER(17)	p-block elements-II Alicyclic hydrocarbons Benzene and its Reactivity	9 6 2	17
JANUARY (18)	Benzene and its Reactivity Polynuclear hydrocarbons Solid state Colloids and surface Chemistry	5 2 9 2	18
FEBRUARY(17)	Colloids and surface Chemistry Atomic structure and elementary quantum mechanics Chemical Bonding Material Science	4 5 6 2	17
MARCH(2)	Material Science	2	2

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Name of the Faculty:

1. Ms.Moumita.B
2. Dr.L.Arunapriya



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Academic Planner: 2019-20

Department Of Chemistry

Program: B Sc (MbGC, BtGC, MbBcC)

Course Title: CT335: Organic and General Chemistry

Year: II

No. of classes per week: 4

Semester: III

PAPER III

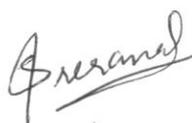
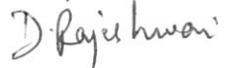
MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
JUNE (10)	Theory of Quantitative analysis Evaluation of Analytical data	5 5	10
JULY(19)	Molecular symmetry Halogen Compounds Hydroxy compounds Ethers and Epoxides Carbonyl Compounds	5 4 6 2 2	19
AUGUST(12)	Carbonyl Compounds Carboxyl acids and Derivatives	3 5	8
SEPTEMBER(16)	Active Methylene compounds ,Interconversions Nuclear Chemistry Stereoselectivity in Chemistry Introduction to Pericyclic reactions	3 5 5 3	16
OCTOBER(3)	Introduction to Pericyclic reactions	3	3

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Name of the Faculty:

1. Ms.Prerana Loomba

2. Ms. D.Rajeshwari



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Academic Planner: 2019-20

Department Of Chemistry

Program: B Sc (MbGC, BtGC, MbBcC)

Course Title: CT435: Inorganic and Physical chemistry

Year: II

No. of classes per week: 4

Semester: IV

PAPER IV

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
NOVEMBER(4)	Chemistry of d-block elements	4	4
DECEMBER(14)	Chemistry of d-block elements Chemistry of f-block elements Theories of bonding in metals	5 8 1	14
JANUARY (12)+ extra classes	Theories of bonding in metals metal carbonyls & related compounds Phase rule	6 6 5	12 + extra classes
FEBRUARY(14 + extra classes)	Dilute solutions Electrochemistry	8 17	4+ extra classes

Name of the Faculty:

1. Ms.Prerana Loomba

2. Ms. D.Rajeshwari

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Academic Planner: 2019-20

Department Of Chemistry

Program: B Sc (MbGC, BtGC, MbBcC)

Course Title: CT535: Organic, Inorganic and Physical chemistry

Year: III

No. of classes per week: 3

Semester: V

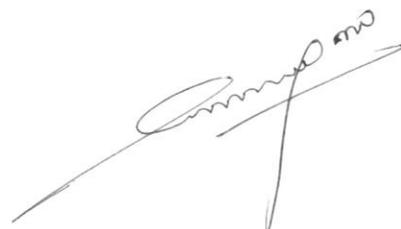
PAPER V

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
JUNE (8)	Nitrogen Compounds	8	8
JULY(12)	Nitrogen Compounds Co-ordination Compounds	3 9	12
AUGUST(12)	Co-ordination Compounds Heterocyclic compounds Spectral and magnetic properties of metal complexes	2 6 2	10
SEPTEMBER(12)	Spectral and magnetic properties of metal complexes Thermodynamics	3 9	12
OCTOBER(3)	Thermodynamics	3	3

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Name of the Faculty:

1. Mr.G.V. Ramana Murthy
2. Ms.Mary Nygi Kurian



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Academic Planner: 2019-20

Department Of Chemistry

Program: B Sc (MbGC, BtGC, MbBcC)

Course Title: CT535A: Physico-chemical methods, Molecular spectroscopy and Catalysis

Year: III

No. of classes per week: 3

Semester: V

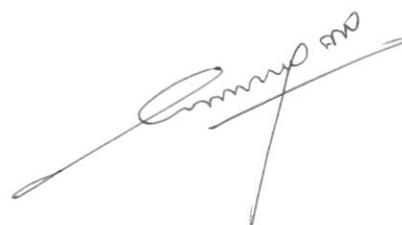
PAPER VI

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
JUNE (6)	Catalysis Separation techniques	6	6
JULY(9)	Catalysis Separation techniques	5 4	9
AUGUST(10)	Separation techniques Spectrophotometry	7 8	15
SEPTEMBER(15)	Mass Spectrophotometry Molecular Spectroscopy	3 8	11
OCTOBER(4)	Molecular Spectroscopy	4	4

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Name of the Faculty:

1. Dr.Madhumita .B



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Academic Planner: 2019-20

Department Of Chemistry

Program: B Sc (MbGC, BtGC, MbBcC)

Course Title: CT635: Organic, Inorganic and Physical chemistry

Year: III

No. of classes per week: 3

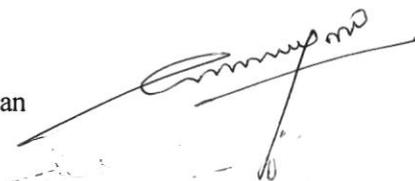
Semester: VI

PAPER VII

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
NOVEMBER(2)	Carbohydrates	2	2
DECEMBER(13)+	Carbohydrates Chemical Kinetics	4 9 5	13
JANUARY (14)	Chemical Kinetics Photochemistry Amino acids	2 2 5 4	9
FEBRUARY(11)	Reactivity of metal complexes Stability of Metal complexes Hard and soft acids bases Synthetic strategies Bio-inorganic chemistry	4 4 4 6 2	20
MARCH(1)	Bio-inorganic chemistry	1	1

Name of the Faculty:

1. Ms.Mary Nygi Kurian



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Academic Planner: 2018-19

Department Of Chemistry

Program: B Sc (MbGC, BtGC, MbBcC)

Course Title: CT635A: Drugs, Macromolecules, Pesticides, Material science

Year: III

No. of classes per week: 3

Semester: VI

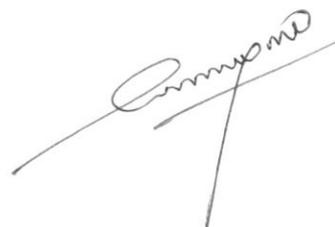
PAPER VII

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
NOVEMBER(3)	Macromolecules	3	3
DECEMBER(10)	Macromolecules Pharmaceutical drugs	8 2	10
JANUARY (10)	Pharmaceutical drugs	10	10
FEBRUARY(14)	HIV and AIDS Formulations Pesticides-I Pesticides-II	5 3 3 3	14
MARCH(1)	Material Science	8	8

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Name of the Faculty:

1.Dr.Madhumita.B



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Department of chemistry

Academic planner (2019-20)

**SEC- SE 335: SAFETY RULES IN CHEMISTRY LABORATORY AND PREPARING LAB
REAGENTS**

Year II

No.of classes per week: 2

Sem III

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
JUNE	INTRODUCTION	4+Extra classes	4
JULY	SAFETY RULES AND REGULATIONS	4+Extra classes	4
AUGUST	SAFETY RULES AND REGULATIONS PREPARATION OF REAGENTS	4+Extra classes	4
SEPTEMBER	PREPARATION OF REAGENTS	10+Extra classes	10

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Name of the Faculty:

Mr.G.V. Ramana Murthy



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Department of chemistry

Academic planner (2019-20)

SEC: SE435: GREEN METHODS IN CHEMISTRY

Year: II

No.of classes per week: 2

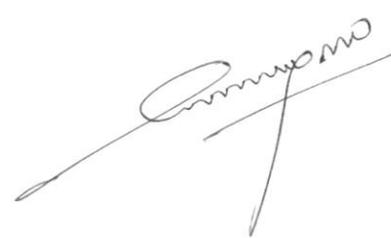
Sem:IV

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
DECEMBER	INTRODUCTION	8+Extra classes	8
JANUARY	GREEN ENERGY AND SUSTAINABILITY	6+Extra classes	6
FEBRUARY	GREEN ENERGY AND SUSTAINABILITY LAB COURSE	4+Extra classes	4

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Name of the Faculty:

Dr.L.Aruna Priya



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SEC- Code: SE 535: BASIC ANALYTICAL CHEMISTRY

Year: III

No.of Classes per week: 2

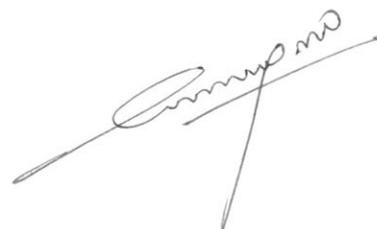
Sem: V

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
JUNE	INTRODUCTION	4+Extra classes	4
JULY	INTRODUCTION ANALYSIS OF SOIL	4+Extra classes	4
AUGUST	ANALYSIS OF SOIL ANALYSIS OF WATER	6+Extra classes	6
SEPTEMBER	ANALYSIS OF WATER ANALYSIS OF COSMETICS	6+Extra classes	6

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Name of the Faculty:

Ms. D.Rajeshwari *D Rajeshwari*



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Academic planner (2019-20)

GE: GE535: ORGANIC FARMING

Year: III

No.of classes per week: 2

Sem: V

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
JUNE	CONCEPT OF ORGANIC FARMING	2+Extra classes	2
JULY	ORGANIC PLANT NUTRIENT MANAGEMENT	8+Extra classes	8
AUGUST	ORGANIC PLANT PROTECTION	6+Extra classes	6
SEPTEMBER	ORGANIC CROP PRODUCTION PRACTICES ORGANIC CERTIFICATION	6+Extra classes	6

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Name of the faculty:

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GE: GE635: Chemistry of Cosmetics and Perfumes

Year: III

No.of classes per week: 2

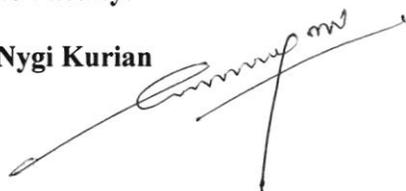
Sem: VI

MONTH	TOPIC	NO.OF CLASSES	TOTAL CLASSES
JULY	PREPERATION AND USES OF HAIR DYE, HAIR SPRAY,SHAMPOO ,SUNTAN LOTION	4+Extra classes	4
AUGUST	PREPERATION AND USES OF FACE POWDER LIPSTICKS TALCUM POWDER CREAMS.	4+Extra classes	4
SEPTEMBER	ANTI PERSPIRANTS AND ARTIFICIAL FLAVOURS	4+Extra classes	4
OCTOBER	ESSENTIAL OILS	6+Extra classes	6

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Name of the Faculty:

Ms.Mary Nygi Kurian



This is to inform that SEC SE635 Cheminformatics is offered by ICT CSIR

CHEMINFORMATICS (Credits:02) (30Hours)

INTRODUCTION TO CHEMINFORMATICS:-

History and evolution of cheminformatics, use of cheminformatics, prospects of cheminformatics, molecular modelling , structure elucidation. (2h)

REPRESENTATION OF MOLECULES AND CHEMICAL REACTIONS:- Chemical Nomenclature – (development, representation of elements and molecular formulas), types of notations , SMILES coding, matrix representation, structure of Molfiles and Sdfiles, libraries and tool kits, reaction classification. (7h)

SEARCHING CHEMICAL STRUCTURES:-

Full structure search, sub-structure search, basic ideas, similarity search, 3D search methods, Basics of computation of physical and chemical data and structure descriptors. (9h)

APPLICATIONS:- Prediction of properties of compounds : Linear free energy relations, Quantitative Structure –Property Relations, Descriptor analysis, model building, modelling toxicity.

COMPUTER ASSISTED SYNTHESIS DESIGN.

DRUG DESIGN – introduction, Drug discovery process (Target identification and validation, Lead finding and optimization), Application of cheminformatics in drug design (Analysis of HTS data, virtual screening, design of combinatorial libraries, ligand based and structure based drug design). (12h)

REFERENCE BOOKS:

1. Andrew R. Leach & Valerie, J. Gillet (2007) An introduction to Cheminformatics.
2. Gasteiger, J. & Engel, T. (2003) Cheminformatics : A text book . Wiley-VCH

