



Andhra Christian College, Guntur

Affiliated to Acharya Nagarjuna University
Sambasivapet main road, Guntur -522001, A. P.

E mail: accollegeguntur@ymail.com

website: www.accollegeguntur.com

Criterion: **I**

Metric: **1.1.1**



Criterion 1 – Curriculum Planning & Implementation

1.1.1 The Institution Ensures Effective Curriculum Planning and Delivery Through a Well-planned and Documented Process Including Academic Calendar and Conduct of Continuous Internal Assessment.

ACADEMIC PLANS

	Andhra Christian College, Guntur Affiliated to Acharya Nagarjuna University Sambasivapet main road, Guntur -522001, A. P. E mail: accollegeguntur@ymail.com website: www.accollegeguntur.com	Criterion: 1 Metric: 1.1.1
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ACADEMIC PLAN

Chemistry

2022-23

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2022-2023 Semester: III

Department: CHEMISTRY

Teacher: Dr. N. J. SOLOMON BABU

- Teaching Objective:
- ① To Understand principles and Applications of Molecular Spectroscopy
 - ② To Know the Basic details of Rotational, vibrational Electronic and NMR Spectroscopy
 - ③ To apply UV, Visible, IR Spectroscopies to organic molecules

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	2 hrs	Molecular Spectroscopy	Lecture	Know the interaction of light and matter	Q2A
2	2 hrs	Rotational Spectroscopy	Lecture	To know the selection rules and to determine structure of molecules	Q2A
3	4 hrs	Vibrational Spectroscopy	Lecture	Understand the characteristic & combination oscillations, vibrations of polyatomic molecules	Q2A
4	4 hrs	Electronic Spectroscopy	Lecture	Know the Types of Transitions & Effect of Conjugation	Q2A


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Academic Plan

Year: 2022 to 23 Semester: III Department: CHEMISTRY

Name of the teacher: Dr. T. KUSUMA KUMARI

- Teaching Objective: End of the course student will be able to:
1. understand prep & prop of halogen compounds & oxygenated functional group compounds.
 2. use the synthetic chemistry to transform functional groups.
 3. propose probable mechanisms for any relevant reactions.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	6h.	Halogenated Compounds.	Lecture	understand prep & prop of halogenated compounds.	Q.A
2.	6h.	Alcohols & Phenols.	Lecture	Learn the mechanism of various reactions.	Q.A.
3.	10h.	Carbonyl Compds.	Lecture	Know about Named reactions.	Q.A.
4.	12h.	Carboxylic Acid derivatives.	Lecture	Know the reactions of various compounds.	Q.A.

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Academic Plan

Year: 2022-23 Semester: V, 6C Department: CHEMISTRY.

Name of the teacher: Dr. N. KUSUMA KUMARI.

Teaching Objective: Students will be able to

1. Know the importance of fertilizers.
2. Understand various steps in the manufacture of cane sugar.
3. Explain the manufacture of pulp & paper.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	10h.	Fertilizers	Lecture	Able to apply the knowledge of fertilizers	D.A.
2.	8h.	Sugar chemistry	Lecture	Understand various steps in the manufacture of sugar	D.A.
3.	10h.	Paper chemistry	Lecture	Understand able to know how paper is manufactured	Seminar

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Academic Plan

Year: 2022-2023 Semester: IV Department: CHEMISTRY

Line teacher: Dr. N. T. SOLOMON BABU

Teaching Objective: Paper IV

- To understand Physical Processes and mechanisms of photochemical reactions
- To familiarize with Basic concepts of Thermodynamics and various state functions
- To learn about Heterocyclic compounds
- To know about Electrochemical conductance of solutions and EMF
- To know the kinetics of 0, 1, 2 order reactions and kinetics of catalysis

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	7	Heterocyclic compounds	Lecture	Know Properties of Pyrrole, Furan, Thiophene, Pyridine	Q & A
2	5	Photochemistry	Lecture	Know about photochemical reactions and photophysical processes	Q & A
3	12	Thermodynamics	Lecture	Know 1st, 2nd Law, and know about E, H, S, G, A	Assignment
4	14	Electrochemistry	Lecture	Know about conductance and EMF	Q & A
5	14	Chemical Kinetics	Lecture	Define 0, 1, 2 order reactions and Effect of Temp on rate	Q & A

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Academic Plan

Year: 2022-23 Semester: II, P-II Department: Chemistry

Name of the teacher: Y. DURGA PRASAD

Teaching Objective: I BSc, Sem-II, P-II (Organic & General Chemistry)

- To learn about aromatic compounds and their characteristics, concept of aromaticity, Huckel's rule, structure of benzene - VB and MO theories, orientation effect in benzene - o, p and m - directing groups. E.S. reactions of benzene + Mech. of nitration, sulfonation, halogenation, alkylation, acylation.
- To learn about physical and chemical adsorption, Langmuir adsorption isotherm, applications of adsorption, Colloids - properties.
- To learn about elements of symmetry, optical & stereo isomerism, R, S and E, Z configuration.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	10	Benzene and its reactivity	lecture	Students are aware of concept of aromaticity, E.S. mechanism in benzene, orientation effect in benzene.	Q & A, Assignments
2	6	Surface Chemistry - Adsorption & Colloids.	lecture	Students studied about adsorption, isotherms, applications, properties of colloids.	Q & A, assignments
3	2	HSAB	lecture	Concept of HSAB.	
4	10	Stereochemistry of Carbon compounds.	lecture	Elements of symmetry, chirality, O.I. in tartaric acid, 2,3-dibromopentane, R, S and E, Z configuration.	Q & A, assignments

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Academic Plan

Year: 2022-2023

Semester: III

Department: CHEMISTRY

The teacher: Dr. N.J. SOLOMON B.A.W.

Teaching Objective:

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
5	6hrs	NMR Spectroscopy	Lecture	Know the equivalent non equivalent protons, chemical shifts	Q & A
6	8hrs	Applications of Spectroscopy of simple molecules	Lecture	Apply U.V, V.S, I.R Spectra to simple organic compounds	Quiz

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Academic Plan

Year: 2022-23 Semester: IV, P-IV Department: Chemistry

Name of the teacher: Y. DURGA PRASAD

Teaching Objective: II BSc, Sem-IV, P-IV (30 hrs)

- 1) To learn about def, classification, preparation of OMCS. Metal carbonyls: prep, structure, 18-electron rule, synergistic effects, MO diagram of CO.
- 2) To learn about def, classification of carbohydrates, structures of glucose & fructose (detailed study), interconversions in monosaccharides.
- 3) Prep and prop of nitrohydrocarbons, tautomerism, Nef reaction, Mannich reaction.
- 4) To learn about classification, preparation and reactions of amines. Basic nature of amines - comparative study. Prep and uses of diazonium salts.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	8	Organometallic Compounds.	lecture	Students are aware of types of OMCS, Metal Carbonyls: 18 electron rule, synergistic effects.	Q & A, Assignments
2	8	Carbohydrates	lecture	Students know classification & and A, of carbohydrates, structures of glucose & fructose. Interconversions in monosaccharides.	Q & A, Assignments
3	3	Nitrohydrocarbons	lecture	prep and properties are known.	Assignments
4	11	Amines	lecture	classification, prep and properties of amines. Separation of 1°, 2°, 3° amines. comparison of basic nature, prep and uses of diazonium salts are known to students.	Q & A, Assignments, Seminars by students.

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Academic Plan

Year: 2022-23 Semester: V, P-VII C Department: Chemistry

Name of the teacher: Y. DURGA PRASAD

Teaching Objective: III BSc, S-V, P-VII C (Industrial Chemistry - 2).

- 1) To learn about def, classification methods of organic polymers. Degree of polymerisation.
- 2) To learn about mechanism of polymerisation: Addition-free radical, cationic & anionic polymerisation, condensation polymerisation, coordination polymerisation: Z-N catalysts. Manufacture of some imp. polymers.
- 3) Sources of air pollution, green house effect, ozone depletion, acid rain, photochemical smog. Control of air pollution.
- 4) Analysis of water: Total hardness, CO₂, BOD, DO, TDS, Alkalinity. Def of etc.
- 5) Industrial waste management methods.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	10	Organic Polymers - I	Lecture	Def and classification methods of polymers are studied well.	Q & A Assignments.
2	10	Organic Polymers - II	"	Students are aware of mechanism of addition, condensation & coordination polymerisation. Manufacture of polystyrene, PMMA etc.	Q & A Assignments
3	8	Air Pollution	"	Students are aware of sources, bad effects of different gaseous air pollutants.	Q & A Assignments
4	10	Analysis of Water	"	Analysis of hardness of water, CO ₂ , BOD, DO, etc.	Q & A Assignments
5	12	Industrial Waste Management.	"	Management of industrial and domestic waste.	Q & A Assignments

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Academic Plan

Year: 2022 to 2023 Semester: IV Paper V Department: CHEMISTRY

Name of the teacher: Dr. H. KUSUMA KEMARI.

Teaching Objective: student will be able to understand ⁽¹⁾ crystal field stabilization energy.

2. To know how reactions S_N1 , S_N2 reaction take place.
3. Apply knowledge of effect of physical conditions on the reaction equilibrium.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	12h	Coordination Chemistry.	Lecture	understand the splitting of orbitals.	Q. A.
2.	6h.	Inorganic reaction mechanism & stability	Lecture	Student knows the S_N1 , S_N2 reactions mechanism.	Q. A. Lectures
3.	8h	Bio inorganic Chemistry.	Lecture	Apply the remedial measures to the living beings.	Seminar.
4	8h.	Phase rule	Lecture	Learn the effects of various conditions on the Equilibrium systems.	Quiz

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Academic Plan

Year: 2022-23 Semester: II Department: CHEMISTRY.

Name of the teacher: Dr. M. KUSUMA KUMARI.

Teaching Objective:

1. understand diffrent behaviour of organic.
2. Formulate the mechanism of org. reactions
3. Learn org. react Substitution, E. Addition, E.A. Subst.
4. Correlate and describe Stereochemical proper

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	12 h.	Alkanes & cycloalkanes.	Lecture	understand the prop. of org. comp.	Q. A.
2.	12 h	Alkenes & Alkynes.	Lecture	Formulate Mechanism of org. reaction	Quiz
3.	6 h.	Chemical Bonding	Lecture	Learn about Chemical Bonding & Hybridization	Seminar.

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Academic Plan

Year: 2022-23 Semester: Sem-I Department: Chemistry

Name of the teacher: Y. DURGA PRASAD

Teaching Objective: I BSc, S-I, P-I (Inorganic & Physical Chemistry)

- 1) To learn about elements of symmetry, crystal lattice, unit cell, Law of constancy of interfacial angles, Bragg's eqn, det. of crystal structure by powder method, various crystal defects.
- 2) To study Van der Waal's eqn of state law of corresponding states, relation between T_c , P_c , V_c and a and b . J-T effect. Liquefaction of gases, inversion temperature.
- 3) To learn about azeotropic mixtures, CST, effect of impurities on CST, principle of steam distillation, Raoult's Distribution law and its application.
- 4) Colligative properties - ~~and~~ and abnormal colligative properties.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	10	Solid state	Lecture	Students are aware of crystal systems, det. of crystal structure, Bragg's eqn, Defects in crystals.	Q & A Assignments.
2	6	Gaseous State	"	Derivation of Van der Waal's eqn, relation between T_c , P_c , V_c and a , b , J-T effect and liquefaction of gases.	Q & A, Assignments
3	6	Solutions	"	Azeotropic mixtures, CST and principle of steam distillation.	Q & A, Assignments
4	7	Dilute Solutions	"	Raoult's law, distribution law, colligative properties, and their relation, abnormal colligative properties.	Q & A, Assignments.

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Academic Plan Economics 2022-23

ANDHRA CHRISTIAN COLLEGE, GUNTUR.

ACADEMIC PLAN.

DEPARTMENT: ECONOMICS.

Year: 22-23 SEMESTER: 3

Name of the teacher: DR. N. MARTHA INDURU.

Teaching objectives: To create an understanding of development economics to the students.

Sl. No.	Hrs. allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	12	Economic Development as a branch of Study of Economics - scope and Importance - distinction between Economic growth and Economic devt. - Measures of Economic development and their limitations - Three core values of economic development: sustainability, self-reliance and freedom - Economy and Environment: concepts of sustainable development and inclusive growth.	Lecture method	helps understand the concept of growth & development.	Good
2	10	Characteristics of underdeveloped countries - World Bank & IMF classification of countries - Obstacles to economic development. Factors of Economic Growth: Economic & Non-Economic - Capital Formation - Foreign & Domestic Capital, Debt & Investment.	"	helps understand world economies	Good
3	10	Classical theory - Adam Smith, Ricardo and Malthus - Malthusian Theory, Rostow's stages of Economic Growth - Harrod - Domar two sector model - Robinson's Golden Age.	"	helps understand different theories of growth.	Good
4	8	Strategies of Economic Development - Big push - Balanced Growth - Unbalanced Growth - Capital Intensive Technology - vs Labour Intensive Technology - Role of Infrastructure in Economic development	"	helps understand development theories.	Good
5	10	Role of State in Economic Devt - public sector vs Private sector - Economic Federalism - Financial Institutions and Economic Development - Role of International Institutions - IBRD, ADB, IMF - Foreign Trade - FDI and FDIIs.	"	helps understand the role of financial institutions	Good.

Dr. N. M. Marudula

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ACADEMIC PLAN.

Department: Economics.

Year: 2022-23

SEMESTER: IV

Name of the teacher: Dr. N. Martha Mundula.

Teaching Objective: To create an understanding about the statistical skills in the students.

Sl. No	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	8	Introduction to Statistics - Definition, scope & importance of statistics - Primary and Secondary data. Census & Sampling techniques and their merits & demerits.	Lecture method demonstration method.	helps in understanding the imp of Statistics.	Good
2.	10	Collection of data - schedule and questionnaire - Frequency distribution Tabulation - diagram & graphic presentation of data. Histogram, Frequency polygon. Cumulative Frequency Curves - Bar diagram & pie diagram.	demonstration method.	helps in understanding different concepts & graphs.	Good
3.	15	Measures of Central tendency & Dispersion Types of Averages - Arithmetic Mean, Geometric Mean, Harmonic Mean, - median, mode - Dispersion Range, Quartile Deviation, Mean Deviation, Standard Deviation - Coefficient of variation.	demonstration method	helps in understanding averages etc.	Good
4.	15	Correlation & Regression - meaning, Definition & use of Correlation - Types of Correlation - Karl Pearson's Correlation Coefficient, Spearman's Rank Correlation - Regression equations - Utility of regression analysis.	"	helps in understanding correlation & regression	Good
5.	12	Time Series & Index Numbers: Definition & components of Time Series - Measurement of time series - Moving Average and the Least Square Method, Index Number, Concepts of Price & Quantity Indices Laspeyres, Paasche's and Fisher Ideal Index Numbers - Uses & Limitations of Index Number.	"	helps in understanding time series & index number.	Good

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Academic Plan Economics 2021-22

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2021-22

Semester: II

Department: Business - Economics

Name of the teacher: Dr. N.M. Mondula.

Teaching Objective: To create an understanding about micro-economic theories.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	10	Meaning & definition of B.E. Nature & scope of B.E. Micro & macro Econ - Differences, Cardinal & ordinal utility.	Lecture method	gain knowledge of business Economic concepts	good.
2.	15	Demand analysis - Meaning & definitions of Pd. Types of Pd. Functions Law of Pd, its curve, exceptions.	"	Idea on Elasticity of demand, types	good
3.	8	Meaning, definition of Price Pd. Types of E. Measure of E of d.	"	gain knowledge on price Pd, types & measure	good
4.	10	Classification of costs Total, average, marginal revenue, marginal cost cost function - Long run & short run.	"	gain idea on classification of costs.	good
5.	10	Types of cost - Fixed cost - Semi-variable cost - variable cost cost behaviour, Break even analysis - uses & limitations.	"	gain idea on types of costs, & break even analysis	good.

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Academic Plan

Year: 2021-22

Semester: VI

Department:

Agricultural
Economics.

Name of the teacher: Dr. N. M. Moudula.

Teaching Objective: aims to sensitize students on agricultural Economics.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	10	Nature & scope of agl Econ, factors affecting agl devt, technological, institutional & general interdependence between ag & industry.	Lecture method.	develops understanding on agriculture	good.
2.	10	Concept of p/n-fn, input & output & p/n relationship in farm production.	"	Knowledge of relationship between input & output.	good
3.	12	Evolution & p/nity trends ag with spl ref to India. Agrarian reforms & role in Eco devt.	"	Role of ag in Eco devt.	good
4.	13	Systems of farm production with spl relation to Indian ag. New agl strategy & green revolution & its impact.	"	Idea about Green revolution	good,
5	13	Emerging trends in product processing, marketing & regulation relating to industrial sector with special reference to agro-industries in agri business enterprises.	"	Relationship of ag with industry	good

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Academic Plan Mathematics 2021-22

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2021-22 Semester: IV (P.O.U.S.-IV) Department: mathematics

Name of the teacher: Dr. B. VIJAYA KUMAR

Teaching Objective: After completion of the course student can understand Real number system, the concepts in Real sequences, Infinite Series, Limits and continuity, Differentiability and Riemann Integrals. Able to solve problems relating to these topics. Able to prove the theorems. Able to apply the concepts of differentiability and integrability in physics.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
01.	12	Real Analysis: Real number systems & Real sequences	Black board & Lecture method	Understand R-System and Real sequences. Able to prove theorems and solve problems.	Slip test, mid exam, Student Seminars
02.	12	Infinite Series	Black board & Lecture method	Understand the concept of Series. Able to prove theorems and solve problems.	Slip Test, mid exam, Student Seminars
03.	12	Continuity	Black board & Lecture method	Understand the concept of limit, continuity. Able to prove theorems and solve problems and applications.	Slip Test, mid exam, Student Seminars.
04.	12	Differentiation and mean value theorems	Black board & Lecture method	Understand the concept of differentiation and able to prove Rolle's, Lagrange's and Cauchy's mean value theorems.	Slip test mid exam Student Seminars
05.	12	Riemann Integration	Black board & Lecture method	Understand the concept of Riemann Integration, able to prove fundamental th. of Integral calculus and mean value theorems.	Slip test mid exam Student Seminars

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Academic Plan

Year: 2021-22

Semester: VI

Department: Mathematics

Name of the teacher:

Teaching Objective: After completion of the course, the student is able to

- (i) Define integral transform, Laplace transform, inverse Laplace transform
- (ii) able to understand and solve the problems relating to linearity, multiplication by t , multiplication by t^n , division by t , Laplace transforms of Bessel function
- (iii) able to prove the theorems relating to first shifting theorem, second shifting theorem, initial value theorem, final value theorem etc.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	12	Laplace Transforms I	Black board & lecture method	Define Integral Transform, Linearity property, existence of LT	Slip tests, Int'l. Exam, Student Seminars
2.	12	Laplace Transforms II	"	Prove 1 st shifting & 2 nd shifting theorems, understand and prove initial and final value theorems	"
3.	12	Laplace Transforms III	"	understand LT of integrals, multiplication & division by t , LT of Bessel function, LT of Error function	"
4.	12	Inverse Laplace Transform I	"	Define inverse LT, linearity property, 1 st and 2 nd shifting theorems - prove	"
5.	12	Inverse Laplace Transform II	"	Solve inverse LT of Derivatives, Inverse LTs of Integrals, multiplication and division by powers of p .	"

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Academic Plan Chemistry 2020-21

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-21

Semester: VI

Department: CHEMISTRY

Name of the teacher: Dr. N.J. SOLOMON BABU

Teaching Objective: Fuel chemistry & Batteries B,
 1. To know about various conventional & non conventional energy sources
 2. To familiarize with various processes of Petrochemical industry
 3. To acquire the knowledge about Lubricants and Batteries

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	12hs	Review of energy sources	Lecture	Know about various sources of energy	Q & A
2	6hs	Petroleum & Petrochemical industry	Lecture	Understand the nature & source & significance of petrochemicals	Quiz
3	10hs	Fractional distillation Principle & process	Lecture	Explain the technique of fractional distillation	Q & A
4	10hs	Lubricants	Lecture	Know the types of lubricants & their role in machinery	Q & A
5	7hs	Batteries	Lecture	Acquire the information about Batteries	Q & A

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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-2021 Semester: VII B Department: CHEMISTRY

Name of the teacher: Dr. H. KUSUMA KUMARI

Teaching Objective:

1. To know the toxic effects of the pollution.
2. To acquire knowledge about pollution.
3. To explain the Bio diversity.
4. To learn about Ecosystems.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	9h	ENVIRONMENTAL Chemistry Introduction	Lecture	Student able to identify different conditions in the environment.	Quiz.
2.	9h	Air pollution	Lecture	Acquire the knowledge about Air pollution & Remedies.	Quiz
3.	9h	Water pollution	Lecture	understand how water is polluted & find out the remedies.	Q & A.
4.	9h	Chemical Toxicology	Lecture	know about the toxic effects of the substances.	Q & A.
5.	5h	Ecosystem	Lecture	Explain the ecosystems.	Quiz
6.	4h	Bio diversity.	Lecture	Able to explain the diversity in the living beings.	Q & A.

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Academic Plan

Year: 2020-2021 Semester: IV Department: CHEMISTRY

Name of the teacher: Dr. M. KUSEMA KUMARI

Teaching Objective: 1. To know about the colligative properties of the dilute solutions.
2. To understand the Conductivity of the Electrolytes
3. To understand phase rule and acquire the knowledge to apply for the physical equilibrium.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	10h.	Dilute Solutions	LECTURE	Acquire knowledge about colligative properties.	Q & A
2.	10	Electrochemistry	Lecture	understand Principles of Conductivity	Q & A
3.	4h.	Electrochemistry	Lecture	knows about electrolytes.	Q & A
4.	6h	Phase rule	Lecture	understand Physical Equilibrium at different Conditions	Q & A

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Academic Plan

Year: 2020-2021 Semester: V

Department: CHEMISTRY

Name of the teacher: Dr. N. J. SOLOMON BASU

Teaching Objective: 1. TO Know about formation of complexes, their bonding, nomenclature and spectral, magnetic Properties
2. TO Learn the Preparation, Properties and uses of organic compounds containing nitrogen
3. TO Learn the basics of thermodynamics and various state functions and understand their significance in knowing the feasibility of process

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	2 hrs	Coordination Compounds	Lecture	Know the significance of complexes	Q & A
2	4 hrs	Spectral and magnetic Properties of metal complex	Lecture	Understand the magnetic Properties	Quiz
3	3 hrs	Stability of metal complexes	Lecture	Acquire the knowledge about stability	Q & A
4	3 hrs	Nitrohydrocarbons	Lecture	Understand the synthesis of Nitro comp	Q & A
5	12 hrs	Nitrogen comp - Nitro, Amines	Lecture	Know about amines, their basicity etc	Q & A
6	15 hrs	Thermodynamics	Lecture	Learn the Basics of thermodynamics and various state functions	Quiz

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Academic Plan

Year: 2020-21

Semester: III

Department: CHEMISTRY

Name of the teacher: Dr. N. J. SOLOMON BABU

Teaching Objective: 1. To know about various ^{org} compounds with different functional groups and study their reactions with mechanisms
2. To know about the Physical & Properties of Halogen compounds, Hydroxy comp, Carbonyl comp and acid derivatives
3. To know the significance of Active methylene group and its role in the synthesis of org comp.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	5 hrs	Halogen comp	Lecture	Understand SN ¹ , SN ² mechanisms	Q & A
2	5 hrs	Hydroxy compounds	Lecture	Know the significance of alcohols & phenols	Q & A
3	10 hrs	Carbonyl compounds	Lecture	Identify the importance of aldehydes & ketones	Quiz
4	6 hrs	Carboxylic acids and derivatives	Lecture	Understand the various derivatives of acids and their reactivity	Q & A
5	4 hrs	Active methylene compounds	Lecture	Know the significance of Active methylene group and its application in synthesis	Q & A

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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-2021

Semester: III

Department: CHEMISTRY

Name of the teacher: Dr. N. KUSUMA KUMARI

Teaching Objective: 1. To learn about 'd' block & 'f' block elements and understand their properties.
2. To know the uniqueness of Metals and their Bonding, & theories involved and their structure & stability.
3. To understand the structure of carbonyls & utility.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	9 hrs	Chemistry of 'd' block elements.	Lecture	student able to identify different properties of 'd' block elements.	Q & A
2	6 hrs	Theories of Bonding in Metals.	Lecture	Acquire the knowledge of Bonding in Metals.	Q & A
3	7	Metal Carbonyls.	Lecture	understands various structures of Metal carbonyls.	Quiz
4	8	Chemistry of 'f' block elements.	Lecture	Students know about the Lanthanides and Actinides.	Q & A.

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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-2021 Semester: V Department: CHEMISTRY

Name of the teacher: Dr. H. KUSUMA KUMARI.

Teaching Objective: 1. To learn about the reactivity of Metal complexes.
2. To understand the role of some elements in living beings.
3. To acquire the knowledge of kinetics and effect of light on chemical reactions.
4. To explain the reactions of organic compounds.
5. To identify the importance of Amino acids & proteins in the life of Human beings.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	4	Reactivity of Metal complexes.	Lecture	Acquire the knowledge of reactivity of metal complexes.	Q & A.
2.	4	Bioinorganic chemistry	Lecture	Understands the role of chemicals in living organisms.	Q & A.
3	8.	Chemical kinetics	Lecture	Student able to understand various steps in chemical kinetics.	Quiz.
4	5	Photo Chemistry	Lecture	Know the significance of light on chemical reactions.	Q & A.
5	7	Heterocyclic compounds	Lecture	Understands the prep & prop. of various heterocyclic compounds.	Q & A.
6	8	Carbohydrates	Lecture	Student able to explain the structure & reactions of carbohydrates.	Q & A.
7	7	Amino acids & Proteins.	Lecture	Students are able to identify the importance of Amino acids & Proteins.	Q & A.

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Academic Plan

Year: 2020-21 Semester: I Department: Chemistry

Name of the teacher: Y. DURGA PRASAD

- Teaching Objective:
- 1) To learn about properties, preparation, structures of diborane, borazane, silicones, phosphorous halides, oxides, interhalogen compounds and pseudohalogens.
 - 2) To learn about electronic conf, oxidation states, magnetic & colour properties, catalytic properties, complex formation ability of d-block elements.
 - 3) To learn electronic conf, oxidation states, lanthanide & actinide colour spectral & magnetic properties, separation methods of lanthanides & actinides.
 - 4) To learn various theories of bonding in metals.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	8	P-block elements	Lecture	Student understands periodic trends, properties and structures of diborane, borazane, phosphorous halides, oxides, interhalogen compounds, pseudohalogens.	O & A
2	6	d-block elements	Lecture	Student understands properties of d-block elements.	O & A
3	6	f-block elements	Lecture	Student understands properties of f-block.	O & A
4	4	Theories of bonding in metals	Lecture	Student knows able to acquire the knowledge about properties of metals theories like VB, MO (Band theory) of metals.	O & A
5	6	Gaseous state	Lecture	Student understands van der Waals eq, of state, Andrews & Boltzmann Law of corresponding states.	O & A

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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-21 Semester: II, P-II Department: Chemistry

Name of the teacher: Y. DURGA PRASAD

Teaching Objective: Learn and identify many organic reactions mechanisms.
 - Aromatic electrophilic substitution, orientation effects in Benzene - Aromatic Character - Huckel's rule.
 Colloids - Def, preparation, kinetic, optical and electrical properties.
 Adsorption: Def, types, Langmuir adsorption isotherm, applications.
 HSAB: Lewis's concept of HSAB.
 Stereochemistry: To learn various molecular representations, optical isomerism, elements of symmetry, enantiomers, diastereomers.
 O.I in tartaric acid, 2, 3-dibromopentane. R, S and E, Z configurations.
 Racemic mixtures.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	12	Benzene and its reactivity	lecture	Students understand about aromatic character, mech. of E-S in benzene, orientation effect-o, p, m directing groups.	Q & A Assignments
2	6	Surface Chemistry	lecture	Students are well aware of properties of colloids, types of adsorption, adsorption isotherms, applications.	Q and A
3	2	HSAB	lecture	Concept of HSAB was understood.	Q & A
4	10	Stereochemistry of Carbon Compounds.	lecture	Students understand optical isomerism, enantiomers, diastereomers, with examples, elements of symmetry, D, L, R, S and E, Z configurations.	Q & A - Assignments

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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-21

Semester: V

Department: Chemistry

Name of the teacher: Y. DURGA PRASAD

- Teaching Objective:
- 1) To know about formation, nomenclature, various theories of bonding, geometrical and optical isomerism of coordination complexes.
 - 2) To learn and understand spectral and magnetic properties of metal complexes.
 - 3) To learn about thermodynamic & kinetic stability, determination of stability constants.
 - 4) To learn about nomenclature, preparation and properties of nitrohydrocarbons.
 - 5) To learn about nomenclature, prep., properties, separation, basic nature and factors affecting basic nature of amines.
 - 6) To learn, understand I, II and III laws of thermodynamics. Significance in chemical sciences.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	8	Coordination Compounds	Lecture	Students know the formation, nomenclature, theories of bonding, geometries, stereochemistry of complex compounds.	Q & A in class room, quiz program on the chapter.
2	4	Spectral and magnetic properties of metal complexes.	Lecture	Students learn and understand types of magnetic behaviors, and spectral properties of metal complexes.	question & answer session at the end of the topic.
3	3	stability of metal complexes	Lecture	Thermodynamic and kinetic stability factors affecting stability, det. of composition of complexes.	Q and A to test the knowledge of students.
4	3	Nitrohydrocarbons	Lecture	Nomenclature, preparation, properties are understood.	Q & A to test the knowledge and understanding of the topic.
5	12	Nitrogen Compounds	Lecture	Nomenclature, prep, prop., basic nature, separation of amines were understood.	Q & A to test the understanding of the topic.
6	15	Thermodynamics	Lecture	I, II & III laws of thermodynamics, their importance were understood.	Q & A to test the understanding of the topic.

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Academic Plan

Year: 2020-21

Semester: VI

(P-VIII B2)

Department: Chemistry

Name of the teacher:

Y. DURGA PRASAD

Teaching Objective:

P-VIII B2: Inorganic Materials of Industrial Importance

- 1) To remind periodic properties - atomic size, IE, EA, EA of s and p-block elements. Comparing properties of s and p-block w.r to oxidation states.
- 2) To learn about manufacturing processes involved in glass and cement. Various types of glasses and their composition, uses. Setting of cement.
- 3) To learn about types, preparation and uses of fertilizers like urea, CAN, superphosphate, K_2SO_4 , $(NH_4)_2SO_4$ etc. organic fertilizers.
- 4) To learn about other, methods, cleaning methods of surfaces - Paints - components and composition, types of special paints.
- 5) Alloys - Ref. types, steel - processes, heat treatment, types of steel, their uses.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	8 hrs	Re-capitulation of s- and p-block elements	Lecture	Students learnt about properties of s and p block elements.	Q & A
2	15	Silicate Industries	Lecture	Students understood manufacture of cement, glass. Types of glasses and uses. Setting process of cement.	Q & A Assignments.
3	8	Fertilizers	Lecture	Students are aware of types of fertilizers manufacture and uses.	Q & A Assignments.
4	8	Surface Coatings	Lecture	Objectives, methods of cleaning of surfaces, paints - composition, types etc.	Q & A Assignments.
5	6	Alloys	Lecture	Ref. types, manufacture of steel, desulphurization, dephosphorization, removal of S, desphosphorization, various types of steel - composition, industrial uses.	Q & A Assignments.

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Academic Plan

Year: 2020-21

Semester: IV

Department: CHEMISTRY

Name of the teacher: Dr. N. V. SOLOMON BABU

Teaching Objective: To Understand the Concept of Absorption Spectroscopy
To identify the presence of π bonds as non bonding electrons present in a molecule using Electronic Spectroscopy and to know the extent of conjugation
To analyze the molecules with the help of IR spectra and identify functional groups
To Understand the Concept of Electron Env and identify different Protons and their signals in PMR spectra.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	6	General features of absorption	Lecture	To know about interaction of light & matter	Q & A
2	8	Electronic Spectroscopy	Lecture	Know the Principles and applications of UV Spectra	Q & A
3	8	I.R Spectroscopy	Lecture	Know the types of vibrations and understand functional group 2 finger print region	Q & A
4	8	PMR Spectroscopy	Lecture	Know the Principles of NMR Spectroscopy, and find the chemical shift & splitting signals	Assignment

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Academic Plan Economics 2020-21

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-21

Semester: II

Department: Economics.

Name of the teacher: Dr. N. M. Mandula.

Teaching Objective: To make the students understand the subject.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
4.	10	classification of costs total, average, marginal revenue, Marginal cost - cost function, long run and short-run.	Lecture method.	to learn about various costs.	
5.	10	Break-Even analysis. Types of costs, fixed cost, semi-variable cost, variable cost, cost behaviour, Break-even analysis - uses and limitations		to learn about types of costs.	

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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-21 Semester: II (I B Sem) Department: Business Economics.

Name of the teacher: Dr. N. M. Maudula

Teaching Objective: To make the students understand the subject.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	2	Meaning & definition of Business Economics	Lecture method	Understanding	Good
	2	Nature & scope of Business Economics	Lecture method	Understanding	Good
	1.	Differences between micro & macro Economics.	Lecture method	Understanding	Good
	1.	Cardinal & Ordinal utility - differences	Lecture method	Understanding	Good
	3.	Demand - types, meaning, & nature of demand curve. Function of demand curve	Lecture method	Understanding	Good
	1.	Reasons for downward sloping demand curve.	Lecture method	Understanding	Good

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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-21

Semester: II

Department: Economics

Name of the teacher: Dr. N. M. Maudhula

Teaching Objective: To make the students understand the subject.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	10	Meaning and definition of economics. Nature and scope of Business Economics. Micro and Macro Economics. Differences, cardinal and ordinal utility.			
2.	12	Demand Analysis- Meaning and definition of price elasticity of demand, types of price elasticity - functions, Law of demand, demand curves - exception			
3.	12	Meaning and definition of price elasticity Types of elasticity Measurement of elasticity.			

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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-21 Semester: VI (II BA) Department: Economics.

Name of the teacher: Dr. N. M. Nandula.

Teaching Objective: To make students understand the topics in the subject.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	1.	Importance of agl Economics.	Lecture method.	Assimilation	Good.
2	2.	Nature and scope of Agricultural Economics	Lecture method	Understanding	Good.
3	2.	Factors affecting agricultural devt.	Lecture method	Understanding	Good.
4	2.	General interdependence between Ag & Industry	Lecture method	Understanding	Good
5	2	Concept of production function.	Lecture method	Understanding	Good.
6	2	Input and output and product relationship in farm production	Lecture method.	Understanding	Good.

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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-21

Semester: VI

Department: Economics.

Name of the teacher: Dr. N. M. Mandula.

Agricultural Output
Marketing.

Teaching Objective: To make the students understand about agricultural Output marketing.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	12	Structure & model of ag. marketing. Organization with functions. Intermediaries - Marketing practices in primary and Secondary and tertiary markets. Regulated markets. Co-operative markets.	Lecture method	to learn about types of agricultural marketing	
2.	15	Marketing Costs and margins. Marketing finance. Marketing structure of major agricultural commodities Food grains, rice & maize cash crops. oil-seeds, vegetables & fruits.	Lecture method.	to learn about agricultural marketing structure	
3.	10	Problems & challenges in Agricultural Marketing. Market yards - Support prices - rural warehousing.	Lecture method	"	

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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 20-21

Semester: I

Department: English (Gen. English).

Name of the teacher: Anna Shalini-G.

Teaching Objective: Know the difference between listening and hearing.
Sensitise to the nuances of English speech sounds, word accent, intonation and rhythm.
Increase awareness of correct usage of English grammar in writing and speaking.
Learn to improve a positive attitude.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
	12.	Unit I: Listening skills.	Lecture Method	Confidently use textbooks of communication skills.	
	12.	Unit II: Speaking Skills.	Lecture Method	Demonstrate the use of good vocabulary.	
	12	Unit III: General Grammar.	Lecture Method.	Demonstrate an understanding of writing skills.	
	12	Unit IV: Writing	Lecture Method: Practice.	"	
	12.	Unit V: - Soft skills.	Lecture Method	Acquire ability to use soft skills in professional and daily life.	

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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-21

Semester: III

Department: ECONOMICS

Name of the teacher: B. NIRMALA

Teaching Objective: The Teaching objectives of macroeconomics generally include understanding and analyzing the overall economy. Key goals involve grasping concepts like GDP, inflation, unemployment and fiscal/monetary policies. Students often learn to evaluate economic indicators, comprehend the role of government, and explore how macroeconomic factors impact societies.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
Module I	15	Meaning, definition of Macro Economics - Importance of Macro Economics - Difference between micro and Macro Economics - Paradox of Macro Economics - Limitations	Lecture Method.	Remember and state in a systematic way. Various concepts, definitions, laws and principles of Macroeconomics.	Assign Question
Module II	15	National Income - Definition - Concepts of National Income - Measurement of National Income - Circular flow of Income in two, three, and four sector Economy	Lecture Method	Theory with ref to Income money, employment, banking and finance. Explains the difference bet various concepts and components of National Income with illustrations and methods of measuring N. Income.	Qu 12 Group Study
Module III	8	Classical Theory of Employment - Say's Law & Markets.			
Module IV	20	Keynesian Theory of Employment - Consumption function - Investment function - Marginal efficiency of Capital (MEC) - Concepts of multiplier and accelerator	Lecture Method.	Functions of Commercial Banks and Central Bank Creation and Control of credit	Assignment
Module V	20	Meaning and functions of money - Classification		Critically examine using data and figures	

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-2021

Semester: 2.

Department: Psychology.

Name of the teacher: B. Y. S. S. P.

Teaching Objective: The student to describe, Explain, predict and change or control the mind and behaviour of the others.

The student gets the wide range of subfields, such as social behaviour, human development and cognitive functions.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	12.	Definition; Nature; Scope; and Aims of Psychology. Schools of Psychology characteristics of Psychology; methods of Psychology.	lecturing method discussion method experimental method.	The student enable the evolution of Psychology is the major pioneer in the field.	C & A.
2.	15	Biological Basis of Behavior: Neuroanatomy; Structure and conduction of the neuron; central nervous system; Spinal cord-structure and functions; Hormones and Behaviour; Endocrine glands; Hormone production psychogenesis; mechanisms of Heredity and environment. Nature and nurture	lecturing method display method question and answer method	The student Describe the basic anatomy and functions of taste, smell; touch; pain and the vestibular sense.	I mid Examination

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-2021 Semester: I

Department: General English

Name of the teacher: Ch. Anita

Teaching Objective: Know the difference between listening and hearing
Sensitize the nuances of English speech sounds, word accent, intonation and rhythm
Increase awareness of correct usage of English grammar in writing and speaking
Be aware of self Confidence, values, strengths and weakness through self-analysis
Learn to improve a positive attitude.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
	12	Unit I Listening Skills	Lecture method	Confidently use the tools of communication skills	
	12	Unit II Speaking Skills	"	Demonstrate fluency of good vocabulary	
	12	Unit III General Grammar	"	Demonstrate an understanding of writing skills.	
	12	Unit IV Writing Skills	"	"	
	12	Unit V Soft Skills	"	Acquire ability to use soft-skills in professional and daily use -	

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020 - 21

Semester: I

Department: Botany

Name of the teacher: G. Nirmala Kumari

Teaching Objective: Paper-I - Fundamentals of Microbes & Non-vascular Plants

1. To explain origin of life, life cycles of bacteria and viruses and their pathogenicity.
2. To explain life history of certain fungi, diseases caused by them
3. To explain life history of Algae & their economic importance
4. To explain the life history of certain Bryophytes & their evolutionary trends.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	3	Origin of life, Miller & Urey experiment, Five kingdom classification of R.H. Whittaker, Discovery of microorganisms, Pasteur's experiments, germ theory of disease	Lecture	Students understand the theories of origin of life.	Exam
2.	8	Viruses - structure & replication of TMV & bacteriophage, diseases caused, their transmission and control. Significance of viruses in vaccine production, biopesticides and as cloning vectors	Lecture	Students able to understand the life history of TMV & bacteriophage & diseases caused by viruses and their significance	G.B.A

G. Nirmala Kumari

Signature of Lecturer
DEPARTMENT OF BOTANY
Andhra Christian College
GUNTUR (A.P.)

Signature of Lecturer
Dr. V. EZRA VIJAYA SEKHAR
M.Sc., M.Phil., Ph.D., B.Ed.,
Head, Dept. of Botany
A.C. COLLEGE, GUNTUR (A.P.)

Signature of the Principal
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ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year:

Semester: I

Department: political Science

Name of the teacher:

J. Samuel John

Teaching Objective:

Explain the Students in definition, nature, scope Importance of political Science. Elements of the State and origin of the State, Divine origin, force, the 8y, and Social contract theory and modern and welfare state; and also explain Law, sources of Law, Liberty, Types of equality and Legitimacy.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1.	15	Definition Nature Scope, Importance of political Science. Relations with history Economics, Sociology. 2. Approaches to the study.	Lecturing Method Question and Answer Method	Recall the previous knowledge about political Science and understand	C.C.E
2.	15	Definition of the state Elements, theories of origin of the state Divine origin, Force social contract - Modern state and welfare state	Discussion method Lecturing Method	understand concepts intrinsic to the study of political Science.	Mid exam
3.	15	Law, Liberty Equality, power Authority and Legitimacy.	Question and Answer Method	Have solid theoretical understanding of Rights.	Assignment

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020 - 2021

Semester: I

Department: గ్రామీణ

Name of the teacher:

Teaching Objective: ఈ కోర్సు విజయ మొనగడ ముగింపాక విద్యార్థులు
అభ్యసన ఫలాలను పొందగలరు. వైద్యక, ఆధునిక సాంఘిక
జాతీయత, వైద్యక ఆధునిక సాంఘికత మధ్య గల తేడాను
తెలుసుకుంటారు. అత్యధిక ముఖ్యమైన రూప, వ్యక్తిత్వ వివరణలను
అవగాహన చేసుకుంటారు. అత్యధిక కౌమర్య శిక్షణ, రసానుభూతి
పొందగలరు.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1)	4	వైద్యక సాంఘికత, తెలుసుకునే సాంఘికత, వ్యక్తిత్వ వివరణ - విశాఖ	వైద్యక తెలుసుకునే సాంఘికత, తెలుసుకునే సాంఘికత, తెలుసుకునే సాంఘికత	తెలుసుకునే సాంఘికత, తెలుసుకునే సాంఘికత, తెలుసుకునే సాంఘికత	తెలుసుకునే సాంఘికత, తెలుసుకునే సాంఘికత, తెలుసుకునే సాంఘికత
2)	4	దేశీయత వివరణ, శివతత్వం కాలం - భాషా విశేషాలు -	దేశీయత వివరణ, శివతత్వం కాలం - భాషా విశేషాలు -	దేశీయత వివరణ, శివతత్వం కాలం - భాషా విశేషాలు -	దేశీయత వివరణ, శివతత్వం కాలం - భాషా విశేషాలు -
3)	4	అత్యధిక రూపం - ముఖ్య భాషా రూపం.	అత్యధిక రూపం - ముఖ్య భాషా రూపం.	అత్యధిక రూపం - ముఖ్య భాషా రూపం.	అత్యధిక రూపం - ముఖ్య భాషా రూపం.
4)	4	అభివృద్ధి అభివృద్ధి - అభివృద్ధి అభివృద్ధి.	అభివృద్ధి అభివృద్ధి - అభివృద్ధి అభివృద్ధి.	అభివృద్ధి అభివృద్ధి - అభివృద్ధి అభివృద్ధి.	అభివృద్ధి అభివృద్ధి - అభివృద్ధి అభివృద్ధి.
5)		వైద్యక సాంఘికత వైద్యక సాంఘికత వివరణ, ముఖ్య రూపాలు.	వైద్యక సాంఘికత వైద్యక సాంఘికత వివరణ, ముఖ్య రూపాలు.	వైద్యక సాంఘికత వైద్యక సాంఘికత వివరణ, ముఖ్య రూపాలు.	వైద్యక సాంఘికత వైద్యక సాంఘికత వివరణ, ముఖ్య రూపాలు.

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-2021

Semester: III

Department: CHEMISTRY

Name of the teacher: Dr. M. KUSUMA KUMARI

Teaching Objective: 1. To learn about 'd' block & 'f' block elements and understand their properties.

2. To know the uniqueness of Metals and their Bonding, theories involved and their structure.

3. To understand the structure of carbonyls & utility.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	9 hrs	Chemistry of 'd' block elements.	Lecture	student able to identify different properties of 'd' block elements.	Q & A
2	6 hrs	Theories of Bonding in Metals.	Lecture	Acquire the knowledge of Bonding in Metals.	Q & A
3	7	Metal Carbonyls.	Lecture	understands various structures of Metal carbonyls.	Quiz
4	8	Chemistry of 'f' block elements.	Lecture	Students know about the Lanthanides and Actinides.	Q & A.

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020-21

Semester: III

Department: CHEMISTRY

Name of the teacher: Dr. N. J. SOLOMON BABU

Teaching Objective: 1. TO know about various ^{org} compounds with different functional groups and study their reactions with mechanisms
2 TO know about the Behaviour & Properties of Halogen compounds, Hydroxy comp, Carbonyl comp and acid derivatives
3 TO know the significance of Active methylene group and its role in the synthesis of org comp.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
1	5 hrs	Halogen comp	Lecture	Understand SN^1, SN^2 mechanisms	Q & A
2	5 hrs	Hydroxy compounds	Lecture	Know the significance of alcohols & phenols	Q & A
3	10 hrs	Carbonyl compounds	Lecture	Identify the importance of aldehydes, ketones	Quiz
4	6 hrs	Carboxylic acids and derivatives	Lecture	Understand the various derivatives of acids and their reactivity	Q & A
5	4 hrs	Active methylene compounds	Lecture	Know the uniqueness of active methylene group and its application in synthesis	Q & A

ANDHRA CHRISTIAN COLLEGE, GUNTUR

Academic Plan

Year: 2020 - 21

Semester: I

Department: Botany

Name of the teacher: G. Nirmala Kumari

Teaching Objective: Paper I - Fundamental of microbes & nonvascular plants

1. To explain origin of life, life cycles of bacteria and viruses and their pathogenesis
2. To explain life history of fungi, diseases caused by them
3. To explain life history of Algae & their economic importance
4. To explain the life history of certain Bryophytes & their evolutionary trends.

Sr. No.	Hours allotted	Topics	Teaching Method	Learning Outcome	Assessment
3.	10	Brief account of Archea bacteria, Actinomyetes, cyanobacteria, cell structure and nutrition of Eubacteria, Reproduction of Bacteria, their economic importance & symptoms of diseases caused by Bacteria	Lecture	Students able to understand the prokaryotes their structure economic importance & various diseases caused by Bacteria	Exam
4.	6	General characters of Fungi, life history of Rhizopus and Puccinia	Lecture Demonstration	Student able to understand and how to identify Fungi, Rhizopus & Puccinia	Exam

G. Nirmala Kumari

Signature of the Lecturer
DEPARTMENT OF BOTANY

Andhra Christian College
GUNTUR (A.P.)

Signature of the Lecturer
Dr. V. EZHA VIJAYA SETHAN

M.Sc., M.Phil., Ph.D., B.Ed.,
Head, Dept. of Botany
A.C. COLLEGE, GUNTUR (A.P.)

Signature of the Principal

PRINCIPAL
Andhra Christian College
(Day/Even./P.G.)
GUNTUR