

E.M. GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution -Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A+ & CGPA 3.51 by NAAC



LESSON PLAN

2022-2023

DEPARTMENT OF **PHYSICS**

(UG – Odd Semester)



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution -Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

LESSON PLAN

2022-2023

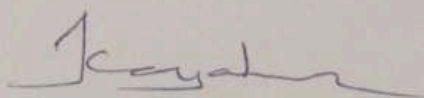
Class : I B.Sc Physics
Sub. Code : 22OUPH11

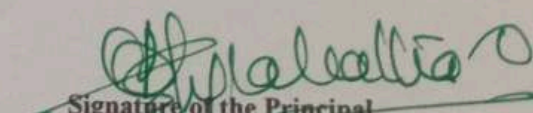
Semester : I

Title of the Paper: Mechanics, Properties of Matter and Sound

Total Hours: 60 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Mechanics: Significance of Conservation laws-Concepts of work, power and energy-Conservative forces-Energy-Conservation of linear momentum-Collision—Calculation of final velocities of colliding particles(one dimension only)-Systems of variable mass-The Rocket.	12	Chalk & Talk	E. Chandirani M.A. H.
July	II	Dynamics of Rigid Bodies: Rigid body -Torque-Angular momentum-Moment of inertia (Radius of Gyration)-General theorems on moment of inertia (Perpendicular and Parallel axis theorem) -Particular cases of moment of inertia(circular disc, circular ring, solid sphere).	12	Chalk & Talk	E. Chandirani
August	III	Gravitation: Newton's law of gravitation-Experimental determination of gravitational constant (G) using Boy's method- Kepler's laws -Compound pendulum(to find value of g and T using bar pendulum) Viscosity: -Viscosity- Newton's law of viscous flow-Coefficient of viscosity- Equation of continuity of flow-Bernoulli's theorem - Applications of Bernoulli's theorem (Venturimeter, Pitot tube).	12	Chalk & Talk	M.A. H.
September	IV	Elasticity: Introduction- Load, Stress and strain - Hooke's law -Different types of Elasticity - Poisson's ratio-Relations connecting the elastic constants -Determination of Young's modulus for a material(for a thick Bar) - Bending moment - Determination of Elastic constant (Searle's method).	12	Chalk & Talk	M.A. H.
October	V	Sound : Simple harmonic motion - Linearity and superposition principle -Wave motion -Characteristics of wave motion-Transverse wave motion- Longitudinal wave motion-Definitions-Relation between frequency and wavelength-Properties of longitudinal progressive wave-Stationary waves-Properties of stationary longitudinal waves- Melde's experiment -Acoustics-Reverberation-Factors affecting the Acoustics of buildings-Requisite for Good Acoustics.	12	Chalk & Talk	E. Chandirani


Signature of the HOD


Signature of the Principal
PRINCIPAL VC
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI - 625 004



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution –Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

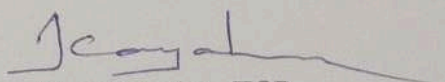
LESSON PLAN
2022-2023

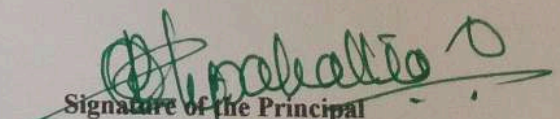
Class : I B.Sc Physics
Sub. Code : 22OUPHSE11
Title of the Paper: Basic Electronics

Semester : I

Total Hours : 30 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Resistors: Resistors – Resistor types –Wire wound resistors- Carbon composition resistors – Carbon film resistors – Cermet film resistors – Metal film resistors – Power rating – value tolerance – Variable resistors – Resistor colour code –Resistance colour bands. Capacitors: Capacitors – Capacitor connected to a battery – Capacitance – Factors controlling capacitance – Types of capacitors – Fixed capacitors – Variable capacitors.	6	Chalk & Talk	B. Seetha
July	II	Inductor: Inductor-Comparison of different cores – Inductance of an inductor – Another definition of inductance –Mutual inductance – Coefficient of coupling – Variable inductors – Inductors in series or parallel without M – Series combination with M.	6	Chalk & Talk	B. Subha
August	III	Diodes: Ideal diode – The Real diode - Diode circuits with DC and AC voltage sources – Zener diode – Voltage regulation – Tunnel diode – Schottky diode - Thermistor.	6	Chalk & Talk	B. Subha S. Madhumitha
September	IV	Semiconductor and Types of Semiconductors: Semiconductor – Types of Semiconductor -Intrinsic semiconductor – extrinsic semiconductor – N type – P type semiconductors – Majority and minority carriers – Mobile charge carriers and immobile ions.	6	Chalk & Talk	S. Madhumitha
October	V	Transistor: Bipolar Junction Transistor- Transistor Biasing–Important biasing Rule-Transistor Circuit Configuration-CB, CE - Relation between α and β - CC Configurations- Relation between Transistor Currents.	6	Chalk & Talk	S. Madhumitha


Signature of the HOD


Signature of the Principal
PRINCIPAL VC
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-322014



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution -Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

LESSON PLAN
2022-2023

Class : I B.Sc Physics
Sub. Code : 22OUPHSE12

Semester : I
Total Hours : 30 Hours

Title of the Paper: Introduction to MS Office and Internet

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	MS Word: About MS Word- 2000 – File Menu – Edit Menu – Insert Menu – Format Menu – Tools Menu – Window Menu – Help Menu	6	Chalk & Talk	
July	II	MS Excel: About Excel – Formatting Worksheets – Charts – Link – Share – Protect – Audit Workbooks	6	Chalk & Talk	
August	III	MS Power point: About Power Point – View, Insert & Edit in Presentation – Formatting in Presentations – Inserting Pictures - Slide Show in Presentations	6	Chalk & Talk	
September	IV	Internet: What is the Internet? – History of the Internet – Internet services and Accessibility – Uses of the Internet – Protocols – Search Engines	6	Chalk & Talk	
October	V	E-mail: Basics of E-mail – Getting an e-mail account- Sending and receiving emails – Accessing sent emails – Using emails – Document collaboration – Instant Messaging - Netiquettes	6	Chalk & Talk	

Signature of the HOD

Signature of the Principal
PRINCIPAL VC
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-322014



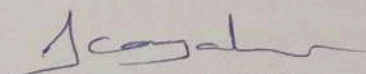
E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution –Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

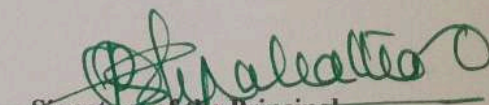
LESSON PLAN
2022-2023

Class : I UG
Sub. Code : 22OUPHID1
Title of the Paper: Energy Physics

Semester : I
Total Hours : 30 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Fundamentals of Energy Science: Introduction-Energy, Economy and social development - Classification of Energy Resources-Importance of Non-Conventional energy sources-Advantages and Disadvantages of conventional energy sources-Environmental aspects of energy.	6	Chalk & Talk	S. Ameet, Nisha Bibi
July	II	Solar Energy: Introduction-solar collectors-solar water heater-solar industrial Heating System-Solar refrigeration and air conditioning system-Solar cookers.	6	Chalk & Talk	S. Ameet, Nisha Bibi
August	III	Wind Energy: Introduction-Origin of winds-Nature of winds-Wind turbine sitting-Major application of wind power-Environmental aspects- Wind energy programme in India.	6	Chalk & Talk	S. Ameet Nisha Bibi R. Anuja Natchiyar
September	IV	Biomass Energy: Introduction- Photosynthesis process - Biomass Resources-Biomass conversion Technologies-Biogas production from waste biomass.	6	Chalk & Talk	R. Anuja Natchiyar
October	V	Ocean Energy: Introduction-Tidal Energy- Origin and Nature of Tidal Energy -Limitations of Tidal energy-Wave Energy- Power in Waves- Ocean thermal Energy- Ocean thermal Energy Conversion Technology.	6	Chalk & Talk	R. Anuja Natchiyar


Signature of the HOD


Signature of the Principal
PRINCIPAL VC
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI - 3



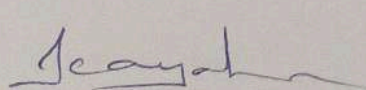
E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
 An Autonomous Institution –Affiliated to Madurai Kamaraj University
 Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

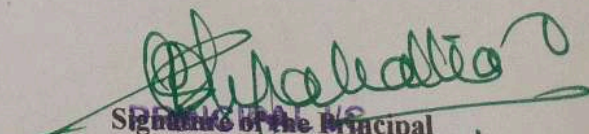
LESSON PLAN
2022-2023

Class : II B.Sc Physics
 Sub. Code : 21P31
 Title of the Paper: Electromagnetism

Semester : III
 Total Hours : 60 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Static Electric Field Maxwell's equation and their empirical basis-Introduction-Properties of charge-Conservation of charges-Quantisation of charge: Fundamental of charges-Coulomb's law –Definition of S.I unit of charge: coulomb-Comparison of electrical force with gravitational force-Principle of superposition-Electrostatic force due to a continuous distribution of charge-Electric field strength-Concept of electric field in terms of lines of force-Properties of electric lines of force.	12	Chalk & Talk	S. Annes Nishe Beshi
July	II	Static Magnetic Field Introduction-Force on a moving charge in a uniform magnetic field- Lorentz force- Torque on a current loop-Moving coil ballistic galvanometer- Biot savart law-Relation between μ_0 and ϵ_0 -Magnetic field due to a current carrying straight wire- Force between current carrying parallel wires-Magnetic field induction on the axis of a current carrying circular loop.	12	Chalk & Talk	S. Annes Nishe Beshi R. Anis Nachayya
August	III	Magnetic Properties of Materials Flux density in a magnetic material-Intensity of magnetization, Relative permeability and magnetic susceptibility-Diamagnetic, paramagnetic and ferromagnetic substance-Hysteresis and B-H curve(concept only)-Langevin's theory of diamagnetism-Langevin's theory of paramagnetism-Weiss' theory of ferromagnetism.	12	Chalk & Talk	R. Anis Nachayya
September	IV	Electromagnetic Inductions Faraday's law of electromagnetic induction-Faraday's laws in universal form-Self induction –Self inductance of a solenoid –Self inductance of a toroidal solenoid-Measurement of self inductance by Rayleigh's method-Mutual inductance	12	Chalk & Talk	S. Annes Nishe Beshi
October	V	Transient Currents RC circuit-Measurement of high resistance by the method of leakage-Transients in series LCR circuit-Maxwell's bridge for self inductance-Anderson's bridge for self inductance-Owen's bridge for self inductance-De Sauty's bridge for capacitance-Wein's bridge for capacitance.	12	Chalk & Talk	R. Anis Nachayya


 Signature of the HOD


 Signature of the Principal
E.M.G. YADAVA WOMEN'S COLLEGE
 MADURAI-625014



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution - Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A* and CGPA 3.51 by NAAC

LESSON PLAN
2022-2023

Class : III B.Sc Physics

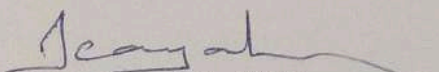
Sub. Code : 17P51

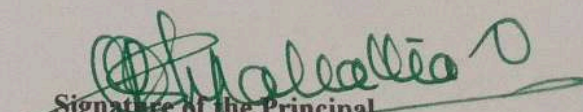
Title of the Paper: Atomic and Nuclear Physics

Semester : V

Total Hours : 60 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Atomic Structure Thomson Model of the Atom-Rutherford experiment- Scattering of α particles and Rutherford model of the atom-Rutherford scattering of α particles-Bohr model of the atom-Bohr's theory of the hydrogen spectrum-Spectral lines for hydrogen atom-Energy level of hydrogen atom - Resonance Excitation and Ionization potential.	12	Chalk & Talk	S. Priyanka
July	II	Vector Atom Model Vector atom model- Spinning electron-Quantum numbers associated with the vector atom model- Coupling schemes- Applications of spatial quantization- Application of the vector model- Pauli's exclusion principle- Electronic structure in atom-Example of electronic configurations-Fine structure of spectral lines- optical spectra-Fine structure.	12	Chalk & Talk	S. Priyanka
August	III	Nucleus & Nuclear Models Introduction-Historical Developments- Constituents of the nucleus- Quantitative facts about nucleus- Binding energy- Nuclear angular momentum- Nuclear moments- wave mechanical properties-Yukawa theory of nuclear forces- Liquid drop model-Shell model-Fermi gas model- Collective model.	12	Chalk & Talk	S. Priyanka S. Amey Nisha Biji
September	IV	Particle Accelerators & Radiation Detectors Introduction- Cockcroft and Walton Accelerator- Betatron- Synchrocyclotrons- Synchrotrons- Ionization Chamber- Scintillation Detectors- Cloud Chamber- Bubble Chamber - Spark Chamber.	12	Chalk & Talk	S. Amey Nisha Biji
October	V	Particle physics Introduction- Production of elementary particles- Types of interactions- Classification of elementary particles- Mass spectra and decays of elementary particles- Quantum Numbers- Conservation Laws.	12	Chalk & Talk	S. Amey Nisha Biji


Signature of the HOD


Signature of the Principal
PRINCIPAL VC
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625014



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
 An Autonomous Institution - Affiliated to Madurai Kamaraj University
 Re-accredited (3rd Cycle) with Grade A+ and CGPA 3.51 by NAAC

LESSON PLAN

2022-2023

Class : III B.Sc Physics

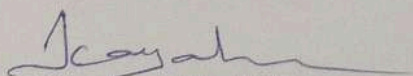
Sub. Code : 17P52

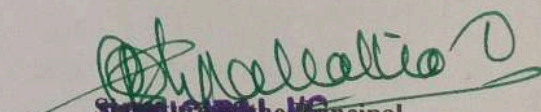
Semester : V

Title of the Paper: : Programming with C++

Total Hours : 60 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Principles of OOP and Beginning with C++ Basic concepts of OOP - Benefits of OOP - objects- object oriented language - application of OOP - What is C++? - Application of C++ - A simple C++ program - More C++ statements - An example with class - Structure of C++ program. Programs: Find the sum and Average of two numbers, Calculate the age using of Class.	12	Chalk & Talk	E. cheris monica MA
July	II	Tokens, Expressions and control structures: Introduction - Token - Keywords - Identifier and constants - Basic data types - User Defined Data Types - Derived Data Types - Reference Variables - Scope Resolution Operator - Manipulators - Expressions and their Types - Control Structures. Programs: find the inner block and outer block values Using Scope resolution operator, Using the manipulators illustrates the use of endl and setw.	12	Chalk & Talk	E. cheris monica
August	III	Function in C++ Introduction - The Main Function - Function Prototyping - Call by Reference - Return by Reference - Inline Functions - Default Arguments - Constants Arguments - Function Overloading - Friend and Virtual Functions - Math Library Functions. Programs: Find the multiplication and division of two numbers using Inline Functions, Find the volume of Cube, Cylinder and Rectangular box Using Function Overloading.	12	Chalk & Talk	MA
September	IV	Classes and objects Introduction - C Structures Revisited - Specifying a Class - Defining Member Functions - A C++ program with Class - Nesting of Member Functions - Arrays within a Class - Memory Allocated for Objects - Static Data Members - Static Member Functions - Arrays of Objects - Objects as Function Arguments - Friendly Functions. Programs: Find the largest value of two numbers using Nesting of Member Functions, Calculate the mean value Illustrate the using Friend Function.	12	Chalk & Talk	MA
October	V	Constructors and Destructors Introduction - Constructors - parameterized Constructors - Multiple constructors in a class - constructors with default arguments - copy constructor - dynamic constructors - constructing Two-dimensional Arrays - const Objects - Destructors. Programs: Illustrate the program using copy constructor, Illustrate the program using destructors.	12	Chalk & Talk	E. cheris monica


Signature of the HOD


Principal
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI - 625 014



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution -Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

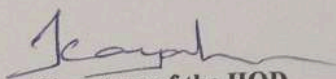
LESSON PLAN
2022-2023

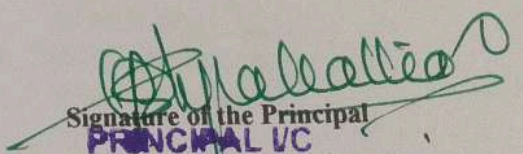
Semester : V

Class : III B.Sc Physics
Sub. Code : 17PE5A
Title of the Paper: Electronics

Total Hours : 60 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Diode Circuits and Transistor fundamentals The Half Wave Rectifier-The Transformer-The Full Wave Rectifier-The Bridge Rectifier-The Choke Input Filter-The Capacitor Input Filter-C Clippers and Limiters-Clampers-The Zener Diode-The Loaded Zener Regulator-Variations in Current Gain-The Load Line-The Operating Point.	12	Chalk & Talk	R. Arunachalam Natchayya
July	II	Power Amplifiers and FETs Darlington connections- Amplifier terms-Two load lines-Class A operation-Class B operation -FETs Basic ideas-Drain curves-The Transconductance curve-Biasing in the Ohmic region-Biasing in the active region-Transconductance-The Depletion mode MOSFET.	12	Chalk & Talk	R. Arunachalam Natchayya
August	III	Operational Amplifiers and Oscillators Introduction to Op Amps-The 741 Op Amp-The Inverting Amplifier-The Non Inverting Amplifiers-Theory of Sinusoidal Oscillation-The Wein's bridge Oscillator-The Colpitt's Oscillator-The 555 timer-Astable operation of the Timer.	12	Chalk & Talk	S. Madhukumar R. Arunachalam Natchayya
September	IV	Digital Sequential Circuits Introduction-RS flip flops-Clocked RS flip flop -JK flip flop-JK master slave flip flop-D flip flop-Types of Shift registers-Serial in Serial out-Serial in Parallel out-Parallel in Serial out-Parallel in Parallel out.	12	Chalk & Talk	S. Madhukumar
October	V	Counters and converters Asynchronous counters- 3 Bit up and down counters-Synchronous counters-Decade counter-Variable resistor networks-Binary ladders-D/A converters-A/D converters.	12	Chalk & Talk	S. Madhukumar


Signature of the HOD


Signature of the Principal
PRINCIPAL VC
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625014



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution –Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

LESSON PLAN
2022-2023

Class : III B.Sc Physics

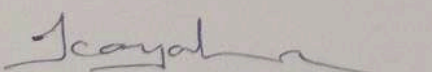
Sub. Code : 17SEP51

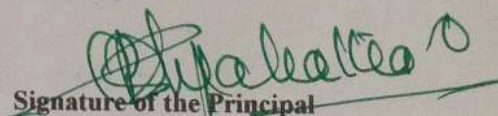
Semester : V

Title of the Paper: Fibre Optic Communication

Total Hours : 30 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Principles of fibre optic communication: Introduction and historical background – Advantages of optical fibre communication-Elementary fibre optic communication systems- Types of optical fibres- Numerical Aperture of optical fibre- Fibre bundles and cables- Fibre strength- Fibre optical properties.	6	Chalk & Talk	S. Prayank
July	II	Fibre optical source devices: Types of optical sources- operation principle in LED and Laser- External Quantum Efficiency of LED- LED modulation Bandwidth- Coupling of LEDs with fibre – Edge Emitting LEDs.	6	Chalk & Talk	S. Prayank
August	III	Fibre optical communication components: Introduction- Coupling components for optical Fibres- Modulation methods and modulators- switches- Transmitters- receivers- Optical amplifiers.	6	Chalk & Talk	S. Prayank S. Madheemitha
September	IV	Fibre optical communication systems: Wavelength division multiplexing- optical Time Division multiplexing- Data buses.	6	Chalk & Talk	S. Madheemitha
October	V	Fibre optical networks: Local Area network system- FDDI- SONET and SDH Networks- ISDN,BISDN and High speed Networks- Microwave technology Applications of Light wave systems.	6	Chalk & Talk	S. Madheemitha


Signature of the HOD


Signature of the Principal

PRINCIPAL VC
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution -Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

LESSON PLAN
2022-2023

Class : III B.Sc Physics

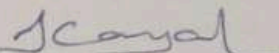
Sub. Code : 174EV5

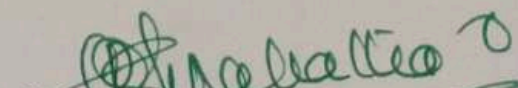
Title of the Paper: Environmental Studies

Semester : V

Total Hours : 30 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Natural Resources :- Water Renewable Resources - Forest Resources - Soil Resources - Food Resources - Energy Resources -Non Renewable Resources	6	Chalk & Talk	E. Cheri's monia
July	II	Ecosystem :Structure of an Ecosystem, Abiotic Components - Biotic Components - Functional Components - Food Chain - Energy Flow - Biogeochemical Cycles - Types of Ecosystem - Types of Aquatic Ecosystem -Pond Ecosystem - Grassland Ecosystem - Desert Ecosystem.	6	Chalk & Talk	R. Arjya Nachayya
August	III	Biodiversity and Conservation :- What is Biodiversity - Levels of Biodiversity - Values of Biodiversity -Consumptive use value - Social benefits -Cultural Values - India as a Mega Diversity Nation - Conservation and its significance.	6	Chalk & Talk	R. Arjya Nachayya
September	IV	Pollution :- Types of Pollutants - Types of Pollution - Air Pollution -Water Pollution - Thermal Pollution - Marine Pollution - Soil Pollution -Control Measures -Noise Pollution - Radiation Pollution.	6	Chalk & Talk	E. Cheri's monia R. Arjya Nachayya
October	V	Environmental Ethics and Social Issues :- Attitudes of Major Religions towards the Environment -Human Population and Environment-GlobalizationEnvironment -Global Environmental Issues -Alternative Lifestyles -Role of Individuals, Organisations and Government in protecting the Environment	6	Chalk & Talk	E. Cheri's monia


Signature of the HOD


Signature of the Principal

PRINCIPAL VC
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-625014



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution -Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

LESSON PLAN
2022-2023

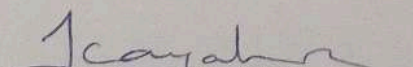
Class : I B.Sc Mathematics
Sub. Code : 22OUMAGEPH1

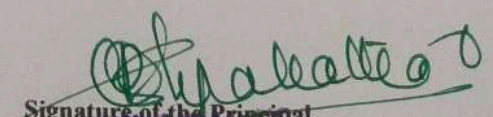
Semester : I

Title of the Paper: Physics-I Mechanics and Properties of Matter

Total Hours : 60 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Force, Power and Energy: The basic Forces in nature- Central forces – Conservative forces-Non conservative forces-Friction-Limiting friction, Co efficient of friction and Angle of friction-Laws of friction-Experiment to determine the coefficient of friction–Energy-Kinetic energy- Potential energy- Power.	12	Chalk & Talk	S. Praveen
July	II	Rotational Motion: Angular velocity-Angular acceleration- Centripetal force – Centrifugal force- Torque –Angular momentum-Expression for torque in rotational motion-Expression for angular momentum of a rotating rigid body - Moment of inertia –Perpendicular axes theorem –Theorem of parallel axes-Moment of Inertia of circular disc, Solid sphere .	12	Chalk & Talk	S. Praveen
August	III	Gravitational motion: Kepler's law of planetary motion – Newton's law of gravitation-Mass and Density of the Earth-Determination of G-Boy's method – The compound pendulum-Determination of g with compound pendulum-Variation of g with latitude ,altitude and depth- artificial satellites.	12	Chalk & Talk	S. Praveen S. Madhureti
September	IV	Elasticity: Different moduli of Elasticity-Poisson's ratio-Bending of beams –expressions for the bending moment-Depression of the loaded end of a cantilever-Determination of Young's modulus by uniform and non uniform bending – Torsion of a cylinder -Torsional oscillations of a body-Rigidity modulus by Torsion pendulum.	12	Chalk & Talk	S. Madhureti
October	V	Viscosity: Introduction – Derivation of Poiseuille's formula –Poiseuille's method for determining coefficient of viscosity of a liquid – Equation of continuity-Bernoulli's Theorem- Applications of Bernoulli's theorem –Venturimeter –Pitot Tube.	12	Chalk & Talk	S. Madhureti


Signature of the HOD


Signature of the Principal
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
 An Autonomous Institution –Affiliated to Madurai Kamaraj University
 Re-accredited (3rd Cycle) with Grade A+ and CGPA 3.51 by NAAC

LESSON PLAN
2022-2023

Class : II B.Sc Mathematics

Sub. Code : 21AP3

Title of the Paper: Electricity and Electronics

Semester : III

Total Hours : 60 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Current , Resistance and Electrical Measurements Current and current density-Expression for current density- Equation of continuity-Ohm's law and electrical conductivity- Kirchhoff's laws-Application of kirchhoff's laws to Wheatstone's network-Sensitivity of Wheatstone's bridge-Carey foster bridge- Potentiometer-Callibration of Ammeter-Callibration of voltmeter.	12	Chalk & Talk	E. Charis Monica M.A. / J.H.
July	II	Thermo-Electricity Seebeck effect- Laws of thermo e.m.f- Measurement of thermo- EMF using potentiometer- Peltier effect- Thomson effect- Thermodynamics of Thermocouple-Thermo electric diagrams- Uses of Thermoelectric Diagrams.	12	Chalk & Talk	E. Charis Monica
August	III	Semiconductor Physics Semiconductor-Intrinsic semiconductor-Extrinsic semiconductor- n type semiconductor-p type semiconductor-pn junction- properties of pn junction-Appling D.C. Voltage Across pn Junction or Biasing a pn Junction-Current flow in a forward biased pn junction-Volt ampere characteristics of pn junction.	12	Chalk & Talk	M.A. / J.H.
September	IV	Operational Amplifier Operational amplifier- Schematic symbol of operational amplifier-output voltage from op-amp- Bandwidth of an op-amp- slew rate-Frequency response of an op-amp with negative feedback-Inverting Amplifier- Non inverting amplifier-voltage follower-Effect of Negative Feedback on op-amp Impedances- Summing amplifier-Applications of Summing amplifier.	12	Chalk & Talk	E. Charis Monica
October	V	Logic gates Decimal to binary conversion-Binary to decimal conversion-Octal number system-Hexadecimal number system- OR gate-AND gate-NOT gate-Combination of basic logic gates- NAND Gate as a universal Gate- Boolean theorems- DeMorgans theorems	12	Chalk & Talk	M.A. / J.H.

K. Jayah
 Signature of the HOD

[Signature]
 Signature of the Principal
PRINCIPAL VC
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution –Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A⁺ and CGPA 3.51 by NAAC

LESSON PLAN
2022-2023

Semester : III

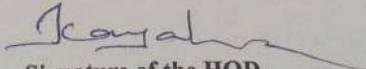
Class : II B.Sc Chemistry

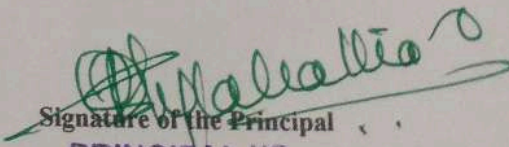
Sub. Code : 21AP1

Title of the Paper: Mechanics , Properties of matter and Sound

Total Hours : 60 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Force, Work, Power and Energy: The basic Forces in nature-Central forces – Conservative forces-Non conservative forces-Friction-Limiting friction, Co efficient of friction and Angle of friction-Laws of friction-Experiment to determine the coefficient of friction-Work – Work done by a varying force –Energy-Kinetic energy-Potential energy- Power.	12	Chalk & Talk	S. Ameer, Nisha Bibi
July	II	Rotational Motion: Angular velocity-Angular acceleration-Normal acceleration -Centripetal force – Centrifugal force- Torque –Angular momentum-Expression for torque in rotational motion-Expression for angular momentum of a rotating rigid body-Kinetic energy of rotation- Expression for work and power in rotational motion - Moment of inertia –Perpendicular axes theorem – Theorem of parallel axes-Moment of Inertia of circular disc, Solid sphere .	12	Chalk & Talk	S. Ameer Nisha Bibi
August	III	Gravitational motion: Kepler's law of planetary motion – Newton's law of gravitation-Mass and Density of the Earth-Determination of G-Boy's method – The compound pendulum-Determination of g with compound pendulum-Variation of g with latitude ,altitude and depth- artificial satellites.	12	Chalk & Talk	S. Ameer Nisha Bibi S. Madhumita
September	IV	Elasticity: Different moduli of Elasticity-Poisson's ratio-Bending of beams –expressions for the bending moment-Depression of the loaded end of a cantilever-Determination of Young's modulus by uniform and non uniform bending – Torsion of a cylinder-Work done in twisting -Torsional oscillations of a body-Rigidity modulus by Torsion pendulum.	12	Chalk & Talk	S. Madhumita
October	V	Sound: Simple Harmonic Motion - Composition of two S.H.M in a straight line-Beats- Progressive waves and their properties- Stationary waves and their properties- Melde's experiment -Transverse and longitudinal mode of vibration-Acoustics of buildings-Ultrasonics, Production and applications.	12	Chalk & Talk	S. Madhumita


Signature of the HOD


Signature of the Principal

PRINCIPAL VC
E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI-500014



E.M.GOPALAKRISHNA KONE YADAVA WOMEN'S COLLEGE
An Autonomous Institution -Affiliated to Madurai Kamaraj University
Re-accredited (3rd Cycle) with Grade A+ and CGPA 3.51 by NAAC

LESSON PLAN
2022-2023

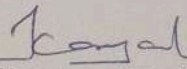
Class : III B.Sc Chemistry
Sub. Code : 17AP3

Semester : V

Title of the Paper: Electricity and Electronics

Total Hours : 60 Hours

Month	Unit	Description of the Syllabus	Hours Allocated	Teaching Mode & Methods	Course Teacher Signature
June	I	Current , Resistance and Electrical Measurements Current and current density-Expression for current density-Equation of continuity-Ohm's law and electrical conductivity-Kirchhoff's laws-Carey foster bridge-Potentiometer	12	Chalk & Talk	E. Christy Monica S. Madheemith
July	II	Thermo-Electricity Seebeck effect- Laws of thermo e.m.f- Measurement of thermo-EMF using potentiometer- Peltier effect-Thomson effect-Thermodynamics of Thermocouple-Thermo electric diagrams.	12	Chalk & Talk	S. Madheemith
August	III	Semiconductor Physics Semiconductor-Intrinsic semiconductor-Extrinsic semiconductor-n type semiconductor-p type semiconductor-pn junction-properties of pn junction-Current flow in a forward biased pn junction-Volt ampere characteristics of pn junction.	12	Chalk & Talk	E. Christy Monica
September	IV	Operational Amplifier Operational amplifier- Schematic symbol of operational amplifier-output voltage from op-amp- Bandwidth of an op-amp- slew rate-Frequency response of an op-amp with negative feedback-Inverting Amplifier-Noninverting amplifier-voltage follower- Summing amplifier.	12	Chalk & Talk	S. Madheemith
October	V	Logic gates Decimal to binary conversion-Binary to decimal conversion- OR gate-AND gate- NOT gate-Combination of basic logic gates- NAND Gate as a universal Gate-Boolean theorems- DeMorgans theorems	12	Chalk & Talk	E. Christy Monica


Signature of the HOD


Signature of the Principal

PRINCIPAL VC

E.M.G. YADAVA WOMEN'S COLLEGE
MADURAI