\$GGDC PILER Department of Physics Course Outcomes (For all VI \$emesters)				
Course Code	Course Name	Course Objectives	Course Outcomes	
3-1-116 (Credits: 04Hours per week: 04)	LSemester: Physics Paper I: Mechanics& Properties of Matter Unit I: 1. Vector Analysis Unit II: 2. Mechanics of particles Unit III: 3. Mechanics of Rigid bodies 4. Mechanics of continuous media Unit IV: 5. Central forces Unit V: 6. Special theory of relativity	 To acquire the knowledge of terms, facts, concepts, definitions, laws and principles in Vector Analysis, Mechanics of particles, Mechanics of Rigid bodies, Central forces and Special theory of relativity. To understand the terms, facts, concepts, definitions, laws, principles and theorems in Vector Analysis, Mechanics of particles, Mechanics of Rigid bodies, Central forces and Special theory of relativity. To apply the knowledge and understanding of Vector Analysis, Mechanics of particles, Mechanics of particles, Mechanics of particles, Mechanics of Rigid bodies, Central forces and Special theory of relativity. 	 After the successful completion of the course the learning outcomes are The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Vector Analysis, Mechanics of particles, Mechanics of Rigid bodies, Central forces and Special theory of relativity. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Vector Analysis, Mechanics of particles, Mechanics of Rigid bodies, Central forces and Special theory of relativity. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Vector Analysis, Mechanics of particles, Mechanics of Rigid bodies, Central forces and Special theory of relativity. They can analyze, interprets, predicts, relates and realizes the various phenomena in Vector 	

		 Special theory of relativity. To acquire the skill in practical aspects of handling the apparatus, recording the observations, drawing diagrams and graphs 	 Mechanics of Rigid bodies, Central forces and Special theory of relativity. They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs.
		To develop scientific interest.	The students develop scientific interest by questioning, reading, discussing and debating.
		To develop scientific attitude.	The student develop scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.
		To develop good personality traits	The students develop personality traits such as Punctuality, faithfulness and self-confidence.
3-2-116	II Semester:	The main objectives of the course are	After the successful completion of
(Credits:	Physics Paper II: Waves		the course the learning outcomes
04Hours	&Oscillations	\succ To acquire the knowledge of terms,	are
per week: 04)	Unit I : 1. Simple Harmonic oscillations	facts, concepts, definitions, laws and principles in Simple Harmonic oscillations, Damped and forced oscillations, Complex vibrations, Vibrating strings, Vibrations of bars	The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Simple Harmonic oscillations, Damped and forced oscillations.

Unit II: 2. Damped and	and Ultrasonics.	Complex vibrations, Vibrating strings, Vibrations of bars and
forcedoscillations	To understand the terms from	Ultrasonics.
Unit III: 3. Complex vibrations Unit IV: 4. Vibrating strings 5. Vibrations of bars Unit V: 6. Ultrasonics	To understand the terms, facts, concepts, definitions, laws, principles and theorems in Simple Harmonic oscillations, Damped and forced oscillations, Complex vibrations, Vibrating strings, Vibrations of bars and Ultrasonics.	The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Simple Harmonic oscillations, Damped and forced oscillations, Complex vibrations, Vibrating strings, Vibrations of bars and
	To apply the knowledge and understanding of Simple Harmonic oscillations, Damped and forced oscillations, Complex vibrations, Vibrating strings, Vibrations of bars andUltrasonics.	 Ultrasonics. They can analyze, interprets, predicts, relates and realizes the various phenomena in Simple Harmonic oscillations, Damped and forced oscillations, Complex vibrations, Vibrating strings, Vibrations of bars andUltrasonics.
	To acquire the skill in practical aspects of handling the apparatus, recording the observations, drawing diagrams and graphs related to the practicals in Simple Harmonicoscillations, Damped and forced oscillations, Complex vibrations, Vibrating strings, Vibrations of bars	They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs related to the practicals in Simple Harmonic oscillations, Damped and forced oscillations, Complex vibrations, Vibrating

	1		
		and Ultrasonics.	strings, Vibrations of bars
		To develop scientific interest.	an dUltrasonics. > The students develop scientific interest by questioning, reading, discussion and debating
		To develop scientific attitude	
		 To develop good personality traits 	 The student develop scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking. The students develop personality traits such as Punctuality, faithfulness and self-confidence.
3-3-116	III Semester:	The main objectives of the course are	After the successful completion of
(Credits:	Physics Paper III: Optics and		the course the learning outcomes
	I geor Dhusies	To acquire the knowledge of terms	the tourse the learning outcomes
per week: 04)	Unit I : 1. Aberrations Unit II: 2. Interference Unit III:	facts, concepts, definitions, laws, principles and processes in Aberrations, Interference, Diffraction, Polarization, Lasers & Holography and Fiber optics.	 The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Aberrations, Interference, Diffraction, Polarization, Lasers & Holography and Fiber optics
	3. Diffraction Unit IV:	To understand the terms, facts, concepts, definitions, laws, principles and processes in Aberrations, Interference, Diffraction, Polarization, Lasers &	 The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions,

4. Polarization	Holography and Fiber optics.	laws, principles and processes in
11.9.11		Aberrations,
Unit V:	unhu l	Interference Diffraction Delarization Layors &
and Fiber optic	\sim To apply the knowledge and	Holography and Fiber optics.
	understanding of Aberrations,	
	Interference, Diffraction,	They can analyze, interprets,
	Polarization, Lasers & Holography	predicts, relates and realizes the
	and Fiber optics.	Interference Diffraction
		Polarization, Lasers & Holography
	To acquire the skill in practical	and Fiber optics.
	aspects of handling the apparatus,	
	recording the observations, drawing diagrams and graphs	> They could check the apparatus
		perform experiments, records the
		readings, draw the diagrams and
	To develop scientific interest.	graphs.
		interest by questioning, reading,
	To develop scientific attitude.	discussing and debating.
		The student develop scientific attitude through proper recording
	To develop good personality traits	interpretation, precise statements.
		judgment and independent
		thinking.
		Ine students develop personality traits such as Dupctuality
		faithfulness and self-confidence.

3-4-116	IV Semester:	The main objectives of the course are	After the successful completion of
(Credits:	Physics Paper IV:		the course the learning outcomes
O4Hours per week: 04)	Physics Paper IV: Thermodynamics &RadiationPhysics Unit I: 1. Kinetic theory of gases Unit II: 2. Thermodynamics Unit III: 3. Thermodynamic potentials and Maxwell's equations Unit IV: 4. Low temperature Physics Unit V: 5. Quantum theory ofradiation	 To acquire the knowledge of terms, facts, concepts, definitions, laws, principles and processes in Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynamic potentials and Maxwell's equations, Low temperature Physics an dQuantum theory of radiation. To understand the terms, facts, concepts, definitions, laws, principles and processes in Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynamics, Diffraction, Thermodynamics, Diffraction, Thermodynamic potentials and Maxwell's equations, Low temperature Physics and processes in Kinetic theory of gases, Thermodynamic potentials and Maxwell's equations, Low temperature Physics and processes an dQuantum theory of radiation. 	 The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynamic potentials and Maxwell's equations, Low temperature Physics and Quantum theory of radiation. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynamics, Concepts, definitions, laws, principles and processes in Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynamics, Diffraction, Thermodynamic potentials and Maxwell's equations, Low
		To apply the knowledge and understanding of Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynami c potentials and Maxwell's equations, Low temperature Physics and Quantum theory of radiation.	 They can analyze, interprets, predicts, relates and realizes the various phenomena in Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynamic potentials and Maxwell's equations, Low temperature Physics and

		To acquire the skill in practical aspects of handling the apparatus, recording the observations, drawing diagrams and graphs related to the practicals of Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynami c potentials and Maxwell's equations, Low temperature Physics and Quantum theory of radiation.	 Quantum theory of radiation. They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs related to the practicals of Kinetic theory of gases, Thermodynamics, Diffraction, Thermodynamic potentials and Maxwell's equations, Low temperature Physics and Quantum theory of radiation.
		To develop scientific interest.	The students develop scientific interest by questioning, reading, discussing and debating.
		To develop scientific attitude.	The student develop scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking.
		To develop good personality traits	 The students develop personality traits such as Punctuality, faithfulness and self-confidence.
3-5-127 (Credits: 04Hours per week: 03)	V Semester: Physics Paper V: Electricity, Magnetism &Electronics Unit I : 1. Electric field intensity and	➤ To acquire the knowledge of terms, facts, concepts, definitions, laws, principles and processes in Electric field intensity and potential,	After the successful completion of the course the learning outcomes are ➤ The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in

potential 2. Dielectrics Unit II: 3. Electric and magneticfields 4. Electromagnetic induction	Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and Digital electronics.	Electric field intensity and potential, Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and
Unit III: 5. Alternating currents andelectromagnetic waves 6. Maxwell's equations Unit IV: 7. Basic electronics Unit V: 8. Digital electronics	To understand the terms, facts, concepts, definitions, laws, principles and processes in Electric field intensity and potential, Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and Digital electronics.	 Digital electronics. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Electric field intensity and potential, Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and Digital electronics.
	 To apply the knowledge and understanding of Electric field intensity and potential, Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and Digital electronics. To acquire the skill in practical aspects of handling the apparatus, 	They can analyze, interprets, predicts, relates and realizes the various phenomena in Electric field intensity and potential, Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and Digital electronics.

		recording the observations, drawing diagrams, circuits and graphs related to the practicals of Electric field intensity and potential, Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and Digital electronics.	They could check the apparatus, perform experiments, records the readings, draw the diagrams, circuits and graphs related to the practicals of Electric field intensity and potential, Dielectrics, Electric and magnetic fields, Electromagnetic induction, Alternating currents and electromagnetic waves, Maxwell's equations, Basic electronics and Digital electronics.
		To develop scientific interest. To develop scientific attitude	The students develop scientific interest by questioning, reading, discussing and debating.
		 To develop good personality traits 	 The student develop scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking. The students develop personality traits such as Punctuality, faithfulness and self-confidence.
3-5-128	<u>V Semester:</u>	The main objectives of the course are	After the successful completion of
(Credits:	Physics Paper VI: Modern		the course the learning outcomes
04Hours	Physics .	To acquire the knowledge of terms,	are
per week: 03)	Unit I : 1. Atomic and molecularphysics	facts, concepts, definitions, Idws, principles and processes in Atomic and molecular physics, Matter waves & Uncertainty	The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Atomic and molecular physics,

	Principle, Quantum (wave)	Matter waves & Uncertainty
Unit II:	mechanics, General Properties of	Principle, Quantum (wave)
2. Matter waves &	Nuclei, Radioactivity decay,	mechanics, General Properties of
Uncertainty	Maxwell's equations, Crystal	Nuclei, Radioactivity decay,
Principle	Structure	Maxwell's equations, Crystal
	and	Structure
Unit III:	Superconductivity.	and
3. Quantum		Superconductivity.
(wave)	To understand the terms, facts,	
mechanics	concepts, definitions, laws,	The students could explain,
	principles and processes in	describe, illustrate, differentiate,
Unit IV:	Atomic and molecular physics,	compare, relate and identify the
4. General Properties	Matter waves & Uncertainty	terms, facts, concepts, definitions,
ofNuclei	Principle, Quantum (wave)	laws, principles and processes in
5. Radioactivity decay	mechanics, General Properties of	Atomic and molecular physics,
	Nuclei, Radioactivity decay,	Matter waves & Uncertainty
Unit V:	Maxwell's equations, Crystal	Principle, Quantum (wave)
6 Crystal Structure	Structure	mechanics, General Properties of
7 Superconductivity	and	Nuclei, Radioactivity decay,
	Superconductivity.	Maxwell's equations, Crystal
		Structure
		and
	To apply the knowledge and	Superconductivity.
	understanding of Electric field	
	intensity and potential, Dielectrics,	They can analyze, interprets,
	Atomic and molecular physics,	predicts, relates and realizes the
	Matter waves & Uncertainty	various phenomena in Electric
	Principle, Quantum (wave)	field intensity and potential,
	mechanics, General Properties of	Dielectrics, Atomic and molecular
	Nuclei, Radioactivity decay,	physics, Matter waves &
	Maxwell's equations, Crystal	Uncertainty Principle, Quantum
	Structure	(wave) mechanics,
	and	General Properties of Nuclei,
	Superconductivity.	Radioactivity
		decay, Maxwell's equations,

 To acquire the skill in practical aspects of handling the apparatus, recording the observations, drawing diagrams, circuits and graphs related to the practicals of Atomic and molecular physics, Matter waves & Uncertainty Principle, Quantum (wave) mechanics, General Properties of Nuclei, Radioactivity decay, Maxwell's equations, Crystal Structure andSuperconductivity. To develop scientific interest. 	 They could check the apparatus, perform experiments, records the readings, draw the diagrams, circuits and graphs related to the practicals of Atomic and molecular physics, Matter waves & Uncertainty Principle, Quantum (wave) mechanics, General Properties of Nuclei, Radioactivity decay, Maxwell's equations, CrystalStructure and Superconductivity.
To develop scientific attitude.	interest by questioning, reading, discussing and debating.
To develop good personality traits	 The student develop scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking. The students develop personality traits such as Punctuality, faithfulness and self-confidence.

(Credits: 04Hour: per weets 03) Physics Paper VII (B): ElectivePaper: Material science > To acquire the knowledge of terms facts, concepts, definitions, laws, principles and processes in Materials and Crystal Bonding, Defects and Diffusion in Materials > To acquire the knowledge of terms facts, concepts, definitions, laws, principles and processes in Materials > The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Materials Unit II: 2. Defects and Diffusion in Materials > To understand the terms, facts, concepts, definitions, laws, principles and processes in Materials and Crystal Bonding, Defects and Diffusion in Materials > To understand the terms, facts, concepts, definitions, laws, principles and processes in Materials Unit II: 3. Mechanical Behavior ofMaterials > To understand the terms, facts, concepts, definitions, laws, principles and processes in Materials > The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Materials Unit IV: 4. Magnetic Materials > To apply the knowledge and understanding of Materials. > The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Materials 5. Dielectric Materials > To apply the knowledge and understanding of Materials. > They can analyze, interprets, predicts, relates and Dielectric Materials. behavior of Materials and Crystal Bonding, Defects and Diffusion in Materials. > They	3-6-113	<u>VI Semester:</u>	The main objectives of the course are	After the successful completion of
O4Hour; per weeks O3) ElectivePaper: Material science > To acquire the knowledge of terms, facts, concepts, definitions, laws, principles and processes in Materials and Crystal Bonding, Defects and Diffusion in Materials, Magnetic > The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Materials Unit II: 2. Defects and Diffusion in Materials Naterials > To understand the terms, facts, concepts, definitions, laws, principles and processes in Materials > The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Materials and Dielectric Materials, Magnetic Materials > The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, materials and Diffusion in Materials, Magnetic Materials Unit IV: 4. Magnetic Materials > To apply the knowledge and understanding of Materials, Magnetic Materials, andDielectric Materials, Magnetic and Diffusion in Materials, Magnetic and Diffusion in Materials, Magnetic Materials and Dielectric Materials > The y can analyze, interprets, predicts, relates and realize the various phenomena in Materials, Magnetic Materials, and Diffusion in Materials, Magnetic Materials	(Credits:	Physics Paper VII (B):		the course the learning outcomes
Materials.	(Creats: 04Hour; per week: 03)	 ElectivePaper: Material Science Unit I: Materials and CrystalBonding Unit II: Defects and Diffusion in Materials Unit III: Mechanical Behavior ofMaterials Unit IV: Magnetic Materials Unit V: Dielectric Materials 	 To acquire the knowledge of terms, facts, concepts, definitions, laws, principles and processes in Materials and Crystal Bonding, Defects and Diffusion in Materials, Magnetic Materials. To understand the terms, facts, concepts, definitions, laws, principles and processes in Materials and Crystal Bonding, Defects and Diffusion in Materials, Magnetic Materials and Crystal Bonding, Defects and Diffusion in Materials, Magnetic Materials, Magnetic Materials, Magnetic Materials. To apply the knowledge and understanding of Materials and Crystal Bonding, Defects and Diffusion in Materials, Magnetic Materials, Mechanical Behavior of Materials and Crystal Bonding, Defects and Diffusion in Materials, Magnetic Materials, Magnetic	 The course the learning outcomes are The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Materials and Crystal Bonding, Defects and Diffusion in Materials, Mechanical Behavior of Materials, Magnetic Materials and Dielectric Materials. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Materials and Crystal Bonding, Defects and Diffusion in Materials, Magnetic Materials and Processes in Materials and Crystal Bonding, Defects and Diffusion in Materials, Mechanical Behavior of Materials, Magnetic Materials and Dielectric Materials. They can analyze, interprets, predicts, relates and realizes the various phenomena in Materials and Crystal Bonding, Defects and Diffusion in Materials and Crystal Bonding, Defects and Dielectric Materials.

		To acquire the skill in practical aspects of handling the apparatus, recording the observations, drawing diagrams and graphs related to the practicals of Materials and Crystal Bonding, Defects and Diffusion in Materials, Mechanical Behavior of Materials, Magnetic Materials and Dielectric Materials.	They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs related to the practicals of Materials and Crystal Bonding, Defects and Diffusion in Materials, Mechanical Behavior of Materials, Magnetic Materials and Dielectric Materials.
		 To develop scientific interest. To develop scientific attitude 	The students develop scientific interest by questioning, reading, discussing and debating.
		 To develop scientific attitude. To develop good personality traits 	 The student develop scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking. The students develop personality traits such as Punctuality, faithfulness and self-confidence.
3-6-113A	<u>VI \$emeșter:</u>	The main objectives of the course are	After the successful completion of
(Credits:	Elective Paper VIII-B-1 :	To acquire the brouledge of torrest	the course the learning outcomes
04 nours per week:	runaamentais of Nanoscience	facts, concepts, definitions, laws,	The students could able to recall
03)	Unit I : 1. Background and history Unit II: 2. Classification of	Background and history, Classification of Nanomaterials, Macromolecules, Molecular & Nanoelectronics and Biomaterials.	and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Background and history, Classification of Nanomaterials, Macromolecules, Molecular &

Nanomaterials		Nanoelectronics and Biomaterials.
Unit III: 3. Macromolecules Unit IV: 4. Molecular & Nanoelectronics Unit V: 5. Biomaterials	To understand the terms, facts, concepts, definitions, laws, principles and processes in Background and history, Classification of Nanomaterials, Macromolecules, Molecular & Nanoelectronics and Biomaterials.	The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Background and history, Classification of Nanomaterials, Macromolecules, Molecular & Nanoelectronics and Biomaterials.
	To apply the knowledge and understanding of Background and history, Classification of Nanomaterials, Macromolecules, Molecular & Nanoelectronics and Biomaterials.	They can analyze, interprets, predicts, relates and realizes the various phenomena in Background and history, Classification of Nanomaterials, Macromolecules, Molecular & Nanoelectronics and Biomaterials.
	To acquire the skill in practical aspects of handling the apparatus, recording the observations, drawing diagrams and graphs related to the practicals of Background and history, Classification of Nanomaterials, Macromolecules, Molecular & Nanoelectronics and Biomaterials.	They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs related to the practicals of Background and history, Classification of Nanomaterials, Macromolecules, Molecular & Nanoelectronics and Biomaterials.
	To develop scientific interest.	The students develop scientific interest by questioning, reading,

		 To develop scientific attitude. To develop good personality traits 	 discussing and debating. The student develop scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking. The students develop personality traits such as Punctuality, faithfulness and self-confidence.
3-6-113B (Credit;: 04Hour; per week: 03)	VI Semester: Cluster Elective Paper VIII- B-2: Synthesis and Characterization of NanomaterialsUnit I: 1. Nanomaterials synthesisUnit II: 2. Classification of materialsUnit II: 3. GlassesUnit IV: 4. Liquid CrystalsUnit V: 5. Characterization Methods	 To acquire the knowledge of terms, facts, concepts, definitions, laws, principles and processes in Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and Characterization Methods. To understand the terms, facts, concepts, definitions, laws, principles and processes in Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and processes in Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and Characterization Methods. 	 After the successful completion of the course the learning outcomes are The students could able to recall and recognize the different terms, facts, concepts, definitions, laws, principles and processes in Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and Characterization Methods. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and Characterization Methods.
		\succ To apply the knowledge and	> They can analyze, interprets,

understanding of Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and Characterization Methods.	predicts, relates and realizes the various phenomena inNanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and Characterization Methods.
To acquire the skill in practical aspects of handling the apparatus, recording the observations, drawing diagrams and graphs related to the practicals of Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and CharacterizationMethods.	They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs related to the practicals of Nanomaterials synthesis, Classification of materials, Glasses, Liquid Crystals and Characterization Methods.
To develop scientific interest.	The students develop scientific interest by questioning, reading, discussing and debating.
To develop scientific attitude.	
To develop good personality traits	 The student develop scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking. The students develop personality traits such as Punctuality, faithfulness and self-confidence.

3-6-113C	<u>VI Semester:</u>	The main objectives of the course are	After the successful completion of
(Credits:	Cluster Elective Paper VIII-		the course the learning outcomes
04Hour; per week: 03)	B-3: Application; of Nanomaterial; and Device;	 To acquire the knowledge of terms, facts, concepts, definitions, laws, principles and processes in Optical properties, Electrical 	 The students could able to recall and recognize the different terms, facts concepts definitions laws
	1. Optical properties Unit II: 2. Electrical transport	transport, Applications, Nanoelectronics and Nanobiotechnology and Medical applications of Nanomaterials andDevices.	principles and processes in Optical properties, Electrical transport, Applications, Nanoelectronics and Nanobiotechnology and Medical applications of
	3. Applications Unit IV: 4. Nanoelectronics Unit V: 5. Nanobiotechnology andMedical applications	To understand the terms, facts, concepts, definitions, laws, principles and processes in Optical properties, Electrical transport, Applications, Nanoelectronics and Nanobiotechnology and Medical applications of Nanomaterials andDevices.	 Nanomaterials and Devices. The students could explain, describe, illustrate, differentiate, compare, relate and identify the terms, facts, concepts, definitions, laws, principles and processes in Optical properties, Electrical transport, Applications, Nanoelectronics and Nanobiotechnology and Medical applications of Nanomaterials and Devices
		To apply the knowledge and understanding of Optical properties, Electrical transport, Applications, Nanoelectronics and Nanobiotechnology and Medical applications of Nanomaterials and Devices.	 They can analyze, interprets, predicts, relates and realizes the various phenomena in Optical properties, Electrical transport, Applications, Nanoelectronics and Nanobiotechnology and Medical applications of

	Nanomaterials and Devices.
To acquire the skill in practical aspects of handling the apparatus, recording the observations, drawing diagrams and graphs related to the practicals of Optical properties, Electrical transport, Applications, Nanoelectronics and Nanobiotechnology and Medical applications of Nanomaterials andDevices.	They could check the apparatus, perform experiments, records the readings, draw the diagrams and graphs related to the practicals of Optical properties, Electrical transport, Applications, Nanoelectronics and Nanobiotechnology and Medical applications of Nanomaterials and Devices.
To develop scientific interest.	The students develop scientific interest by questioning, reading, discussing and debating.
To develop scientific attitude.	
To develop good personality traits	 The student develop scientific attitude through proper recording, interpretation, precise statements, judgment and independent thinking. The students develop personality traits such as Punctuality, faithfulness and self-confidence.