

TECHING PLAN

Name: Akash Dipta Thakur

Course: B.Sc

Semester: Fifth.

Department : Physics

Programme: Major

Class allotted: 4 per week(Theory) 2 per week(Lab)

Paper/Unit	Course Content	Key aspects	Teaching Methods	Classes required
PHYM 50200/UNIT- I and II	Electromagnetic Fields: From Electromagnetic Induction upto Poynting Vector and Poynting Theorem. Propogation of Electromagnetic waves: Propogation of Electromagnetic waves in different media upto Reflection, Refraction and Polarisation of Electromagnetic waves, Brewster's angle.	1.Introduction 2.Displacement Current. 3.Maxwell's Field equations-Integral and Differential forms. 4.Electromagnetic potentials. 5.Maxwell's wave equations. 6.Lorentz and Coloumb Gauge. 7.Field Energy and Field Momentum. 8.Plane waves in non-conducting media,	1. Lecture Method using White Board	Four classes per week

		<p>polarization.</p> <p>9.Plane waves in conducting medium, skin effect.</p> <p>10. Reflection and Reraction of a plane wave at an interface between two Dielectrics, Boundary Conditions.</p> <p>11.Fresnel's Formula.</p> <p>12.Total Internal Reflection.</p> <p>13.Brewster's angle.</p>		
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<p>PHYM50500</p>	<p>MI. Thermal Conductivity- Searle's Method.</p> <p>MII. Specific Heat ratio – Clement and Desorms method</p> <p>MIII. Platinum Resistance Thermometer.</p> <p>MVI. ECE of copper.</p> <p>MVII. Optical rotation by Polarimeter.</p> <p>MVIII. Anderson's Bridge.</p> <p>MIX. Series and Parallel Resonant Circuit.</p> <p>MX. Half wave and Full wave rectifier.</p>		<p>Proper demonstrations</p>	<p>2 Classes per week.</p>
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Signature of Teacher
Akash Dipta Thakur

TECHING PLAN

Name: Akash Dipta Thakur

Course: B.Sc

Semester: Third

Department: Physics and Electronics

Programme: Major

Class allotted: 1per week(Th)

Paper/Unit	Course Content	Key aspects	Teaching Methods	Classes required
PHYG 30100/UNIT-I	Magnetism : Starting from Biot-Savart Law upto Magnetic substances – Dia, Para and Ferromagnetic substances.	1.Magnetic field due to a circular current carrying loop and Solenoid- at the centre and on the axial line; Gauss's theorem in magnetism and applications. Magnetic permeability, Susceptibility, Magnetization, Magnetic intensity and their relation. Dia, Para, Ferromagnetism.	1. Lecture Method using Black Board	one class per week

Signature of theTeacher
Akash Dipta Thakur

Department of physics

J B College

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TEACHING PLAN (THEORY) for the Year 2016

Name of teacher: Dr Jibon Saikia

Course: B.Sc. (Hon)

Semester: I

Programme: Major

Class Allotted: 16

Paper/Unit	Course Content	Key Aspects	Teaching Methods	Classes required
PHYSICS-C II	MECHANICS a) Gravitation and central force b) Oscillations	1. Laws of gravitation , Gravitational potential 2. Inertial and gravitational mass 3. Pot due to a spherical shell and solid sphere 4. Motion under a central force 5. Two body problem 6. Energy equation 7. Kepler's laws 8. Satellites, Geosynchronous orbits 9. Weightlessness, GPS 10. SHM 11. Energy of a body executing SHM 12. Damped oscillation 13. Forced oscillations 14. Resonance 15. Power, Q-factor 16. Question discussion and assignment checking	Lecture using Black Board, inquiry based teaching method	One classes per week (16) (Extra classes has to be taken)

Jibon Saikia

Signature of the Teacher

Course: B.Sc.

Semester: III

Programme: Major

Class Allotted: 22

Paper/Unit	Course Content	Key Aspects	Teaching Methods	Classes required
PHYM30100/I&II	Geometrical optics and Interference	1.Aberrations – types 2.Details of monochromatic aberration 3&4 In lenses 5.Achromatism in lenses 6. Achromatism in prisms 7. Eyepieces – principle 8.Types of eyepiece 9. Qn discussion 10 Assignment Checking	Lecture using Black Board	Two classes per week (24)

Jibon saikia

Signature of the Teacher

Course: B.Sc.

Semester: V

Programme: Major

Class Allotted: 14

Paper/Unit	Course Content	Key Aspects	Teaching Methods	Classes required
PHYM50300/III	Molecular spectra and Lasers	1.Introduction to molecular spectrum- its origin 2.Types – Analytical treatments 3. Types – Analytical treatments 4Details of P and R Branches 5.Raman scattering 6 Classical theory for Raman Effect 7.Assignmen Checking 8. Introduction to Lasers 9Theories-Eiensteins, coefficients and their relations 10. Theory and workings of Lasers 11. Theory and workings of Lasers 12Ammonia beam Maser 13.Question paper discussion. 14.Assignment checking and query meet	Lecture using Black Board	Two classes per week

Jibon saikia

Signature of the Teacher

Jagannath Barooah College
TEACHING PLAN(Theory)

Name- **Dr Ranjit Sarma**

Program- **Major**

Semester- **III**

Department- **Physics**

Course- **BSc**

Class allotted- **10**

Paper/Unit	Course Content	Key aspects	Teaching methods	Class required
30200/IV	1.Electromagnetic induction 2.A.C. Current	Electromagnetic induction, Faraday's law and Lenz's law, self and mutual inductance, methods of measurements. AC and DC generators and motors, transformer, relation between maximum, average and virtual or effective (rms) values of current,	1)Black board 2) LCD	10

Ranjit Sarma

Signature of the teacher

Jagannath Barooah College

TEACHING PLAN(Theory)

Name- **Dr Ranjit Sarma**

Program- **Major**

Semester- **V**

Department- **Physics**

Course- **BSc**

Class allotted- **13**

Paper/Unit	Course Content	Key aspects	Teaching methods	Class required
50400/I	1.Semiconductors 2.PN Junction diode	Charged particles, electronic structure of elements, energy band theory of crystals,conductors, semiconductors and insulators, electrons and holes in semiconductor, donor and acceptor impurity, generation and recombination of charge, diffusion, continuity equation. Junction diode characteristics: the open circuited P-N junction, I-V characteristics of P-N diode, breakdown diodes, diode as a rectifier, half-wave and full-wave rectifier with resistance load, ripple factor, smoothing filters, DC power supply	1)Black board 2) LCD	13

Ranjit Sarma

Signature of the teacher