

DEPARTMENTAL ROUTINE (PHYSICS) KALYANI MAHAVIDYALAYA 2018-19

Day	Year	10.00-11.00	11.00-12.00	12.00-01.00	01.30-02.30	02.30-03.30	03.30-04.30
Monday	1 st	-	-	CC1(T)-SB	CC1(T)-SB	GE1(T)-SB	-
	2 nd	G/P(SB)	G/P(SB)			H/P (SR)	H/P(SR)
	3 rd	H/P (SR)	H/P (SR)				
Tuesday	1 st			CC1(T)-(SM)	-	CC2(P)-ST	CC2(P)-ST
	2 nd		H/T(RS)	H/T(RS)	G/T(SM)	G/P(RS)	G/P(RS)
	3 rd		H/T(SM)				
Wednesday	1 st	-	CC1(T)-ST	-	CC2(T)-(ST)	GE1(T)-(RS)	-
	2 nd	G/T(RS)			H/T(RS)	H/P(ST)	H/P(ST)
	3 rd		H/P(RS)	H/P(RS)		H/T	H/T(RS)
Thursday	1 st	CC2(T)-BB	-	CC2(T)-ST	GE1(P)-BB	GE1(P)-BB	
	2 nd		H/T-(BB)	H/T-(BB)	G/P-(ST)	G/P-(ST)	
	3 rd		H/T-(SR)	H/T-(SR)		H/P-(SM)	H/P-(SM)
Friday	1 st	GE1(P) (ST)	GE1(P) (ST)	CC2(T)-SM	GE1(T)-(SR)	CC1(P)-(SM)	CC1(P)-(SM)
	2 nd		H/T(SR)	H/T(SR)	G/T(SM)	G/T(SR)	
	3 rd	H/T(SM)	H/T(SM)	H/T(ST)	H/T(ST)		
Saturday	1 st	CC2(P)-BB	CC2(P)-BB	-	GE1(T)-SB	CC1(P)-ST	CC1(P)-ST
	2 nd	G/P(SB)	G/P(SB)	H/T(SB)	H/T(ST)		
	3 rd	H/T(ST)	H/T(ST)	H/T(BB)	H/P(BB)	H/P(BB)	H/T(SB)

CC (T/P) – Core Course (Theory/Practical) , GE(T/P)- Generic Elective (Theory/Practical)
H/T - Honours Theory, H/P – Honours Practical, G/T – General Theory, G/P – General Practical

Name of the Teacher	Allotment of Classes																		Total
	1st Year												2nd Year				3rd Year		
	CC1(T)	CC1(P)	CC2(T)	CC2(P)	GE1(T)	GE1(P)	CC3(T)	CC3(P)	CC4(T)	CC4(P)	GE2(T)	GE2(P)	2H(T)	2H(P)	2G(T)	2G(P)	3H(T)	3H(P)	
ST	1	2	2	2		2	NA	NA	NA	NA	NA	NA	1	2		2	4		19
BB			1	2		2							2				1	2	10
SB	2				2								1			4	1		10
SM	1	2	1												2		4	2	11
SR					1								2	2	1		2	2	10
RS					1								3		1	2	1	2	10
Total	4	4	4	4	4	4							9	4	4	8	13	8	

Distribution of syllabus
Honours/General course for the academic session 2018-19
Department of Physics

Name of the teacher	Course	Allotment of syllabus	No of Lectures
Dr. Subhrangsu Taran	CC1	Recapitulation Vector Calculus / Vector Diff ./Orthogonal Curvilinear Coordinate	5 + 10 + 5 = 20L
	CC2	Rotational Dynamics/ Elasticity / Fluid Motion / Gravitation and Central Force / Motion Under Central Force / Oscillations	12 + 3 + 2 + 3 + 6 + 7 = 33L
	GE1	None	
	2 nd (H)	Thermometry / Kinetic Theory of Gases / Conduction of Heat	5 + 10 + 7 = 22L
	2 nd (G)	None	
	3 rd (H)	Quantum Physics (Paper VIII, Group C) – All topics + Nuclear Physics (Paper IX, Group A) Internal Structure of the Atom/ Gross properties of the Nucleus/ Nuclear Structure/ Unstable Nucleus/ Nuclear Reactions / Elementary Particles / Experimental Techniques	55 + (3 + 3+ 4 + 4 + 11 + 9 + 7 + 12) = 108L
Bhaskar Biswas	CC1	None	
	CC2	Fundamental of Dynamics / Work and Energy / Collisions	6 + 4 + 3 = 13L
	GE1	None	
	2 nd (H)	Stationary Currents/ D.C. Circuits/ Electromagnetism in Vacuum/ Transients Growth and decay of currents/ Alternating Currents/ Units and Dimensions/ Electrical measuring Equipment	2 + 3 + 13 + 3 + 11 + 4 + 3 = 39L

	2 nd (G)	None	
	3 rd (H)	Statistical Mechanics (Paper –VIII, Group B) – All topics	35L
Sukanta Bhattacharyya	CC1	Recapitulation-Calculus :Limit, Continuity, Plotting Function etc, Partial Derivatives, Vector Integration	6 + 6 + 14 = 26L
	CC2	None	
	GE1	Vectors/ Ordinary Diff. Equation / Laws of Motion / Momentum and Energy / Rotational Motion	4 + 6 + 10 + 6 + 5 = 31L
	2 nd (H)	Electromagnetic Induction / Magnetic Materials / thermoelectricity	8 + 14 + 3 = 25L
	2 nd (G)	None	
	3 rd (H)	Classical Mechanics (Paper – VIII, Group A) – All topics	25L
Sayan Mukherjee	CC1	Calculus Recapitulation : 2 nd Order Differential Equation/ Dirac Delta function and its properties	12 + 2 = 14L
	CC2	Non-Inertial System / Special Theory of Relativity	4 + 10 = 14L
	GE1	None	
	2 nd (H)	None	
	2 nd (G)	Electric charge, quantisation of charge / Electrostatic Field and Potential / Steady Currents / Magnetic effect of Current / Magnetic Materials / Electromagnetic Induction / Alternating Currents / Thermoelectricity / Electromagnetic Theory / Nuclear Physics	2 + 8 + 4 + 5 + 4 + 5 + 5 + 2 + 5 + 17 = 57L
	3 rd (H)	Electronics (Paper IX, Group B) – All Topics + Electromagnetic Theory (Paper VII, Group B) Electromagnetic Theory/ Dispersion/ Scattering/ Electro-and Magneto-optic Effects	75 + (23 + 3 + 6 + 5) = 112L

Snigdha Roy	CC1	None	
	CC2	None	
	GE1	Elasticity / Special Theory of Relativity	$8 + 7 = 15L$
	2 nd (H)	Electrostatics in Vacuum / Multipoles / Electrostatics in Material Media / Capacitance/ Electrostatic Energy / Electric Properties of Materials / Solution of Standard Potential Problems	$6 + 6 + 3 + 3 + 3 + 3 + 12 = 36L$
	2 nd (G)	Quantum Theory / Solids / Semiconductor Physics / Atoms	$16 + 3 + 5 + 3 = 27L$
	3 rd (H)	Physical Optics (Paper VII - Group A) – All Topics	60L
Rakesh Sen	CC1	None	
	CC2	None	
	GE1	Gravitation / Oscillation	$8 + 6 = 14L$
	2 nd (H)	Transport Phenomena / Real gases / First Law of Thermodynamics / Second Law of Thermodynamics / Thermodynamic Functions / Heat Engines & Refrigerators / Thermodynamics of Reversible cells / Change of State / Multicomponent Systems / Radiation	$6 + 7 + 6 + 10 + 5 + 7 + 2 + 6 + 5 + 6 = 60L$
	2 nd (G)	Geometrical Optics / Wave Nature of Light / Interference of Light / Diffraction of Light / Polarisation	$11 + 3 + 5 + 6 + 5 = 30L$
	3 rd (H)	Special Theory of Relativity (Paper – VIII, Group B) + Solid State Physics (Paper IX Group A) : Crystal Structure/ Structure of Solids / Semi-conductors	$23 + (8 + 4 + 3) = 38L$

KALYANI MAHAVIDYALAYA
Teaching/Lesson Plan for UG Department of Physics
Semester 1 (Core and Generic Course)

Name of the Faculty	Course (CC/GE)	Topics to be covered upto 1 st Internal Assessment		Topics to be covered between 1 st and 2 nd Internal Assessment		Topics to be covered between 2 nd Internal and End semester exam		Remarks
		TOPIC	No. of Lectures	TOPIC	No. of Lectures	TOPIC	No. of Lectures	
Dr. Subhrangsu Taran	CC1	Recapitulation of vectors/ Vector Differentiation	15	Orthogonal Curvilinear Coordinate	05	Problem Solving/Practice	05	
	CC2	Rotational Dynamics/ Elasticity	15	Fluid Motion / Gravitation and Central Force / Motion Under Central Force	11	Oscillations	07	
	GE1	No Class Allotted	NA	No Class Allotted	NA	No Class Allotted	NA	
Mr. Bhaskar Biswas	CC1	No Class Allotted	NA	No Class Allotted	NA	No Class Allotted	NA	
	CC2	Fundamental of Dynamics	06	Work and Energy / Collisions	07	Problem Solving/Practice	Extra Class	
	GE1	No Class Allotted	NA	No Class Allotted	NA	No Class Allotted	NA	
Mr. Sukanta Bhattacharyya	CC1	Recapitulation-Calculus :Limit, Continuity, Plotting Function etc. /	12	Vector Integration (Few Portion)	10	Vector Integration (Rest)	04	

		Partial Derivatives						
	CC2	No Class Allotted	NA	No Class Allotted	NA	No Class Allotted	NA	
	GE1	Vectors/Ordinary Differential Equation	10	Laws of Motion/Moment & Energy	16	Rotational Motion	05	
Sayan Mukherjee	CC1	Calculus Recapitulation : 2 nd Order Differential Equation (Few Portion)	06	Calculus Recapitulation : 2 nd Order Differential Equation (Rest)	06	Dirac Delta function and its properties	02	
	CC2	Non-Inertial System	04	Special Theory of Relativity (Few Portion)	06	Special Theory of Relativity (Rest)	04	
	GE1	No Class Allotted	NA	No Class Allotted	NA	No Class Allotted	NA	
Snigdha Roy	CC1	No Class Allotted	NA	No Class Allotted	NA	No Class Allotted	NA	
	CC2	No Class Allotted	NA	No Class Allotted	NA	No Class Allotted	NA	
	GE1	Elasticity	08	Special Theory of Relativity	07	Problem Solving	Extra Class	
Rakesh Sen	CC1	No Class Allotted	NA	No Class Allotted	NA	No Class Allotted	NA	
	CC2	No Class Allotted	NA	No Class Allotted	NA	No Class Allotted	NA	
	GE1	Gravitation	08	Oscillation	06	Problem Solving	Extra Class	

CC1 Practical classes will be taken by ST & SM
CC2 Practical classes will be taken by ST & BB
GE Practical classes will be taken by ST & BB

KALYANI MAHAVIDYALAYA
Teaching/Lesson Plan for UG Department of Physics (2nd & 3rd Year)

Honours/General course for the academic session 2018-19

Name of the Faculty	Course	Session I (Pre-Puja vacation)		Session II (Post-Puja vacation)		Session III (Post-Christmas vacation)		Remarks
		TOPIC	No. of Lectures	TOPIC	No. of Lectures	TOPIC	No. of Lectures	
Subhrangsu Taran	2 nd Hons	Thermometry	05	Kinetic Theory of Gases	10	Conduction of Heat	07	Paper V (Group A)
	2 nd Gen	None		None		None		
	3 rd Hons	Evaluation of the Old Quantum Theory	23	Basic Quantum Mechanics	19	Simple Applications of Quantum Mechanics	13	Paper VII (Group C)
		Internal Structure of the Atom/ Gross properties of the Nucleus/ Nuclear Structure/ Unstable Nucleus	18	Nuclear Reactions / Elementary Particles	16	Experimental Techniques	12	Paper IX (Group A)
Bhaskar Biswas	2 nd Hons	Stationary Currents/ D.C. Circuits/ Electromagnetism in Vacuum	18	Transients Growth and decay of currents/ Alternating Currents	14	Units and Dimensions/ Electrical measuring Equipment	7	Paper V

	2 nd Gen	None		None		None		
	3 rd Hons	Phase space etc.	09	Statistical ensembles etc./ Maxwell's distribution law etc.	12	Quantum Statistics/ Fermi-Dirac distribution/ Bose-Einstein distribution	14	Paper VIII (Group B)
Sukanta Bhattacharyya	2 nd Hons	Electromagnetic Induction	08	Magnetic Materials (Few Portion)	08	Magnetic Materials (Rest)/Thermoelectricity	09	Paper V
	2 nd Gen	None		None		None		
	3 rd Hons	Degree of freedom/ Virtual displacement and virtual work	07	The Lagrangian	07	Hamilton's action function/ The Hamiltonian/ Small oscillations	11	Paper – VIII (Group A)
Sayan Mukherjee	2 nd Hons	None		None		None		
	2 nd Gen	Electric charge, quantisation of charge / Electrostatic Field and Potential / Steady Currents / Magnetic effect of Current	19	Magnetic Materials / Electromagnetic Induction / Alternating Currents / Thermoelectricity / Electromagnetic Theory /	21	Nuclear Physics	17	Paper II (Group A & C)
	3 rd Hons	Networks/ Thermionic	24	Amplifiers /Feedback	22	Operational Amplifiers/Digit	29	Paper IX (Group B)

		Emission/ Semi- conductor Devices/ Electromagneti c Theory (Fundamental)/ Wave equation in Isotropic Dielectrics/Wa ve equation in Anisotropic Dielectrics	16	Waves in a Conducting Medium	7	al and Logic Circuits/ Microprocessor/ Power Supply Dispersion/ Scattering / Electro-and Magneto-optic Effects	14	Paper VII (Group B)
Snigdha Roy	2 nd Hons	Electrostatics in Vacuum / Multipoles Problems	12	Electrostatics in Material Media / Capacitance/ Electrostatic Energy / Electric Properties of Materials	12	Solution of Standard Potential	12	Paper V
	2 nd Gen	Quantum Theory (upto wave-particle duality)	07	Quantum Theory (Rest)	09	Solids / Semiconductor Physics / Atoms	11	Paper II (Group C)
	3 rd Hons	Wave Nature of Light/ Interference of Light Waves/ Diffraction of Light Waves	28	Resolving Power/ Interferometers/ Coherence	12	Polarisation	20	Paper VII (Group A)
Rakesh Sen	2 nd Hons	Transport Phenomena / Real gases / First Law of	19	Second Law of Thermodynamic s / Thermodynamic	15	/ Heat Engines & Refrigerators / Thermodynamic	26	Paper IV (Group B)

		Thermodynamics		Functions		s of Reversible cells / Change of State / Multicomponent Systems / Radiation		
	2 nd Gen	Geometrical Optics	11	Wave Nature of Light / Interference of Light	08	Diffraction of Light / Polarisation	11	Paper II (Group B)
	3 rd Hons	Special Theory of Relativity (upto Lorentz transformation)	13	Special Theory of Relativity (Rest)	10	None		Paper VIII (Group B)
		None		None		Solid State Physics : Crystal Structure/ Structure of Solids / Semi-conductors	15	Paper IX (Group A)

2nd Year Honours Practical Classes will be taken by ST & SR

2nd Year General Practical Classes will be taken by ST, SB & RS

3rd Year Honours Practical Classes will be taken by BB, SR & RS