



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION  
Syllabus Planner for the year 2020 - 2021



Subject: PHYSICS

TERM:

TEACHER'S NAME: SOUMITRA MAITY

No. of working days:-

CLASS: XI.

SECTION: A1 & A2

MONTH	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
JANUARY				
FEBRUARY				
MARCH				
APRIL				

Teachers are requested to prepare a LESSON PLAN for each Topic to be taught. The Lesson plans are to be submitted along with the monthly planner.

Signature of the teacher: Soumitra Maity (15.03.21)

Date of Submission: 15.03.21

PRINCIPAL

ACADEMIC COORDINATOR: Jayashree Sharma 15/3/2021

VICE PRINCIPAL

*[Signature]*  
15/3/2021



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION  
Syllabus Planner for the year 2020- 2021



Subject: PHYSICS

TERM: 1<sup>ST</sup>

TEACHER'S NAME: SOUMITRA MAITY

No. of working days:- 64

CLASS: XI

SECTION: A1 & A2

MONTH	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
JUNE 1 <sup>st</sup> term starts on 14.06.21	UNIT I: Physical world and measurement	Need for measurement, systems of units, accuracy, precision, dimension	Short questions MCQs from different examination papers, numericals	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
	UNIT II: Kinematics	Elementary concepts of differentiation and integration Frame of reference, types of motion, Scalar and vector, projectile motion, uniform circular motion	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
JULY	UNIT III: Laws of motion	Concept of force, inertia, impulse, friction Newton's laws of motion, dynamics of uniform circular motion	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
	UNIT IV: Work, energy, power	Concepts of work, power and energy, work-energy theorem, Conservation of mechanical energy, Elastic and inelastic collision	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
AUGUST	UNIT V: Motion of system of particles and rigid body	Centre of mass, moment of a force, torque, angular momentum, conservation of angular momentum, equilibrium, moment of inertia, parallel and perpendicular axes theorems	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
	UNIT VI: Gravitation	Keplar's laws of planetary motion, variations of acceleration due to gravity, gravitational potential energy,	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
SEPTEMBER 1 <sup>ST</sup> TERM EXAM STARTS ON 16 <sup>TH</sup> SEPTEMBER	UNIT VI: Gravitation (Continued)	Escape velocity, geo-stationary satellites	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
	Syllabus for 1 <sup>ST</sup> Term exam : UNIT I: Physical world and measurement, UNIT II: Kinematics, UNIT III: Laws of motion, UNIT IV: Work, energy, power, UNIT V: Motion of system of particles and rigid body and UNIT VI: Gravitation			
	UNIT VII: Properties of Bulk matter	Hooke's law, Young's modulus, Bulk modulus, modulus of rigidity, Poisson's ratio Pascal's law, viscosity, Stoke's law, terminal velocity, Reynold's number, streamline and turbulent flow, critical velocity, Bernoulli's theorem	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.

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Signature of the teacher: Soumitra Maity (15.03.21)

Date of Submission: 15.03.21

PRINCIPAL

ACADEMIC COORDINATOR: Jayashree Shetty 15/3/21

VICE PRINCIPAL

*[Signature]*  
15/3/2021



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION  
Syllabus Planner for the year 2020- 2021



Subject: PHYSICS

TERM: 2ND

TEACHER'S NAME: SOUMITRA MAITY

No. of working days:- 73

CLASS: XI

SECTION: A1 & A2

MONTH	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
OCTOBER 2 <sup>nd</sup> term starts on 01.10.21	UNIT VII: Properties of Bulk matter (contd.)	Surface tension, Capillary rise  Heat, temperature, thermal expansion of solids, liquids and gases, ideal gas laws, isothermal and adiabatic processes, anomalous expansion, specific heat capacity, Cp, Cv, calorimetry, change of state, specific latent heat capacity	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
NOVEMBER	UNIT VII: Properties of Bulk matter (contd.)  UNIT VIII: Thermodynamics	heat transfer, Kirchoff's law, green house effect, thermal conductivity, Newton's law of cooling, Wein's displacement law, Stefan's law  Laws of thermodynamics, heat work and internal energy, heat engines and refrigerators	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
	UNIT IX: Behaviour of perfect gas and kinetic theory	Equation of state of a perfect gas, kinetic theory of gases, kinetic energy and temperature,	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
DECEMBER	UNIT IX: Behaviour of perfect gas and kinetic theory ( Continued )	degrees of freedom, law of equilibrium of energy, concept of mean free path, Avogadro's number	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
	UNIT X: Oscillations and waves	Periodic motion, simple harmonic motion – equation, phase, energy in SHM		
JANUARY 2022	UNIT X: Oscillations and waves ( continued )	Wave motion, longitudinal and transverse wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics.	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
FEBRUARY 2022 2 <sup>nd</sup> term exam starts on 17.02.22	UNIT X: Oscillations and waves ( continued )	Beats, Doppler effect	Selected questions and numericals from the subtopics covered.	Concepts related to all the subtopics will be discussed and different types of numericals will be solved.
	Revision: Kinematics, Properties of Bulk matter and Thermodynamics.	Uniformly accelerated motion, Vectors, Elasticity, viscosity, surface tension, kinetic theory of gases and thermodynamics.	Selected home work will be given from the revision lessons.	Discussions, derivations, explanations Numericals Questions from W.B. council papers and test papers
<b>SYLLABUS FOR 2<sup>nd</sup> TERM EXAM : The entire portion completed in this academic year.</b>				

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Signature of the teacher: Soumitra Maity (15.03.21)

Date of Submission: 15.03.21

PRINCIPAL

ACADEMIC COORDINATOR: Jayashree Sheya 15/3/21

VICE PRINCIPAL

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15/3/2021