



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



Syllabus planning for the academic year 2021-2022

TERM: 1<sup>st</sup> Term & 2<sup>nd</sup> Term

CLASS: 12

TEACHERS' NAMES: Sukumar Mandal, Sanjay Bhattacharya and Chaitali Roy.

No. of working days: 70

Subject: MATHEMATICS

SECTION: A1, A2, B, C, D

MONTH	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
JULY 2021 (1 <sup>st</sup> term begins on 5 <sup>th</sup> July)	Relation, Mapping, Binary Operation, Determinants and Matrices, Inverse circular function.	Types of relation and mapping, Definition & Properties of binary operation, Matrix Operation, Determinants, Adjoint & Inverse of Matrix, Graphical representation Orthogonal Matrix, Cramer's Rule, General and Principal values of Inverse Circular functions and their graphs.	Selected sums from the exercises of Relation, Mapping, Binary Operation, Determinants and Matrices, Inverse circular function.	Selected sums from the examples & exercises of Relation, Mapping, Binary Operation, Determinants and Matrices, Inverse circular function.
AUGUST 2021	Differential Calculus, Indefinite Integral, Definite Integrals.	Limit, Continuity, Differentiability and Derivatives up to second order, Definition of Indefinite Integral, Method of substitution, By parts, Special forms, Definition of Definite Integrals as Limit-sum, Fundamental theorem of integral calculus.	Selected sums from the exercises of Differential Calculus, Indefinite Integral, Definite Integrals.	Selected sums from the examples & exercises of Differential Calculus, Indefinite Integral, Definite Integrals.
SEPTEMBER 2021 (1 <sup>st</sup> term ends on 15 <sup>th</sup> Sept.)	Vector & 3D Geometry.  1 <sup>st</sup> term online exam starts on 16 <sup>th</sup> September, 2021. { Syllabus: UNIT1, UNIT2, UNIT 3 (Up to Definite Integral), UNIT 4 (Up to Directions cosine & Direction Ratios) }	Vector, Products of two Vectors, Dot product, Cross product, Scalar triple product, Direction Cosine & Direction Ratios.	Selected sums from the exercises of Vector, Products of two Vectors, Dot product, Cross product, Scalar triple product, Direction Cosine & Direction Ratios.	Selected sums from the examples & exercises of Vector, Products of two Vectors, Dot product, Cross product, Scalar triple product, Direction Cosine & Direction Ratios.
OCTOBER 2021 (2 <sup>nd</sup> Term begins on 1 <sup>st</sup> Oct.)	Vector & 3D Geometry continues, Differential Equations.  <b>Project 1 : Topic- Inverse circular function</b> <b>Last date of submission: 26<sup>th</sup> October, 2021.</b>	Order & degree of differential equations, Differential equations of first order & first degree, Linear differential equations, Straight line in 3D-space, Plane.	Selected sums from the exercises of Order & degree of differential equations, Differential equations of first order & first degree, Linear differential equations, Straight line in 3D-space, Plane.	Selected sums from the examples & exercises of Order & degree of differential equations, Differential equations of first order & first degree, Linear differential equations, Straight line in 3D-space, Plane.

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.

Submitted Date: 15/03/2021

Signature of Teachers: *Sukumar Mandal* ; *Sanjay Bhattacharya* ; *Chaitali Roy*  
15/03/2021 ; 15/03/2021 ; 15/03/2021

Academic Co-ordinator: *Jayashree Shetty* 15/3/21

PRINCIPAL.

VICE PRINCIPAL

*[Signature]*  
15/3/2021



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



Syllabus planning for the academic year 2021-2022

TERM: 2<sup>nd</sup> Term

CLASS: 12

TEACHERS' NAMES: Sukumar Mandal , Sanjay Bhattacharya and Chaitali Roy.

No. of working days: 70

Subject: Mathematics

SECTION: A1, A2, B, C, D

MONTH	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
NOVEMBER 2021	Significance of derivative , Tangent and normal, Increasing and Decreasing functions , Maxima and Minima , Definite integral as an area .	Significance of derivative and its applications , Tangent and normal , Global maxima- minima and local maxima- minima , Area under curves .	Selected sums from the exercises of Significance of derivative , Tangent and normal, Increasing and Decreasing functions , Maxima and Minima , Definite integral as an area .	Selected sums from the examples & exercises of Significance of derivative , Tangent and normal, Increasing and Decreasing functions , Maxima and Minima , Definite integral as an area .
DECEMBER 2021	LPP , Probability Theory.  <b>Project 2 : Area under curves.</b> <b>Last date of submission: 11<sup>th</sup> January, 2022.</b>	Optimization problems on LPP , Conditional probability, Bayes ' Theorem.	Selected sums from the exercises of Optimization problems on LPP , Conditional probability, Bayes ' Theorem.	Selected sums from the examples & exercises of Optimization problems on LPP , Conditional probability, Bayes ' Theorem.
JANUARY 2022	Statistics  <b>Entire syllabus will be completed.</b>  <b>Revision</b> of entire syllabus.	Random variable and its distribution, Mean, Variance , Binomial Distribution .	Selected sums from the exercises of Random variable and its distribution, Mean, Variance , Binomial Distribution .	Selected sums from the examples & exercises of Random variable and its distribution, Mean, Variance , Binomial Distribution .
FEBRUARY 2022 (2 <sup>nd</sup> Term ends on 14 <sup>th</sup> Feb.)	<b>Revision</b> of entire syllabus continues .  Second term online exam starts on 17 <sup>th</sup> February , 2022. (Syllabus : Entire syllabus.)			

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.

Submitted Date: 15/03/2021

Signature of Teachers: *Sukumar Mandal* 15/03/2021 ; *Sanjay Bhattacharya* 15/03/2021 ; *Chaitali Roy* 15.03.2021

Academic Co-ordinator: *Jayashree Shekhar* 15/3/21

PRINCIPAL

VICE PRINCIPAL *[Signature]* 15/3/2021