

Govt. College for Girls, Padha (Karnal)

**Lesson Plan for Even Semester**  
**(January - April, 2024)**

Name of the teacher-

Class- BA 6<sup>th</sup> Sem

Subject- Maths

Paper- LINEAR ALGEBRA

<b>1<sup>st</sup> Week</b> <b>1-6 January</b>	Vector spaces, subspaces, Sum and Direct sum of subspaces.
<b>7 January</b>	<b>Sunday</b>
<b>2<sup>nd</sup> Week</b> <b>8-13 January</b>	Linear span, Linearly Independent and dependent subsets of a vector space.
<b>14 January</b>	<b>Sunday</b>
<b>3<sup>rd</sup> Week</b> <b>15-16 January</b>	Finitely generated vector space , Existence theorem for basis of a generated vector space.
<b>17 January</b>	<b>Shri Guru Gobind Singh Jayanti</b>
<b>18-20 January</b>	Finite dimensional vector spaces, Invariance of the number of elements of basic sets.
<b>21 January</b>	<b>Sunday</b>
<b>4<sup>th</sup> Week</b> <b>22-25 January</b>	Dimensions, Quotient space and its dimension.
<b>26 January</b>	<b>Republic Day</b>
<b>28 January</b>	<b>Sunday</b>
<b>5<sup>th</sup> Week</b> <b>29 January-3 February</b>	Homomorphism and isomorphism of vector spaces.
<b>4 February</b>	<b>Sunday</b>
<b>2<sup>nd</sup> Week</b>	Linear transformations and Linear form on vector spaces.

5-10 February	
11 February	<b>Sunday</b>
3 <sup>rd</sup> Week 12-13 February	Vector space of all the linear transforms.
14 February	<b>Basant Panchmi/ Sir Chotu Ram Jayanti</b>
15-17 February	Dual spaces, Bidual spaces.
18 February	<b>Sunday</b>
4 <sup>th</sup> Week 19-23 February	Annihilator of subspaces of finite dimensional vector spaces, Null space.
24 February	<b>Guru Ravidas Jayanti</b>
25 February	<b>Sunday</b>
5 <sup>th</sup> Week 26 February-2 March	Range space of a transformation, Rank and Nullity theorem.
3 March	<b>Sunday</b>
2 <sup>nd</sup> Week 4-7 March	Algebra of Linear Transformation.
8 March	<b>Mahashivratri</b>
9 March	Minimal Polynomial of a linear transformation.
10 March	<b>Sunday</b>
3 <sup>rd</sup> Week 11-16 March	Singular and non-singular linear transformations.
17 March	<b>Sunday</b>
4 <sup>th</sup> Week 18-22 March	Matrix of a linear transformation, Change of basis.
23 March	<b>Vacations (Holi)</b>
24 March	
5 <sup>th</sup> Week	

<b>25-30 March</b>	
<b>31 March</b>	
<b>1<sup>st</sup> Week</b> <b>1-6 April</b>	Eigen values and Eigen vectors of linear transformations.
<b>7 April</b>	<b>Sunday</b>
<b>2<sup>nd</sup> Week</b> <b>8-10 April</b>	Inner product spaces, Cauchy-Schwarz inequality.
<b>11 April</b>	<b>Id-Ul-Fitar</b>
<b>12 April</b>	Orthogonal vectors, Orthogonal complements.
<b>13 April</b>	<b>Baisakhi</b>
<b>14 April</b>	<b>Sunday</b>
<b>3<sup>rd</sup> Week</b> <b>15-16 April</b>	Orthogonal sets and Basis , Bessel's inequality for finite dimensional vector spaces.
<b>17 April</b>	<b>Ramnavmi</b>
<b>18-20 April</b>	Gram-Schmidt Orthogonalization process.
<b>21 April</b>	<b>Sunday</b>
<b>4<sup>th</sup> Week</b> <b>22-27 April</b>	Adjoint Of a linear transformation and its properties, Unitary linear transformations.
<b>28 April</b>	<b>Sunday</b>
<b>5<sup>th</sup> Week</b> <b>29-30 April</b>	TEST AND REVISION