

Baba fateh Singh ji Govt. College, Assandh, Karnal

Department of Mathematics [Linear Algebra]

Class BA-3, 6th sem

Lesson Plan

Sr.No		
1	Week 1 Jan 1-6 2024	Vector Space, Subspaces Sum and direct sum of subspaces Linear span
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7	Week 2 Jan 8-13 2024	Linearly independent and dependent subsets of a vector space Finitely generated vector space.
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13	Week 3 Jan 15-20 2024	Existence th ^m for basis of a f.g. vector space. finite dimensional vector space.
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19	Week-4 Jan 22-27 2024	Invariance of the number of elements of basis sets, Dimensions. Quotient space and its dimensions.
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25	Week-5 Jan 29 - Feb 3 2024	Homomorphism and isomorphism of vector spaces. Linear transformation and linear forms on vector space.
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31	Week-6 Feb 5-10 2024	Vector spaces of all the linear transformations. Dual spaces.
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43	Week 7	Bidual Spaces
44	Feb 12-17	Annihilator of subspaces of finite
45	2024	dimensional vector spaces
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48	Week-8	Null space, Range space of a
49	Feb 19-24	linear transformation.
50	2024	Rank and Nullity theorem
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55	Week-9	Algebra of linear transformation.
56	Feb 26-March 2	Minimal polynomial of a
57	2024	linear transformation.
58		Singular and non singular
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64	Week-10	Linear transformation.
65	March 4-9	Matrix of a linear transformation
66	2024	change of basis.
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71	Week-11	Eigen values and Eigen vectors
72	March 11-16	of a linear transformation.
73		Some examples of Eigen values.
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78	Week-12	Inner product spaces.
79	March 18-22	Cauchy - Schwarz inequality.
80	2024	
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84	Week-13	orthogonal vectors.
85	April 1-6	orthogonal complements.
86	2024	orthogonal sets and basis.
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92	Week-14 April 8-13 2024	Bessel's inequality. for finite dimensional vector space. Gram - Schmidt orthogonalization process.
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99	Week-15 April 15-20 2024	Adjoint of a linear transformation and its properties. Unitary linear transformation.
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106	Week-16 April 22-27 2024	Revision. Problem solving.
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113	Week-17 April 29-30 2024	Test and Problem solving.
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120	Week-18	
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127	Week-19	
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