Saraswati Mahila Mahavidyalaya, Palwal

 **Lesson Plan**

**Name of the Assistant/Associate Professor: Ms. Karuna Garg**

**Class and Section:BSC C.S III YR (VI SEM)**

**Name of subject: Linear Algebra**

**Subject Lesson Plan : 18 weeks(from January 2018 to April 2018)**

**(Note: Prepare as per list of holidays declared by Haryana govt.)**

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| **WEEK 1** |
| **ASSIGNMENT:** |
| **WEEK 1,DAY1 ,DATE :01/01/2018(MONDAY)** |
| **Introduction of the Topic Vector Space** |
| **WEEK 1 ,DAY 2 ,DATE :02/01/2018(TUESDAY)** |
| **Examples based on Vector Space** |
| **WEEK 1,DAY 3 ,DATE :03/01/2018(WEDNESDAY)** |
| **Theorems based on Vector Sub Space** |
| **WEEK 1 ,DAY 4 ,DATE :04/01/2018(THURSDAY)** |
| **Examples based on Sub-Space** |
| **WEEK 1,DAY 5 ,DATE :05/01/2018(FRIDAY)** |
|  **Holiday on account of Guru Govind Singh’s Birthday** |
| **WEEK 1 ,DAY 6 ,DATE :06/01/2018(SATURDAY)** |
| **Topic of Linear sum of Sub Spaces with examples** |
| **WEEK 2** |
| **ASSIGNMENT: On the Topic of bases of Vector Space** |
| **WEEK 2,DAY1 ,DATE :08/01/2018(MONDAY)** |
| **Problem solving on Vector Space** |
| **WEEK 2 ,DAY 2 ,DATE :09/01/2018(TUESDAY)** |
| **Topic of Basis and Dimension** |
| **WEEK 2,DAY 3 ,DATE :10/01/2018(WEDNESDAY)** |
| **Examples based on bases on Dimensions**  |
| **WEEK 2 ,DAY 4 ,DATE :11/01/2018(THURSDAY)** |
| **Definition of Linear span with examples** |
| **WEEK 2,DAY 5 ,DATE :12/01/2018(FRIDAY)** |
|  **Basis of a Vector Space** |
| **WEEK 2 ,DAY 6 ,DATE :13/01/2018(SATURDAY)** |
|  **Theorom based on Maximal Linearly Independent Set** |
| **WEEK 3** |
| **ASSIGNMENT: Based on the Dimension of Linear Sum** |
| **WEEK 3,DAY1 ,DATE :15/01/2018(MONDAY)** |
| **Class Test on Basis and Dimension** |
| **WEEK 3 ,DAY 2 ,DATE :16/01/2018(TUESDAY)** |
| **Examples based on dimension of Vector Space** |
| **WEEK 3,DAY 3 ,DATE :17/01/2018(WEDNESDAY)** |
| **Continue with the same topic** |
| **WEEK 3 ,DAY 4 ,DATE :18/01/2018(THURSDAY)** |
| **Topic of Identical Space, Dimention of Linear Sum** |
| **WEEK 3,DAY 5 ,DATE :19/01/2018(FRIDAY)** |
|  **Examples based on dimension of Linear sum** |
| **WEEK 3 ,DAY 6 ,DATE :20/01/2018(SATURDAY)** **Ouotient space** |
| **WEEK 4** |
| **ASSIGNMENT: On the Topic of Linear Transformation** |
| **WEEK 3,DAY1 ,DATE :22/01/2018(MONDAY)** |
|  **Holiday on account of Basant Panchmi.** |
| **WEEK 4 ,DAY 2 ,DATE :23/01/2018(TUESDAY)** |
| **Linear Tranformation with examples** |
| **WEEK 4,DAY 3 ,DATE :24/01/2018(WEDNESDAY)** |
|  **Holiday on account of Sir Chotu Ram Jayanti.** |
| **WEEK 4 ,DAY 4 ,DATE :25/01/2018(THURSDAY)** |
| **Vector space Isomorphism with examples** |
| **WEEK 4,DAY 5 ,DATE :26/01/2018(FRIDAY)** |
|  **Holiday on account of Republic Day.** |
| **WEEK 4 ,DAY 6 ,DATE :27/01/2018(SATURDAY)** |
|  **Examples based on Linear Transformation** |
| **WEEK 5** |
| **ASSIGNMENT: On the Topic of Rank & Nullity** |
| **WEEK 5,DAY1 ,DATE :29/01/2018(MONDAY)** |
| **Introduction of Rank and Nullity** |
| **WEEK 5 ,DAY 2 ,DATE :30/01/2018(TUESDAY)** |
| **Fundamental Theorem of Vector Space Homomorphism** |
| **WEEK 5,DAY 3 ,DATE :31/01/2018(WEDNESDAY)** |
|  **Holiday on account of Guru Ravi Dass Jayanti** |
| **WEEK 5 ,DAY 4 ,DATE :01/02/2018(THURSDAY)** |
| **Problem solving of Vector Space Homomorphism** |
| **WEEK 5,DAY 5 ,DATE :02/02/2018(FRIDAY)** |
| **Examples based on Rank & Nullity** |
| **WEEK 5 ,DAY 6 ,DATE :03/02/2018(SATURDAY)****Continue with Rank & Nullity** |
| **WEEK 6** |
| **ASSIGNMENT: Topic of algebra of Linear Transformations** |
| **WEEK 6,DAY1 ,DATE :05/02/2018(MONDAY)** |
| **Introduction of algebra of Linear Transformations** |
| **WEEK 6 ,DAY 2 ,DATE :06/02/2018(TUESDAY)** |
| **Examples based on Linear Transformations** |
| **WEEK 6,DAY 3 ,DATE :07/02/2018(WEDNESDAY)** |
| **Continue with Linear Tranformations** |
| **WEEK 6 ,DAY 4 ,DATE :08/02/2018(THURSDAY)** |
| **Topic of Singular and Non-Singular with theorems** |
| **WEEK 6,DAY 5 ,DATE :09/02/2018(FRIDAY)** |
|  **Theorems based on singular and non-singular** |
| **WEEK 6 ,DAY 6 ,DATE :10/02/2018(SATURDAY)** |
|  **Holiday on account of Maharshi Dayanand Saraswati Jayanti.** |
| **WEEK 7** |
| **ASSIGNMENT: On the Topic of Singular & Non -Singular** |
| **WEEK 7,DAY1 ,DATE :12/02/2018(MONDAY)** |
| **Examples based on singular and non-singular linear Transformation** |
| **WEEK 7 ,DAY 2 ,DATE :13/02/2018(TUESDAY)** |
| **Holiday on account of Maha Shivaratri.** |
| **WEEK 7,DAY 3 ,DATE :14/02/2018(WEDNESDAY)** |
| **Board Test** |
| **WEEK 7 ,DAY 4 ,DATE :15/02/2018(THURSDAY)** |
| **Topic of Invertible Linear Tranformations** |
| **WEEK 7,DAY 5 ,DATE :16/02/2018(FRIDAY)** |
|  **Continue with the Topic** |
| **WEEK 7 ,DAY 6 ,DATE :17/01/2018(SATURDAY)** |
|  **Problem Discussion** |
| **WEEK 8**  |
| **ASSIGNMENT: on Matrix of a linear Transformation** |
| **WEEK 8,DAY1 ,DATE :19/02/2018(MONDAY)** |
| **Theorems and examples of Linear Transormation** |
| **WEEK 8 ,DAY 2 ,DATE :20/02/2018(TUESDAY)** |
| **Theorems based on Invertible of Linear Transormation** |
| **WEEK 8,DAY 3 ,DATE :21/02/2018(WEDNESDAY)** |
| **Discussion about assignment and Test** |
| **WEEK 8 ,DAY 4 ,DATE :22/02/2018(THURSDAY)** |
| **Topic of Matrix of a Linear Transformation** |
| **WEEK 8,DAY 5 ,DATE :23/02/2018(FRIDAY)** |
|  **Examples based on ordered basis** |
| **WEEK 8 ,DAY 6 ,DATE :24/02/2018(SATURDAY)** |
|  **Continue with the same topic** |
| **WEEK 9** |
| **ASSIGNMENT: On topic of finite dimensional V.S.** |
| **WEEK 9,DAY1 ,DATE :26/02/2018(MONDAY)** |
| **Theorems based on finite dimensional vector space topic** |
| **WEEK 9 ,DAY 2 ,DATE :27/02/2018(TUESDAY)** |
| **Continue with finite dimensional vector space topic** |
| **WEEK 9,DAY 3 ,DATE :28/02/2018(WEDNESDAY)** |
|  **VACATION -II** |
| **WEEK 9 ,DAY 4 ,DATE :01/03/2018(THURSDAY)** |
|  **VACATION -II** |
| **WEEK 9,DAY 5 ,DATE :02/03/2018(FRIDAY)** |
|  **VACATION -II** |
| **WEEK 9 ,DAY 6 ,DATE :03/03/2018(SATURDAY)** |
|  **VACATION -II** |
| **WEEK 10** |
| **ASSIGNMENT: on the topic of transition matrix** |
| **WEEK 10,DAY1 ,DATE :05/03/2018(MONDAY)** |
| **Class test on topic of finite- dimensional vector space** |
| **WEEK 10,DAY 2 ,DATE :06/03/2018(TUESDAY)** |
| **Topic of Transition Matrix or change of Basis Matrix** |
| **WEEK 10,DAY 3 ,DATE :07/03/2018(WEDNESDAY)** |
| **Continue with the same topic** |
| **WEEK 10,DAY 4 ,DATE :08/03/2018(THURSDAY)** |
| **Examples based on Transition Matrix of change of Basis Matrix** |
| **WEEK 10,DAY 5 ,DATE :09/03/2018(FRIDAY)** |
| **Board Test on the topic of change of Basis Matrix** |
| **WEEK 10 ,DAY 6 ,DATE :10/03/2018(SATURDAY)** |
|  **Introducation of Dual Space** |
| **WEEK 11** |
| **ASSIGNMENT: Topic of Dual Space** |
| **WEEK 11,DAY1 ,DATE :12/03/2018(MONDAY)** |
| **Examples based on Dual Space** |
| **WEEK 11,DAY 2 ,DATE :13/03/2018(TUESDAY)** |
| **Bi-Dual of Double Dual of a Vector Space** |
| **WEEK 11,DAY 3 ,DATE :14/03/2018(WEDNESDAY)** |
| **Continue with the same topic** |
| **WEEK 11,DAY 4 ,DATE :15/03/2018(THURSDAY)** |
| **Introducation of Eigen- Values and Eigen- Vector** |
| **WEEK 11,DAY 5 ,DATE :16/03/2018(FRIDAY)** |
|  **Continue with the topic** |
| **WEEK 11 ,DAY 6 ,DATE :17/03/2018(SATURDAY)** |
| **Problem Discussion** |
| **WEEK 12** |
| **ASSIGNMENT: On the topic of Eigen Values & Eigen Vectors** |
| **WEEK 12,DAY1 ,DATE :19/03/2018(MONDAY)** |
| **Examples based on Eigen Values & Eigen Vectors** |
| **WEEK 12,DAY 2 ,DATE :20/03/2018(TUESDAY)** |
| **Continue with Eigen Values and Eigen Vectors** |
| **WEEK 12,DAY 3 ,DATE :21/03/2018(WEDNESDAY)** |
| **Introducation of Similar Matrices** |
| **WEEK 12,DAY 4 ,DATE :22/03/2018(THURSDAY)** |
| **Continue with the topic Similar Matrices** |
| **WEEK 12,DAY 5 ,DATE :23/03/2018(FRIDAY)** |
|  **Holiday on account of Shahidi diwas.** |
| **WEEK 12 ,DAY 6 ,DATE :24/03/2018(SATURDAY)** |
|  **Revision of previous topics** |
| **WEEK 13** |
| **ASSIGNMENT: on the topic of Minimal Polynomial** |
| **WEEK 13,DAY1 ,DATE :26/03/2018(MONDAY)** |
| **Introduction of Minimal Polynomial** |
| **WEEK 13,DAY 2 ,DATE :27/03/2018(TUESDAY)** |
| **Examples based on Minimal Polynominal** |
| **WEEK 13,DAY 3 ,DATE :28/03/2018(WEDNESDAY)** |
| **Discussion about assignment** |
| **WEEK 13,DAY 4 ,DATE :29/03/2018(THURSDAY)** |
|  **Holiday on account of Mahavir jayanti.** |
| **WEEK 13,DAY 5 ,DATE :30/03/2018(FRIDAY)** |
| **Topic of Inner Producat Space** |
| **WEEK 13 ,DAY 6 ,DATE :31/03/2018(SATURDAY)** |
| **Topic of Cauchy Schwarz Inequality** |
| **WEEK 14** |
| **ASSIGNMENT: On orthogonal vector and complement** |
| **WEEK 14,DAY1 ,DATE :02/04/2018(MONDAY)** |
| **Topic of Orthogonal Vector and Orthogonal Complement** |
| **WEEK 14,DAY 2 ,DATE :03/04/2018(TUESDAY)** |
| **Continue with the same topic** |
| **WEEK 14,DAY 3 ,DATE :04/04/2018(WEDNESDAY)** |
| **Bessel’s Inequality** |
| **WEEK 14,DAY 4 ,DATE :05/04/2018(THURSDAY)** |
| **Gram-Scmmidt Orthogonalisation Process** |
| **WEEK 14,DAY 5 ,DATE :06/04/2018(FRIDAY)** |
|  **Linear Operation on inner Product Space** |
| **WEEK 14 ,DAY 6 ,DATE :07/04/2018(SATURDAY)** |
|  **Theorems based on Inner Product Space**  |
| **WEEK 15** |
| **ASSIGNMENT:** |
| **WEEK 15,DAY1 ,DATE :09/04/2018(MONDAY)** |
| **Revision** |
| **WEEK 15,DAY 2 ,DATE :10/04/2018(TUESDAY)** |
| **Revision** |
| **WEEK 15,DAY 3 ,DATE :11/04/2018(WEDNESDAY)** |
| **Revision** |
| **WEEK 15,DAY 4 ,DATE :12/04/2018(THURSDAY)** |
| **Revision** |
| **WEEK 15,DAY 5 ,DATE :13/04/2018(FRIDAY)** |
|  **Revision** |
| **WEEK 15 ,DAY 6 ,DATE :14/04/2018(SATURDAY)** |
| **Holiday on account of Vaisakhi & Dr B.R. Ambedkar’s Jayanti.** |
| **WEEK 16** |
| **ASSIGNMENT:** |
| **WEEK 16,DAY1 ,DATE :16/04/2018(MONDAY)** |
| **Revision** |
| **WEEK 16,DAY 2 ,DATE :17/04/2018(TUESDAY)** |
| **Revision** |
| **WEEK 16,DAY 3 ,DATE :18/04/2018(WEDNESDAY)** |
| **Holiday on account of Maharshi Pasuram Jayanti** |
| **WEEK 16,DAY 4 ,DATE :19/04/2018(THURSDAY)** |
| **Revision** |
| **WEEK 16,DAY 5 ,DATE :20/04/2018(FRIDAY)** |
|  **Revision** |
| **WEEK 16 ,DAY 6 ,DATE :21/04/2018(SATURDAY)** |
|  **Revision** |
| **WEEK 17** |
| **ASSIGNMENT:** |
| **WEEK 17,DAY1 ,DATE :23/04/2018(MONDAY)** |
| **Revision** |
| **WEEK 17,DAY 2 ,DATE :24/04/2018(TUESDAY)** |
| **Revision** |
| **WEEK 17,DAY 3 ,DATE :25/04/2018(WEDNESDAY)** |
| **Revision** |
| **WEEK 17,DAY 4 ,DATE :26/04/2018(THURSDAY)** |
| **Revision** |
| **WEEK 17,DAY 5 ,DATE :27/04/2018(FRIDAY)** |
| **Revision** |
| **WEEK 17 ,DAY 6 ,DATE :28/04/2018(SATURDAY)** |
|  **Revision** |
| **WEEK 18** |
| **ASSIGNMENT:** |
| **WEEK 18,DAY1 ,DATE :30/04/2018(MONDAY)** |
| **Revision** |