

**Lesson Plan**  
**Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh**  
**Monthly Teaching Plans-Odd Semester (Semester-V)**  
**Session – 2023-24**

**Department: Mathematics**

**Class: BA/BSc-III**

**Subject: Mathematics**

**Paper-II: Modern Algebra**

**Name of the Teacher: Dr Sonica**

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	To		
July	24.07.2023	31.07.2023	Groups, Subgroups, Lagrange's Theorem.	Syllabus, Examination pattern discussed, Doubt Session.
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.08.2023</b>				
August	01.08.2023	31.08.2023	Normal subgroups and Quotient Groups, Homomorphisms, Isomorphism Theorems.	Doubt session, Assignments, revision of a few topics.
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.09.2023</b>				
September	01.09.2023	30.09.2023	Conjugate elements, Class equation, Permutation Groups, Alternating groups, Simplicity of $n A$ , $n \geq 5$ (without proof).	Doubt session, Assignments, revision of a few topics.
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 03.10.2023</b>				
October	03.10.2023	31.10.2023	Rings, Integral domains, Subrings and Ideals, Characteristic of a ring, Quotient Rings	Doubt session, Assignments, Power Point Presentations
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.11.2023</b>				
November	01.11.2023	18.11.2023	Prime and Maximal Ideals, Homomorphisms, Isomorphism Theorems, Polynomial rings.	Question papers discussed, Revision of a few topics.
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 19.11.2023</b>				
<b>End semester Examination 27.11.2023 to 30.12.2023</b>				

**Lesson Plan**  
**Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh**  
**Monthly Teaching Plans-Odd Semester (Semester-VI)**  
**Session – 2023-24**

**Department: Mathematics**

**Class: BA/BSc-III**

**Subject: Mathematics**

**Paper-II: Linear Algebra**

**Name of the Teachers: Dr Sonica**

Month	Date		Topics to be covered	Academic Activity to be Undertaken
	From	To		
January	09.01.2024	31.01.2024	<b>Vector Space</b> : Definition and Examples of Vector Spaces, Subspaces, Algebra of subspaces, Linear span, Linear dependence and independence of vectors	Syllabus, Examination pattern discussed, Doubt Session.
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.02.2024</b>				
February	01.02.2024	29.02.2024	Basis and dimension of a vector space, Basis and dimension of subspace, Direct sums and complements Linear transformations, Rank and Nullity of a linear transformation, Vector space of linear transformations	Doubt session, Assignments, revision of a few topics.
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.03.2024</b>				
March	01.03.2024	30.03.2024	Linear transformations and matrices, Change of basis. Characteristic roots and characteristic vectors, Algebraic and Geometric multiplicity of a characteristic value.	Doubt session, Assignments
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 01.04.2024</b>				
April	01.04.2024	22.04.2024	Cayley-Hamilton theorem, Diagonalizable operators and matrices. Minimal polynomial of a linear operator (matrix).	Doubt session, Assignments, Power Point Presentations, Question papers discussed. Revision of a few topics.
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 23.04.2024</b>				
<b>End semester Examination 02.05.2024 to 05.06.2024</b>				