

**Load distribution
Odd Semester**

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Honours

1st Semester:

1. C1- Mathematical Physics-I:
 - a. Introduction to probability, Dirac Delta function and its properties - SP
 - b. Calculus, Vector Calculus, Orthogonal Curvilinear Coordinates – SG

2. C2- Mechanics:
 - a. Fundamentals of Dynamics, Work and Energy, Collisions, Rotational Dynamics, Elasticity, Fluid Motion - DKH
 - b. Gravitation and Central Force Motion, Oscillations, Non-Inertial Systems, Special Theory of Relativity – SJ

3. GE1- Elements of Modern Physics:
 - a. Size and structure of atomic nucleus and its relation with atomic weight, Radioactivity, Fission and fusion – JR
 - b. Planck's quantum, Problems with Rutherford model, Position measurement, Two slit interference experiment, One Dimensional infinitely Rigid Box – DKH

3rd Semester:

1. C5: Mathematical Physics-II
 - a. Fourier Series, Frobenius Method and Special Functions – JR
 - b. Some Special Integrals, Variational calculus in physics, Partial Differential Equations – SP

2. C6- Thermal Physics - DKH

3. C7- Digital Systems and Applications
 - a. Integrated Circuits, Digital Circuits, Boolean algebra, Data processing circuits – SG
 - b. Circuits, Timers, Shift registers, Counters (4 bits), Computer Organization - SP

4. SEC2- Applied Optics – DKH

5. GE 3 - Solid State Physics
 - a. Crystal Structure, Elementary Lattice Dynamics, – SJ
 - b. Magnetic Properties of Matter, Dielectric Properties of Materials – SP
 - c. Elementary band theory, Superconductivity – SG

5th Semester:

1. C11- Quantum Mechanics and Applications - DKH

2. C12- Solid State Physics
 - a. Crystal Structure, Elementary Lattice Dynamics, Magnetic Properties of Matter, Dielectric Properties of Materials – JR

b. Ferro electric Properties of Materials, Elementary band theory, Superconductivity – SG

3. DSE-1: Classical Dynamics – SJ

4. DSE-2: Nuclear and Particle Physics – DKH

GENERAL

1st Semester:

1. DSC-1A(CC-1): Mechanics

a. Vectors, Ordinary Differential Equations – DKH

b. Laws of Motion, Momentum and Energy, Rotational Motion, Gravitation – SP

c. Oscillations, Elasticity, Special Theory of Relativity – SG

3rd Semester:

1. DSC-1C (CC-7): Thermal Physics and Statistical Mechanics

a. Thermodynamic Description of system, Thermodynamic Potentials, – SP

b. Kinetic Theory of Gases, Theory of Radiation, Statistical Mechanics – JR

2. SEC -1A: Physics Workshop Skill - DKH

5th Semester:

1. DSE-1: Elements of Modern Physics – SG

2. SEC-3: Renewable Energy and Energy Harvesting - DKH

