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|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------|
| Lecture Plan                                                                                                                                                 |                  |                     |
| Name of the college: Government College of Arts, Science and Commerce, Sanquelim – Goa.                                                                      |                  |                     |
|                                                                                                                                                              |                  |                     |
| Name of Faculty: Ms. Anushka Panjekar                                                                                                                        | Subject: Physics |                     |
|                                                                                                                                                              |                  |                     |
| Paper code: PHY-111 : Everyday Physics                                                                                                                       | Program: FY BSc  | Division: -         |
|                                                                                                                                                              |                  |                     |
| Academic year: 2025- 2026                                                                                                                                    | Semester: I      | Total Lectures: 15L |
|                                                                                                                                                              |                  |                     |
| Course Objectives: This course aims to enhance the perception of physical concepts and develop deeper understanding of the world we interact with every day. |                  |                     |
|                                                                                                                                                              |                  |                     |
| Expected Course Outcome: Student will be able to                                                                                                             |                  |                     |
| 1. Recall fundamental concepts in Physics and connect them in everyday life                                                                                  |                  |                     |
| 2. Describe the fundamental concept to understand the physical phenomena happening around us.                                                                |                  |                     |
| 3. Apply fundamental concepts in Physics to analyse these phenomena.                                                                                         |                  |                     |
| 4. Correlate the concepts of Physics in other branches of science.                                                                                           |                  |                     |

| <b>Student Learning Outcome: The course will enable students to understand fundamental principles of mechanics, properties of matter, heat, light, sound, electrostatics, magnetism, and modern physics, while applying these concepts to solve real-world problems and develop a strong foundation for advanced studies in physics.</b> |              |            |                          |                               |                      |                         |                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------|--------------------------|-------------------------------|----------------------|-------------------------|------------------------------------------------------------|
| Month                                                                                                                                                                                                                                                                                                                                    | Lecture From | Lecture To | No. of lectures allotted | Topic, Subtopic to be covered | Exercise/ Assignment | ICT Tools               | Reference books                                            |
| JUNE                                                                                                                                                                                                                                                                                                                                     | 20-06-25     | 21-06-25   | 0                        |                               |                      |                         |                                                            |
| JUNE                                                                                                                                                                                                                                                                                                                                     | 23/06/25     | 28/06/25   | 1L                       | 1. Introduction               | Group discussion     | Powerpoint presentation | P. G. Hewitt, Conceptual physics, 12th ed., Pearson, 2015. |

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|---------------|----------|----------|----|---------------------------------------------|---------------------|----------------------------|---------------------------------------------------------------------|
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| JUNE,<br>JULY | 30/06/25 | 05/07/25 | 1L | 1. Newtons first law<br>and second law      | Group<br>discussion | Powerpoint<br>presentation | P. G. Hewitt,<br>Conceptual physics,<br>12th ed., Pearson,<br>2015. |
| JULY          | 07/07/25 | 12/07/25 | 1L | 1. Mass and weight<br>Newton's third<br>law | MCQ Quiz            | Powerpoint<br>presentation | P. G. Hewitt,<br>Conceptual physics,<br>12th ed., Pearson,<br>2015. |
| JULY          | 14/07/25 | 19/07/25 | 1L | 1. EQUILIBRIUM<br>RULE,<br>FRICTION         | MCQ Quiz            | Powerpoint<br>presentation | P. G. Hewitt,<br>Conceptual physics,<br>12th ed., Pearson,<br>2015. |
| JULY          | 21/07/25 | 26/07/25 | 1L |                                             | Group<br>discussion | Powerpoint<br>presentation | P. G. Hewitt,<br>Conceptual physics,                                |

|                 |          |          |    |                                                 |                     |                            |                                                                     |
|-----------------|----------|----------|----|-------------------------------------------------|---------------------|----------------------------|---------------------------------------------------------------------|
|                 |          |          |    | 1. speed,velocity,<br>Acceleration, how<br>fast |                     |                            | 12th ed., Pearson,<br>2015.                                         |
| JULY,<br>AUGUST | 28/07/25 | 02/08/25 | 1L | 1. Momentum,<br>Impulse                         | Group<br>discussion | Powerpoint<br>presentation | P. G. Hewitt,<br>Conceptual physics,<br>12th ed., Pearson,<br>2015. |
| AUGUST          | 04/08/25 | 09/08/25 | 1L | 1. Bouncing                                     | MCQ Quiz            | Powerpoint<br>presentation | P. G. Hewitt,<br>Conceptual physics,<br>12th ed., Pearson,<br>2015. |
| AUGUST          | 11/08/25 | 16/08/25 | 1L | 1. conservation of<br>momentum,<br>collisions   | MCQ Quiz            | Powerpoint<br>presentation | P. G. Hewitt,<br>Conceptual physics,<br>12th ed., Pearson,<br>2015. |

|           |          |          |    |                                                    |          |                         |                                                            |
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| AUGUST    | 18/08/25 | 25/08/25 | 1L | 1. work, Power                                     | MCQ Quiz | Powerpoint presentation | P. G. Hewitt, Conceptual physics, 12th ed., Pearson, 2015. |
| SEPTEMBER | 02/09/25 | 06/09/25 | 1L | Potential, Kinetic energy, conservation of energy. | MCQ Quiz | Powerpoint presentation | P. G. Hewitt, Conceptual physics, 12th ed., Pearson, 2015. |
| SEPTEMBER | 08/09/25 | 13/09/25 | 1L | Circular Motion, Rotational inertia                | MCQ Quiz | Powerpoint presentation | P. G. Hewitt, Conceptual physics, 12th ed., Pearson, 2015. |

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| SEPTEMBER          | 15/09/25 | 20/09/25 | 1L | Torque, Center of mass and center of gravity, Centripetal force, centrifugal force | MCQ Quiz | Powerpoint presentation | P. G. Hewitt, Conceptual physics, 12th ed., Pearson, 2015. |
| SEPTEMBER          | 22/09/25 | 27/09/25 | 1L | Angular Momentum, conservation of angular momentum.                                | MCQ Quiz | Powerpoint presentation | P. G. Hewitt, Conceptual physics, 12th ed., Pearson, 2015. |
| SEPTEMBER, OCTOBER | 29/09/25 | 04/10/25 | 1L | The universal law of gravity, the universal gravitational constant                 | MCQ Quiz | Powerpoint presentation | P. G. Hewitt, Conceptual physics, 12th ed., Pearson, 2015. |

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|         |          |          |    |                                                  |          |                            |                                                                     |
| OCTOBER | 06/10/25 | 11/10/25 | 1L | Inverse square law,<br>weight and weightlessness | MCQ Quiz | Powerpoint<br>presentation | P. G. Hewitt,<br>Conceptual physics,<br>12th ed., Pearson,<br>2015. |
| OCTOBER | 13/10/25 | 18/10/25 | 1L | REVISION                                         |          |                            |                                                                     |

Assessment Rubrics

| Component          | Max Marks |
|--------------------|-----------|
| ISA 1 Assignment   | 10        |
| ISA 2 Written Test | 10        |
| ISA 3 Written Test | 10        |
|                    |           |
| Semester End Exam  | 80        |