



**DCT's
Dhempe College of Arts and Science
Panaji, Goa**

Report on talk on the Aspects of Physics in Shipbuilding

Objective: The primary objective of the talk on 'Aspects of Physics in Shipbuilding' was to introduce students to the fundamental principles of physics that are integral to shipbuilding and naval architecture. The session aimed to enhance understanding of the practical applications of Physics in the design, stability, and movement of ships, while also providing insights into career opportunities in the shipbuilding industry.

No. of Beneficiaries: 54 Students, 4 faculty

Proceedings:

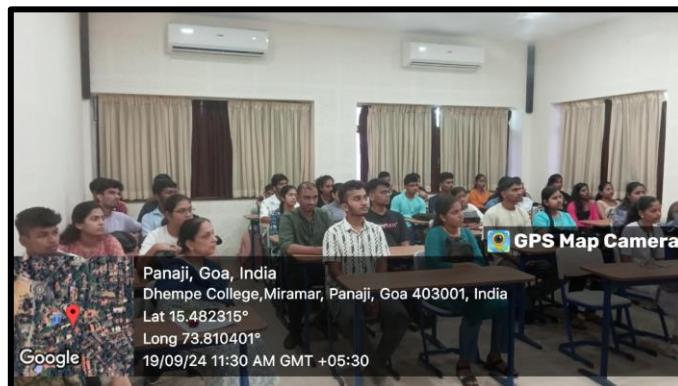
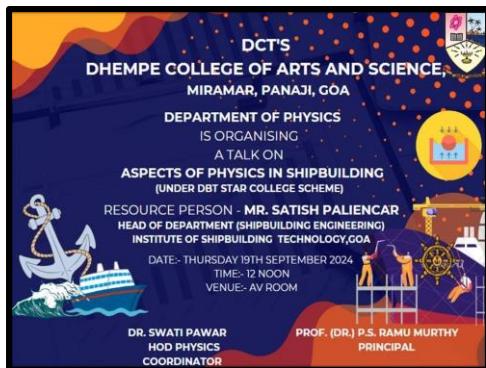
Talk on the Aspect of Physics in Shipbuilding was organised by Quarks Club, Department of Physics under DBT Star College Scheme on 19th September 2024. Mr. Satish Paliencar, Head of Department of Shipbuilding Engineering at the Institute of Shipbuilding Technology, Goa was invited as the chief guest. Mr. Paliencar began his talk by highlighting the vital role of ships in global transportation and provided an overview of the various types of ships used worldwide, such as cargo ships, tankers, container ships, and passenger vessels. He then delved into the essential physics principles that underpin shipbuilding, including Archimedes' Principle, Bernoulli's Theorem, and the laws of buoyancy, explaining how these laws govern the ability of ships to float and remain stable at sea. Through practical examples, he demonstrated their relevance in ensuring ship stability, especially under varying conditions like load changes and rough seas.

The session further explored key elements of naval architecture, with a focus on stability reference points such as the center of gravity and buoyancy, the strategic design of compartments to enhance safety, and the mechanics of propeller movement for efficient propulsion. Additionally, he discussed the role of radar systems in navigation and the Squat Effect, which impacts a ship's draft and speed in shallow waters. Each topic highlighted how the application of physics is integral to modern shipbuilding and the safe operation of vessels.

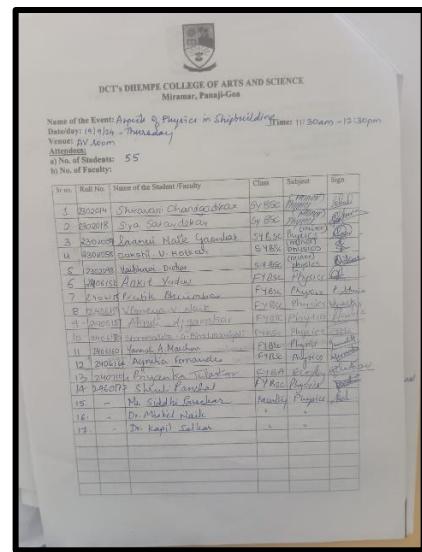
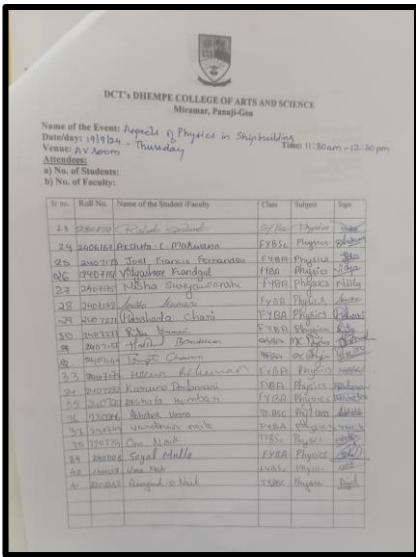
Dr. Swati Pawar, Head of Department of Physics, Vice Principal coordinator of the event of the college was instrumental in getting the resource person. Dr. Kapil Salkar Compered the session. Dr. Miskil Naik & Ms. Siddhi parsekar co-coordinated the session

Outcome

The audience gained a comprehensive understanding of how the application of physics principles is integral to the design, stability, propulsion, and safe operation of ships.



DCT's DHEMPE COLLEGE OF ARTS AND SCIENCE Miramar, Panaji-Goa					
Name of the Event:	Aspects of Physics in Shipbuilding	Class:	Subject:	Sign:	
Date/day:	19/09/2024 - Thursday				
Venue:	AV Room				
Attendees:					
a) No. of Students:					
b) No. of Faculty:					
Sr no.	Roll No.	Name of the Student /Faculty	Class	Subject	Sign.
01	2302069	Gayatri Lakadikar	SYBSC	Physics	✓
2	2302077	Sonal Rane	SYBSC	Physics	✓
3	2302152	Ranit Raj	SYBSC	Physics	✓
4	2302151	Prishab Jivani	SYBSC	Physics	✓
5	2202244	Aniudh Neupane	TYBSC	Physics	✓
6	2202156	Gopal Haldankar	TYBSC	Physics	✓
7	2407040	Tonushka Veerakar	FYBA	MC Physics	✓
8	2407044	Uchitika Kankar	FYBA	MC Physics	✓
9	2407221	Geetika Nimbalkar	FYBA	MC Physics	✓
10	2407229	Shreya Borkar	FYBA	MC Physics	✓
11	2302288	Ramona Fernandes	TYBSC	Physics	✓
12	2202135	Tanya Gavalkar	TYBSC	Physics	✓
13	2202176	Santoshwini Koli	TYBSC	Physics	✓
14	2302117	Shweta Zamkulikar	TYBSC	Physics	✓
15	2302164	Chyle De Almeida	TYBSC	Physics	✓
16	2407136	Nikhil Sardat	FYBA	Physics	✓
17	2407237	Somerksha Gavas	FYBA	Physics	✓
18	2301149	Omkar Dhurai	SYBSC	Physics	✓
19	2302148	Ojasvi Borkhatar	SYBSC	Physics	✓
20	2302099	Prachi Chappankar	SYBSC	Physics	✓
21	2302041	Chaitra Kamble	SYBSC	Physics	✓
22	2302070	Haritha Kalloli	SYBSC	Physics	✓



Dr. Swati Pawar
Vice Principal
&
Head, Department of Physics

Prof. P. S. Ramu Murthy
Principal

Dr. Miskil Naik
Quarks Club- Coordinator