

INDIA'S FIRST PRIVATE SECTOR INITIATIVE FOR DEFENCE TECHNOLOGY STUDIES

Objective of the Centre

The very objective of the CDTs is to create a cadre of professionals / specialists in the Defense Technology Domain.

Vision

To create a cadre of Defense Technology and Management Professionals to meet the Upcoming needs in the Defence Technology & Manufacturing industries and help towards achieving self-reliance in Defense.

Mission

To provide a conducive learning environment to budding Professionals to achieve excellence in the field of Defence Technology and Management



Achievements

- Two workshops were conducted for the faculty members of HITS by eminent professors from Cranfield University on 22nd November 2012.
 - Defence Modeling and Simulation
 - System Engineering and Defence Acquisition
- Book "India's Strategic Spectrum a Technological Perspective" was published by CDTs and released by the Governor of Chattisgarh, Shri. Shekhar Dutt during the DEFED 2012 Conference on 23 - 24 November 2012
- Proceedings of DEFED 2012 is published and circulated in India and Abroad.



Global Class Room for CDTs

Global Classroom has already been Established for video conferencing with universities/ industries.

Conduct of short term courses in collaboration with Cranfield University- Defence Academy of UK are under process.

Courses Proposed to be Conducted at CDTs

M. Tech. (Defence Tehnology) (Mech.)

- Guided missiles: Aerospace propulsion, Aerodynamics, Navigation, Guidance and Control, Aerospace structures and Flight mechanics
- Armament and Combat Vehicles: Advanced mechanics of materials, Mechanical vibrations, Armour protection systems, small arms and cannons and combat vehicle technology
- Air armament: Ballistics of bombs and projectiles, air armament design, air armament control and guidance, war head design and mechanisms
- Marine engg.: Ship dynamics and marine systems, advanced fluid mechanics, CFD, Marine gas turbines, marine diesel and steam engines
- Robotics: Introduction to Robotics, artificial intelligence and expert systems, mechatronics, robotic path planning and control, robot kinematics and dynamics
- Material science and technology: Modern materials for defence applications, materials for high temperature applications, fatigue, fracture and failure analysis, NDT
- System Engg., for defence capability

M. Tech. (Defence Tehnology) (Electronics)

- Cyber Security: Computer network security, operating system security, cryptography, data mining techniques, secure software engg.,
- Software Engg., : Introduction to software engg., software verification, validation and reliability standards
- Navigation systems: GNSS receiver design and applications, multi sensor integrated navigation, inertial navigation, indoor navigation
- Radar and communication: microwave engg., Digital signal processing, Radar system design, Antenna systems
- Wireless networks and application: Mobile and wireless communication, Advanced computer networks, Digital system design using FPGA, SOC and embedded systems, EMI, EMC, EMP, NEMP design
- Modelling and simulation of Military Vehicles: Defence simulation and modelling Short term courses leading to PG Diploma in Defence Technology

International Collaboration

- CDTs was represented at Cranfield-MBDA - HITS tripartite agreement for academic collaboration in 1st Week of May 2013.
- CDTs was also represented in a academic interface with Glyndwr University and Warwick University (UK) for possible academic collaboration in identified areas, in May 2013.
- CDTs - HITS represented at Cranfield under the chairmanship of Pro Chancellor when MOU was signed between the two Universities in 1st week of May 2013 at CU (UK)

Developing the Capabilities in Futuristic Defence Technologies

MOU exists with MBDA, UK for technical interaction

Interaction with MBDA, France

- Work in the field of Dual mode Ramjet-scramjet engine for hypersonic missiles (NIRBY-subsonic missile M=0.7; BRAHMOS supersonic missile M= 2.5; Hypersonic missile M=6-7)
- Interacted with Dr. Francois Felempin, Project Director, LEA Hypersonic Programme, MBDA, France

Interaction with Naval research lab., Washington DC

- Dr. Kailashnath, Head, Department of fluid flow, heat transfer and combustion
- Rotating detonation wave engine for futuristic aircraft engine

Interaction with TsAGI, Moscow

- Dr. Alexander Chevagin, Head, Propulsion and Aerodynamics group, TsAGI, Russia
- Research Areas in Propulsion and Aerodynamics are being identified for further interaction

Courses at CDTs

Following Courses duly approved by the Academic Council of HITS

- PhD - Full Time / Part Time - Defence & Strategic Studies
- M. Phil - Full Time - Defence & Strategic Studies
- MBA - Defence Technology Management

For Details Contact

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