

Education and Training

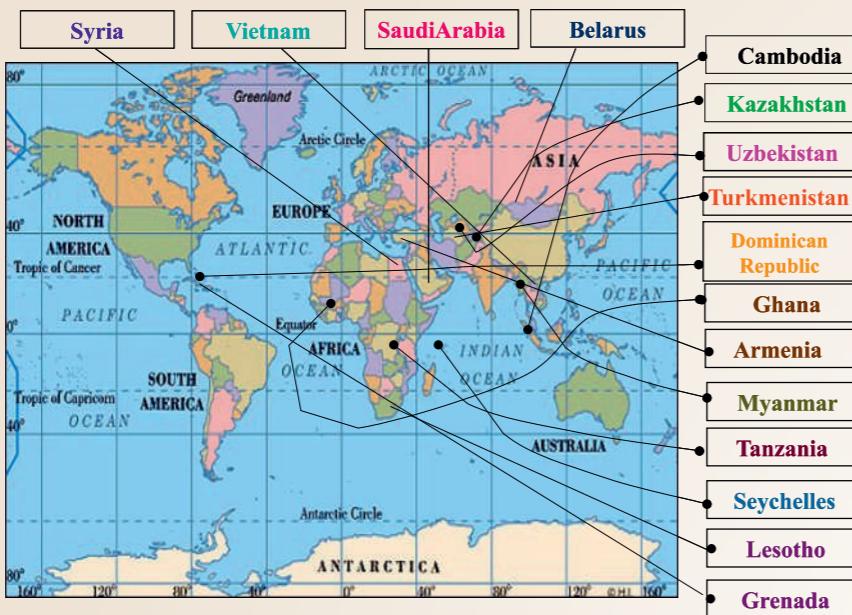


International Collaborations

C-DAC is committed to nation building and is the first Indian government agency that has expanded its training horizons globally, extending its high quality training services to countries like Armenia, Belarus, Cambodia, Dominican Republic, Ghana, Grenada, Kazakhstan, Lesotho, Mauritius, Myanmar, Seychelles, Tajikistan, Tanzania, Uzbekistan, Vietnam, etc.

Training is also imparted by C-DAC under various initiatives such as:

- Indian Technical and Economic Cooperation (ITEC) programme of Ministry of External Affairs (MEA)
- Special Commonwealth Assistance for Africa Programme (SCAAP) of Ministry of External Affairs (MEA)
- India Africa Forum Summit
- Various bilateral and multilateral co-operatives



Other Initiatives

Capacity Building Initiatives

- C-DAC has undertaken capacity building programme in the areas of Electronic Product Design and Production Technology (EPDPT) in collaboration with NIELIT, Aurangabad and NIELIT, Chennai in the identified areas including industrial services setup and incubation facilities, product design and development, testing and calibration, job-work/batch production and corporate training
- C-DAC offers ICT training for Scheduled Tribes (ST) candidates of Union Territory of Lakshadweep
- C-DAC has also empowered large number of local youth and self-help groups in the state of West Bengal and in North-Eastern states of Sikkim, Manipur, Mizoram and Tripura with necessary ICT skills for better employment opportunities

National Skill Development Initiative

Under National Skill Development Initiative, C-DAC conducts the Post Graduate Diploma Programmes at C-DAC centres and its Authorized Training Centres (ATCs) across India. Under this initiative, C-DAC is currently imparting training in Maharashtra and Odisha in collaboration with the state governments.

Training Programmes for Women Empowerment

In order to empower the women, the Department of Electronics and Information Technology (DeitY), Govt. of India has taken an initiative to offer job oriented training programmes through empanelled agencies. C-DAC is one of the organisations that will train students for jobs under this scheme. The training programmes have been designed to prepare the students for careers in Information Technology (IT), Business Process Outsourcing (BPO) and other IT enabled services.

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Post Graduate Diploma Programmes

Formal Education Programmes

Faculty Development Programmes

Corporate Training Programmes

Education Technologies

C-DAC's education and training programmes are aimed at creating skilled manpower in the country by providing quality training programmes in the field of Electronics as well as in the Information and Communication Technology (ICT). This activity started almost two decades ago with a humble beginning of training about 20 students per year, but has today grown to an extent of training more than 6000 students per year. It has also grown from just one training centre to about 50 training centres across India and has even made its presence in several countries abroad. In addition to conducting wide range of training programmes in the areas of Information, Communication and Electronics technologies, C-DAC also develops ICT tools and technologies for modern methods of imparting education and training to masses. The education and training activities of C-DAC are governed and steered by Academic Council (AC) and an Academic Management Committee (AMC).

Presently, C-DAC offers its various training programmes through its own training centres located at Bengaluru, Chennai, Hyderabad, Kolkata, Mohali, Mumbai, Noida, Pune and Thiruvananthapuram as well as through its network of Authorized Training Centres (ATC) spread across the country.

The various activities under the umbrella of C-DAC's education and training programmes are described below:

Post Graduate Diploma Programmes

C-DAC conducts two batches (starting in February and August) of following Post Graduate Diploma programmes of six months duration during the year:

- PG Diploma in Advanced Computing (PG-DAC)
- PG Diploma in Wireless and Mobile Computing (PG-WiMC)
- PG Diploma in VLSI Design (PG-DVLSI)
- PG Diploma in IT Infrastructure, Systems and Security (PG-DITISS)
- PG Diploma in Integrated Embedded System and VLSI Design (PG-DIVESD)
- PG Diploma in Geoinformatics (PG-DGi)
- PG Diploma in Healthcare Informatics (PG-DHI)
- PG Diploma in Embedded System Design (PG-DESD)
- PG Diploma in System Software Development (PG-DSSD)
- PG Diploma in Automation SCADA Systems (PG-DASS)

Admission to these programmes is done through a national level admission test named C-DAC's Common Admission Test (C-CAT).

Formal Education Programmes

C-DAC also conducts formal education programmes for higher education such as Ph.D., M.Tech., M.E., MCA and MBA (SEM) in collaboration/affiliation with Universities such as Gujarat Technical University, Ahmedabad; Veltech RR & SR Technical University, Chennai; Guru Gobind Singh Indraprastha University, Delhi; Punjab Technical University, Jalandhar; and Cochin University of Science and Technology, Kochi.

Faculty Development Programmes

C-DAC conducts advanced faculty training programmes in emerging trends of Hardware, Embedded Systems and Information Technology under the initiative of HRD Division, Department of Electronics and Information Technology (DeitY), Govt. of India and under the scheme for Manpower Development for Software Export Industry. Faculty members of various engineering colleges are provided with hands-on training to industry relevant areas of Information Technology.

Corporate Training Programmes

C-DAC offers various specialized training programmes for the corporate sector, organized sector and government agencies. The customized training programmes are designed based on the needs of the organization, in order to meet the project specific requirements.

C-DAC offers training to government and private sector organizations such as Indian Armed Forces, Armed Forces Medical College (AFMC), College of Military Engineering (CME), Indian Railways, Wipro, Intelligence Bureau (IB), National Technical Research Organization (NTRO), Crime Investigation Department (CID), Border Roads Organisation, Ministry of Finance, Cabinet Secretariat, Indian Coast Guard, etc.

Education Technologies

C-DAC has taken major initiatives in developing various applications and technologies in e-Learning and education technology domains as listed below:

- **e-Mentor** - a web-enabled learning solution that encompasses training, education, just-in-time information and communication, computer-based learning, virtual classrooms and digital collaborations
- **My-Sikshak** - focuses on needs and aspirations of individual learners and enables each learner to learn at his/her own pace
- **Collaborative Class Room (CCR)** - an online educational platform to support formal learning, which facilitates any time, any place learning through real time audio/video conference and accesses computational and storage resources of Garuda grid, a national grid computing initiative
- **Parikshak** - an automated program grading and analysis tool. It allows teachers to conduct programming exams in online mode, auto-evaluation of student's programming assignments, analysis after programming test, etc.
- **e-Pariksha** - a web based application for automation of the examination process. It assists in preparing question papers, scheduling exams, monitoring exams and generating results
- **Virtual Teaching Framework** - a blended virtual classroom based e-Learning framework for providing medical education through virtual teaching to the students of medical colleges
- **e-Contents Framework** - a four quadrant model based framework of e-Learning courses in various areas such as Disaster Management, Information Technology, Geographical Information Systems, Remote Sensing and Information Security
- **EduBOSS 3.0** - the educational variant of BOSS that includes features such as educational resources, games, paint and graphic tools and typing tutor. It also includes a host of tools and packages for basic learning, and also for teaching subjects like Mathematics, Science, Social studies, etc. for higher classes
- **Mentor** - an m-learning solution to help students to access video lectures, reference material, assessment, etc. using their mobile phones. It also facilitates instructors to carry out various course management activities like course creation, mapping videos to different topics in a course, assigning courses to students, evaluation report generation, etc.
- **Context Aware Mobile** - provides an environment to create immersive and interactive augmented reality based applications for different e-learning use-cases, like classroom/collaborative teaching, self-learning, learning by playing, etc.
- **Online Labs (OLabs) for School Lab Experiments** - provides students with the ease and convenience of conducting experiments over the Internet. OLabs has been deployed in various schools across Maharashtra, Kerala, and Karnataka. (<http://www.olabs.co.in>)
- **Framework for Adaptive Instruction** - enables delivery of instruction in a personalized manner. It is internationalized and provides Hindi language support
- **Computer Enabled Continuous and Comprehensive Evaluation (CCE)** - a framework based on the CBSE teacher's manual and other appropriate material for Class 9th and 10th
- **IT Based Computer Aided Design Centre for Creative Design and Development by Artisans/Weavers of North East Region** - a CAD centre aiming at mass scale proliferation of handloom sector, using modern concept and technology support. It develops a master trainer from each district periodically and utilizes the creative design development skill of the artisans by using tablets and user-friendly software solutions
- **T-Learning Suite** - an interactive enabling technology for education on broadcast media. It is an enabling technology for educational television broadcasters to deliver engaging interactive educational services. It caters to the needs of producers and broadcasters of educational TV programmes. The uniqueness of the suite lies in its design for the Indian scenario, enabling localized content. The solution includes efficient localization tools for generation of learning services in local languages

