

Candidates who have been offered seats through the first round of seat allocation, but have not paid the first installment by 5 pm on 24 February 2023 will not be considered for the second round of seat allocation. It will be assumed that these candidates do not want to take admission and their names will be removed from the second round of seat allocation processing. Therefore, in order to be considered for the second round of allocation, candidates are advised to pay the first installment and confirm their admission, even if the course/centre allocated in the first round is not their top preference. It may happen that the candidate may be allocated a higher-preferred course/centre in the second round of seat allocation.

(i)	Declaration of Second Round of Seat Allocation	27 February 2023
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Candidates who have already filled their choices of centres/courses but are not offered seats in the first round of seat allocation will be considered for the second round of seat allocation. In addition, candidates who have been already allocated seats in the first round of allocation, but did not get their top preferences, will also be considered in this round of seat allocation for their higher-preferred courses. The second round of seat allocation will be based on the preferences already given by the candidates during the first counselling (before the first round of allocation).

Upon logging in on the C-DAC website on 27 February 2023, candidates will get to know the course/centre allocated to them in the second round. All the candidates who have got their seats allocated in this round will also receive an e-mail notification. The seats allocated in the second round are the final seats.

(j)	Last date of payment of first installment fee for candidates allocated seats first-time through the second round	2 March 2023 (till 5 pm)
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Candidates who are allocated seats for the first time through the second round are required to pay the first installment fee of Rs 10,000/- + GST on it as applicable in February/March 2023 as a token amount to confirm their admission. The mode of payment of fees is explained in the section [Payment of Course Fee](#). Online payment of first installment course fee should be strictly done before 5 pm on 2 March 2023. Delays due to any reason are not acceptable. **Candidates who have already paid the first installment fee after the first round of seat allocation are not required to pay this amount again.**

Important Note: Candidates who have been allocated seats in any round of seat allocation, but have failed to confirm their admission (by not paying the first installment course fee) will have their seat allocations cancelled.

(k)	Payment of caution deposit and online selection of course and centre (2nd Counselling)	3 – 7 March, 2023 (till 5 pm)
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The second counselling (choice filling) will be done online by the candidates during 3 – 7 March, 2023 for the vacant seats available at C-DAC's training centres. In this new choice filling too, candidates can give preferences only for those courses belonging to the category for which

they have ranks in C-CAT. Seat allocations will be done based on their rank and course-centre preferences for the vacant seats only.

After logging in on the C-DAC website, candidates can check their centre/course eligibility for second counseling based on the C-CAT cut-off rank of the centre/course. **Only the courses/centres that are rank-wise eligible for the candidate will be displayed in his/her list.** Candidates can give their order of preferences of only the eligible courses and training centres. The details of the counselling process are given in section 16(f) of this Admission Booklet.

Candidates who have ranks obtained through the C-CAT conducted in January 2023 can participate in the second counselling, provided they belong to one of the following categories:

- i. Candidates who did not participate in the first choice filling (counselling) during 9 - 15 February 2023.
- ii. Candidates who were not allocated seats based on the first choice filling (counselling).
- iii. Candidates who were allocated seats based on the first choice filling, but have not paid the first installment course fee.
- iv. Candidates who were allocated seats based on the first choice filling and have paid the first installment fee, but subsequently withdrawn their admissions.

In order to participate in second counselling, candidates belonging to the above-mentioned four categories have to pay a caution deposit of Rs 10,000/- + GST on it as applicable in March 2023. After the confirmation of payment of this caution deposit, candidates can give as many preferences of eligible centre/courses from the available list.

Important Notes:

- (i) **In the second choice-filling, candidates should give preference to any centre/course only if they are keen on taking admission to it. Caution deposit shall not be refunded to candidates who are allocated seats in the third round.**
 - (ii) Candidates may note that, in anticipation of getting a higher preferred course through the second counselling, withdrawing or not confirming admission of a seat allocated through the first counselling may be a risky affair.
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Candidates facing any issues during online selection of course/centre may contact C-DAC Mumbai through phone (022-27565308 / 26201604) or e-mail (course-enquiry@cdac.in).

(I)	Declaration of Third Round of Seat Allocation	9 March 2023
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The course and centre allocated to the candidates who participated in the second counselling are published online on 9 March 2023. Candidates are allocated the vacant seats based on their ranks and fresh preferences given in the second counselling. They will get to know the course/centre allocated to them by logging in on the C-DAC website, and also through email.

The full caution deposit of Rs 10,000/- + GST shall be refunded to the candidates who are not allocated any seat in the third round. Candidates who are allocated seats in the third round should go ahead with their seats. No caution deposit shall be refunded to the candidates to whom seats are allocated through the third round.

(m)	Last Date of Payment of Balance Course Fee	15 March 2023
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Candidates who have confirmed their admission by paying the first installment course fee are required to pay the balance course fee on or before 15 March 2023. The second (final) installment amount + GST on it as applicable in March 2023 can only be paid through NEFT. The various steps for NEFT payment are explained in the section [Payment of Course Fee](#) of this Admission Booklet.

(n)	Last Date of Uploading of Eligibility Certificates and Registration of Students	16 March 2023
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Upon payment of full fees and proving the course eligibility, the selected candidates will be enrolled as C-DAC students at their respective allocated training centres. Candidates need to fill up and submit course registration forms online during registration. They are required to upload their passport-size colour photographs and qualifying degree certificate or provisional/passing certificate from the university.

Candidates who do not have their qualifying degree certificate (including candidates who have appeared for the qualifying examination and awaiting results) will be given provisional admission on submitting the proof that they have already appeared for all the examinations of their qualifying degree at the time of registration. These students will have to submit (at the admitted centre) the proof of having passed the qualifying degree with the required minimum marks by 30 June 2023 to confirm their admission.

Important Note: Candidates who are provisionally admitted as C-DAC students but are unable to produce the proof of qualification by 30 June 2023 will have their admissions cancelled. They will not be eligible for any refund of fees.

(o)	Commencement of PG Diploma Courses across India	17 March 2023
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Classes for the March 2023 batch of all the PG Diploma courses at all training centres of C-DAC will begin on 17 March 2023 in online/physical mode as per the courses/centres allocated to the students.

Candidates/students wishing to withdraw their admission during any stage of the admission process or course delivery must follow the guidelines mentioned in the section [Cancellation & Refund](#). Penalties levied on such candidates/students are also explained in this section.

Requests of students to relocate to another centre after taking admission at one centre may not be entertained except in certain exceptional cases. Such request letters along with valid certificates/proofs are to be addressed to the head of the allocated/admitted training centre. Depending on the seriousness of the applications, C-DAC shall take an appropriate decision on the transfer request. Even in all such exceptional cases, C-CAT ranking will be strictly followed.

If this transfer is to a course with higher fees, the difference in amount of fees is to be paid by the candidate. However if the transfer is to a course with lower fees, no part of the fees will be refunded by C-DAC.

Important Notes:

- (i) C-DAC reserves the right to cancel a course at any centre, if conducting the course is not viable due to any reasons. If a course is cancelled by C-DAC, the fees paid will be refunded to the candidates or alternate admission will be offered as per their ranks.
 - (ii) C-DAC has the right to cancel, at any stage, the admission of any candidate who is found to have been admitted to a course to which he/she is not entitled, being unqualified or ineligible in accordance with the rules and regulations in force.
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Open Day: After all the three rounds of seat allocations, an Open Day may be conducted for some C-DAC centres that still have good number of vacant seats. Open Day seat allocations will also be considered based on candidates' C-CAT rank.

17. Details of PG Diploma Courses

17.1 Post Graduate Diploma in Advanced Computing (PG-DAC)

PG-DAC is the most popular PG Diploma course of C-DAC. The course is targeted towards engineering graduates and MCA/MSc who wish to venture into the domain of advanced computing. The course aims to groom the students to enable them to work on current technology scenarios as well as prepare them to keep pace with the changing face of technology and the requirements of the growing IT industry. The entire course syllabus, courseware, teaching methodology and the course delivery have been derived from the rich research and development background of C-DAC. Running successfully for 25 years, the PG-DAC course has produced thousands of professionals, who are well positioned in the industry today. The major modules covered in PG-DAC are:

- Basic Programming Concepts
- Operating System Concepts
- Object Oriented Programming in Java
- Algorithms & Data Structures using Java
- Database Technologies
- Software Development Methodologies
- Web Programming Technologies
- Web-based Java Programming
- Microsoft .Net Technologies
- Aptitude & Effective Communication
- Software Project

17.2 PG Diploma in Big Data Analytics (PG-DBDA)

PG-DBDA will educate the aspirants who want to make an impact in the corporate and academic world in the domain of big data analytics as data scientist and researcher, big data leads/administrators/managers, business analysts and data visualization specialists. The course is also suitable for those who are already working in analytics to enhance their theoretical and conceptual knowledge as well as those with analytical aptitude and would like to start career in big data analytics in different business sectors. The collaboration with the different multi-national companies at the level of mutual research interests and customer related projects will ease the path for campus recruitment. The students will be able to work with big data platform, analyze various big data analysis techniques for useful business applications, design efficient algorithms for mining the data from large volumes, analyze the HADOOP and Map Reduce technologies associated with big data analytics, and explore big data applications. Modules covered in PG-DBDA are:

- Linux Programming and Cloud Computing
- Python and R programming
- Object Oriented Programming with Java 8
- Advanced Analytics using Statistics
- Data Collection and DBMS (Principles, Tools & Platforms)
- Big Data Technologies
- Data Visualization - Analysis and Reporting
- Practical Machine Learning
- Aptitude & Effective Communication
- Project

17.3 Post Graduate Diploma in Embedded Systems Design (PG-DESD)

Realizing the growth of embedded systems in day-to-day life and the need for trained manpower in this promising area, C-DAC launched PG-DESD for engineers in Computers, Electronics and IT. Embedded Systems is a unique field, where engineers need to have sound knowledge in hardware and software design. Keeping this aspect in view, C-DAC has designed this course giving equal emphasis to hardware and software, enabling engineers to face challenges in the design and development of state-of-the-art embedded systems. The latest curriculum includes a module on Internet of Things (IoT), specifically focusing on IoT architectures, applications, standards and protocols. The major modules covered in PG-DESD are:

- Embedded Systems Concepts, Design and Tools
- Embedded C Programming
- Data Structures and Algorithms
- Microcontroller Programming and Interfacing
- Embedded Operating Systems
- Embedded Linux Device Drivers
- Real-Time Operating Systems
- Internet of Things (IoT)
- Aptitude & Effective Communication
- Project and Seminar

17.4 Post Graduate Diploma in IT Infrastructure, Systems & Security (PG-DITISS)

PG-DITISS is targeted towards grooming students in the arena of human-computer interaction and cyber and network security. The objective of this course is to enable the students to understand the concepts of network security and learn the techniques of detecting the attacks and securing a network from internal and external attacks. At the end of the course, the student will be able to recognise a variety of generic security threats and vulnerabilities, understand the principles and practices of cryptographic techniques, identify and analyze particular security problems for a given application and apply appropriate security techniques to solve the security issues. The major modules covered in PG-DITISS are:

- Fundamental of Computer Networks
- Concepts of Operating System and Administration
- Security Concepts
- Network Defense and Countermeasures
- Compliance Audit
- Cyber Forensics
- Public Key Infrastructures
- IT Infrastructure Management & DevOps
- Aptitude & Effective Communication
- Project

17.5 Post Graduate Diploma in Artificial Intelligence (PG-DAI)

The objective of the PG-DAI course is to present in-depth knowledge and applications in Artificial Intelligence using tools and case studies. Upon completion of this course, participants will be empowered to use computational techniques in the area of Artificial Intelligence, Natural Language Processing, Machine Learning and Deep Learning based applications. The major modules covered in PG-DAI are:

- Mathematics for Artificial Intelligence
- Advanced Programming using Python & R
- Data Analytics
- Fundamentals of Artificial Intelligence
- Practical Machine Learning
- Deep Neural Networks
- Natural Language Processing & Computer Vision
- AI Compute Platforms, Applications & Trends
- Aptitude & Effective Communication
- Project

17.6 Post Graduate Diploma in Internet of Things (PG-DIoT)

This course will enable the students to utilize various embedded technologies related to IoT, Sensor Networks, Communication Protocols, Cloud Computing, Accessing Resources

and Services needed to perform functions with dynamically changing needs. It will also help to understand the IoT privacy and security concepts for secured IoT environment and to utilize the various IoT platforms to explore real time IoT application areas. After the course, students will be able to explore modern IoT trends and to undertake industrial research projects for the development of future solutions in the domain of Data Analytics to make an impact in the technological advancement. They will be able to use advanced IoT Tools/ Decision-Making Tools/ Operation Research Techniques to analyze the complex problems and get ready to develop such new techniques for the future. Modules covered in PG-DIoT are:

- Introduction to IoT and IoT Case Studies
- Programming Technologies
- Microcontroller Programming
- Embedded Linux Platform
- Network Programming and Wireless Technologies
- Data Management and Analytics
- IoT Protocols
- Edge and Cloud Computing
- IoT Security
- Aptitude & Effective Communication
- Project

17.7 Post Graduate Diploma in VLSI Design (PG-DVLSI)

PG-DVLSI is a pioneering course offered by C-DAC to assist engineers who wish to gain theoretical as well as practical knowledge in the field of Very Large Scale Integration (VLSI) design. It will also prepare them to keep pace with the changing trends of VLSI technology and the requirements of an ever-growing VLSI design industry. The entire course syllabus, courseware, teaching methodology and the course delivery have been derived from the rich research and development background of C-DAC, which has a legacy of designing the PARAM range of supercomputers. The major modules covered in PG-DVLSI are:

- Advanced Digital Design
- System Architecture
- Linux Shell Scripting & Python
- Verilog HDL
- HDL Simulation and Synthesis
- Programming Fundamentals for Design and Verification
- System Verilog
- Verification using UVM
- CMOS VLSI and Aspect of ASIC Design
- Aptitude & Effective Communication
- Project

17.8 Post Graduate Diploma in Mobile Computing (PG-DMC)

PG-DMC is targeted towards electronics/computer sciences/IT engineers who wish to venture into the domain of mobile computing. The course aims to groom the students to enable them to work on current technology scenarios as well as prepare them to keep pace with the changing face of technology and requirements of an exponentially growing mobile industry. The entire course syllabus, courseware, teaching methodology and the course delivery have been derived from the rich research and development background of C-DAC. The major modules covered in PG-DMC are:

- OS concepts and Linux Programming
- Introduction to DBMS
- OOPs with Java Programming
- Algorithms and Data Structure
- Java Programming-II (Advanced Java)
- Mobile Programming
- Hybrid Mobile Apps Programming
- Aptitude & Effective Communication
- Project

17.9 Post Graduate Diploma in Advanced Secure Software Development (PG-DASSD)

In today's scenario, cyber security threats are majorly addressed reactively; but by following proper software security practices we can minimize attacks and address this problem proactively. PG-DASSD course focuses on security requirements for modern software development with equal emphasis on programming foundations to make the students suitable to work in IT industry from day one. The course gives special emphasis to the emerging technology such as machine learning, and their use cases in cyber security. Objective of the course is to make students strong in programming basics, software security, current & emerging technology trends and prepare them to be on par with the changing technologies and the requirements of IT industry. The major modules covered in PG-DASSD are:

- Secure Programming and Secure SDLC
- Data Structures & Algorithms
- Linux System Programming
- Cryptography & Network Security Essentials
- Software Security
- Secure Network Programming
- Secure Java Programming
- Secure Android Programming & Analysis
- Python and Machine Learning for Cyber Security
- Aptitude & Effective Communication
- Project and Seminar

17.10 Post Graduate Diploma in Geoinformatics (PG-DGi)

Geoinformatics or Geomatics is the synergy of multiple disciplines, namely, GIS, remote sensing, photogrammetry, cartography, GPS and geodesy. It is fundamental to all the disciplines that use data identified by their locations. PG-DGi aims to provide conceptual knowledge on GIS, remote sensing and related fields, and hands-on training in GIS, satellite data interpretation, digital image processing, digital photogrammetry, digital cartography and GPS. There are also three electives, i.e., GIS Development, RDBMS and Geomatics Business & Project Management. Application of Geoinformatics in various development contexts are analysed through appropriate case studies. The course contents have been designed keeping in view the emerging trends in the field of Geoinformatics and the increasing needs of skilled manpower. Subjects covered in PG-DGi are:

- Geographic Information Systems (GIS)
- Global Positioning Systems (GPS)
- Remote Sensing
- Digital Image Processing
- Geospatial Programming (IT Domain)
- Geospatial Programming (GIS Domain)
- Geostatistics with R and Spatial Analysis
- Trends in Geoinformatics,
- RS & GIS Applications
- Aptitude and Effective Communication
- Project & Seminar

17.11 Post Graduate Diploma in Robotics & Allied Technologies (PG-DRAT)

Robotics is one of the growing inter-disciplinary fields of study that involves an understanding of varied domains. Becoming a true roboticist involves the sound knowledge of domains widely ranging from computer science, mechanical engineering, electronics, communications, design, ethical measures and several others. PG-DRAT addresses all these needs so as to equip the students with the necessary tools and techniques to be able to develop efficient, robust and industry standard robots, through state-of-the-art robotic algorithms, hands-on programming, systems development techniques, machine learning, kinematics, dynamics, workspace analysis, mission motion planning etc. The major modules covered in PG-DRAT are:

- Mechanical Design
- Electrical Design
- Programming Concepts
- Electronics Design: Sensor and Actuator Interface-
- Robot Operation System (ROS)
- Mission and Motion Planning
- AI/ML Based robotic vision
- Aptitude & Effective Communication
- Project and Seminar

17.12 Post Graduate Diploma in HPC System Administration (PG-DHPCSA)

PG-DHPCSA will educate the aspirants who want to make an impact in the corporate and academic world in the domain of High Performance Computing system administration as System Administrator, Storage Administrator and IT Infrastructure Specialist. The course is also suitable for those who are already working in HPC administration domain to enhance their theoretical and conceptual knowledge as well as those who would like to start career in HPC administration. The collaboration with the different multi-national companies at the level of mutual research interests and customer related projects will ease the path for campus recruitment. At the end of the course the students will be able to manage HPC infrastructure like network, storage, resource and backup management, efficiently design data center, maintain the HADOOP cluster and map reduce technology, explore on HPC applications and solutions, and understand the fundamentals of various cloud techniques and system security. Modules covered in PG-DHPCSA are:

- Computer Architecture
- Linux Operating System and Perl
- HPC System Administration and Management
- Python Programming
- Fundamentals of Computer Network and Management
- Storage and Backup Management
- Resource Management and Accounting
- Security and Traffic Management
- Hadoop Administration
- Cloud Services and Security
- Aptitude and Effective Communication
- Project

17.13 Post Graduate Diploma in FinTech & Blockchain Development (PG-DFBD)

PG-DFBD will equip students with the skill set to completely decode the FinTech and Blockchain puzzle, imparting fundamental clarity on the required components, and will provide a strong understanding of the Blockchain and FinTech technologies involved along with their applications/business as is being seen in the current scenario. The course will systematically take candidates through the latest technologies of Blockchain, FinTech development, Artificial Intelligence/Machine Learning (AI/ML) in FinTech and Policy, Risks and standards associated with it that are becoming the hallmark of advanced business applications. Major modules covered in the PG-DFBD are:

- Introduction to FinTech and Applications
- Secure Programming and Software Development for FinTech
- Programming for FinTech and Blockchain
- Cryptography and PKI
- MERN Stack for FinTech
- Blockchain Platforms and Applications

- Business Analytics and AI/ML for FinTech Applications
- Policy, Risk, and Challenges in FinTech & Blockchain
- Aptitude and Effective Communication
- Project

17.14 Post Graduate Diploma in Cyber Security & Forensics (PG-DCSF)

The threats of cyber-attacks are increasingly apparent to individuals and organizations across the globe. The PG-DCSF course is beneficial to engineers and cyber security practitioners to develop expertise in defensive cyber security, application security, ethical hacking, cyber forensics etc. It will enable learners to gain knowledge and skills in a series of advanced and current concepts in cyber security and forensics. After completion of this course, students will be equipped with comprehensive understanding of the security controls, network security, traffic analysis, packet analysis, cyber forensics, vulnerability analysis and penetration testing, etc. The entire course syllabus, course-ware, teaching methodology and the course delivery have been derived from the rich research and development background of C-DAC. The depth and width of the course is unique in the industry covering a wide spectrum of requirements of the cyber security domain.

- Linux/Windows Server Administration
- Network Essentials
- Ethical Hacking
- Python Programming
- Cyber Forensics
- Penetration Testing and Incident Response
- Secure Programming
- Security Operations and Management
- Aptitude and Effective Communication
- Project

18. Laptop/Desktop Configuration & Software Requirements for Online Classes

18.1 PG Diploma in Advanced Computing (PG-DAC)

Client Machine (Desktop/Laptop)	
Processor : Intel Core i3 or above	
Memory : 8 GB RAM or above	
Hard Disk : 500 GB	
Video Card : Intel Integrated Graphics	
Network : Ethernet / WiFi with 25 Mbps Speed Connection (UL/DL)	
Accessories : Web Camera, Headphone with Mic	
Module Name	Software
All Modules	Windows 10/ Linux Cent OS 6.4/ Fedora 8.0/ Ubuntu 64 bit or latest version Open/Microsoft Office Mozilla/Chrome latest version
Fundamentals of Programming	JDK 8.0 or latest version, Eclipse latest version, Apache Tomcat 8.0 or latest version
Algorithms & Data Structures	
Objected Oriented Programming with Java	
Web-based Java Programming	
Operating System Concepts	GCC, Secure Shell, VM Editor
Database Technologies	MySQL 5.7 or latest version, MongoDB
Web Programming Technologies	Visual Studio Code latest version, XAMPP
MS.Net Technologies	Visual Studio
Software Development Methodologies	Star UML, Jenkins, Docker, Postman

18.2 PG-Diploma in Big Data Analytics (PG-DBDA)

Client Machine (Desktop/Laptop)	
Processor : Intel Core i5 or above	
Memory : 8 GB RAM or above	
Hard Disk : 500 GB	
Video Card : Intel Integrated Graphics (suggested – 4 GB graphics card - NVIDIA)	
Network : Ethernet / WiFi with 25 Mbps Speed Connection (UL/DL)	
Accessories : Web Camera, Headphone with Mic	

Module Name	Software
All Modules	Linux Cent OS 6.4/ Fedora 8.0/ Ubuntu 64 bit or latest version Mozilla/Chrome latest version Open Office
Linux Programming & Cloud	Virtual Box, latest Linux Image
Python and R programming	Python 3.3.4, Sypder IDE, R Packages, R Studio
Object Oriented Programming with Java 8	Eclipse IDE or Netbeans
Practical Machine Learning	Python IDE, sklearn, seaborn, matplotlib, tensorflow, pytorch
Advanced Analytics using Statistics	Pandas, Numpy, Scipy, Scrappy, Plotly, Beautiful Soup, R Packages
Data Collection and DBMS	Oracle Database , MongoDB
Big Data Technologies	Hadoop tar, Spark, Hive, HBASE, Airflow
Data Visualization	Power BI , MS Excel

18.3 PG Diploma in Artificial Intelligence (PG-DAI)

Client Machine (Desktop/Laptop)	
Processor : Intel Core i5 or above	
Memory : 8 GB RAM or above	
Hard Disk : 500 GB	
Video Card : 4 GB Graphics Card (NVIDIA GeForce GTX10 series or above)	
Network : Ethernet / WiFi with 25 Mbps Speed Connection (UL /DL)	
Accessories : Web Camera, Headphone with Mic	
Module Name	Software
All Modules	Linux Cent OS 6.4/ Fedora 8.0/ Ubuntu 64 bit or latest version Mozilla/Chrome latest version Open Office
Fundamentals of AI	spider IDE, Jupiter notebook
Advanced Programming using Python	Python 3.6, Numpy, Scipy & Pandas
Mathematics for AI	
Practical Machine Learning	ScikitLearn, SEABorn, matplotlib, TensorFlow, pyTorch, Keras
Natural Language Processing & Computer Vision	OpenCV, NLTK
Deep Neural Networks	Google Colab
Data Analytics	Python 3.6, Tableau

AI Compute Platforms, Applications & Trends	Spark 2.x, spyder IDE
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18.4 PG Diploma in Geoinformatics (PG-DGi)

Client Machine (Desktop/Laptop)	
Processor : Intel Core i3 or above	
Memory : 8 GB RAM or above	
Hard Disk : 500 GB	
Video Card : Intel Integrated Graphics	
Network : Ethernet / WiFi with 25 Mbps Speed Connection (UL/DL)	
Accessories : Web Camera, Headphone with Mic	
Module Name	Software
All Modules	Windows 10/ Linux Cent OS 6.4 ; Microsoft Office, Mozilla/Chrome latest version
Geographic information system and Global Positioning system	Arc GIS, QGIS
Remote sensing	ERDAS IMAGINE
Digital Image Processing	ERDAS IMAGINE
Geospatial Programming (IT Domain)	MySQL 5.7 or latest version, Python 3.3.4, Eclipse IDE or Netbeans
Geospatial Programming (GIS Domain)	Python 3.3.4, PostGIS, PostgreSQL
Geostatistics with R and Spatial Analysis	R Packages, R Studio

18.5 PG Diploma in Robotics & Allied Technologies (PG-DRAT)

Client Machine (Desktop/Laptop)	
Processor : Intel Core i5 or above	
Graphics Card: NVIDIA® GeForce® with 2GB graphics memory	
Memory : 16 GB DDR4RAM x1, 3200 MHz or above	
Hard Disk : 512 GB Solid State Drive, 1TB HDD	
GPU : Intel Integrated GPU core	
Network : Ethernet /WiFiwith 25Mbps Speed Connection (UL/DL)	
Accessories :Web Camera, Headphone with Mic	
Module Name	Software
All Modules	Ubuntu 18.04 / 20.04 and Windows 10 Open Office
Introduction to Robots and Robotics	Python, C, C++, Microcontroller Programming(vm lab, KeiluVision)
Mechanical and Electrical Design	AutoCAD, FEA, 3D Modelling, FEAST

Controller , Sensors and Actuator Interface	C, C++
Mission and Motion Planning	Octave Gazebo
Robotic Operating System	ROS
AI/ML/Robotic Vision	TensorFlow, Keras, CUDA, Jupyter Notebooks Google Colab OpenCV, PyTorch

Hardware Kit to be purchased by the students of PG-DRAT course in consultation with C-DAC Kolkata (Total estimated cost – Approximately Rs. 10,000/-):

- STMicroelectronics Discovery MCU Development Kit STM32F407G-DISC1, or any equivalent kit (for ARM module)
- Raspberry Pi or Beagle bone black kit or any equivalent kit (for Linux Device Driver module)
- USB TO UART TTL 5V 3.3V FT232RL Download Cable To Serial Adapter Module 2 PCS (for ARM module)
- Sensor Module Kit.
- Navigation module-Base and Rover pair ZED -F9P, uBlox F9 receiver platform
- Communication module – Long Range Wi-Fi Module, Zigbee, UART
- BLDC, Steering Motor Kit
- Battery
- Serial and Parallel Manipulator
- Various Types of Gripper
- Tracked Vehicle
- Humanoid Platform
- Wheeled Platform

18.6 PG Diploma in FinTech & Blockchain Development (PG-DFBD)

Client Machine (Desktop/Laptop)	
Processor: Intel Core i5 or above	
Memory: 8 GB RAM or above	
Hard Disk : 500 GB	
Video Card : 4 GB Graphics Card (NVIDIA GeForce GTX10 series or above)	
Network: Ethernet / WiFi with 25 Mbps Speed Connection (UL /DL)	
Accessories: Web Camera, Headphone with Mic	
Module Name	Software
All Modules	Latest versions of : <ul style="list-style-type: none"> • Fedora / Ubuntu 64 bit • Open Office • Mozilla/Chrome latest version
Introduction to FinTech and Applications	-----

Secure Programming and Software Development for FinTech	JDK, IDE(Netbeans, Eclipse, VS Code), Git, docker, kubectl, kind,minikube,kubeadm, cURL
Programming for FinTech and Blockchain	Android SDK, node, npm, solcjs, Truffle or Hardhat, ganache, VS Code,
Cryptography and PKI	GCC, spider IDE, Jupiter notebook, openCA
MERN Stack for FinTech	Node, VS Code, mongo, mongoose, Npm or Yarn(react, express)
Introduction to Blockchain and Applications	Node, Npm, geth, VS Code, Docker, Git, cURL, Go
Business Analytics and AI/ML for FinTech Applications	spider IDE, Jupiter notebook
Policy, Risk, and Challenges in FinTech & Blockchain	-----

18.7 PG Diploma in Cyber Security & Forensics (PG-DCSF)

Client Machine (Desktop/Laptop)	
Processor : Intel Core i5 or above	
Memory : 8 GB RAM or above (16 GB recommended)	
Hard Disk : 500 GB (minimum) (1 TB recommended)	
Video Card : Intel Integrated Graphics	
Virtualization: VT-x/Vx must be ENABLED in BIOS	
Network : Ethernet / WiFi with 25 Mbps Speed Connection (UL/DL)	
Accessories : Web Camera, Headphone with Mic	
Module Name	Software
All Modules	Windows 10/ Linux Cent OS 7.2/ Ubuntu 64 bit or latest version ; Open/Microsoft Office Mozilla/Chrome latest version
Linux/Windows Server Administration	VirtualBox, CENTOS 7.2, Windows 2019
Network Essentials	GNS
Ethical Hacking	Nmap, Zenmap, Nikto, Nessus, Metasploit, Wireshark, Maltego, SQLMap, Burp Suite, WebInspect, Hashcat
Python Programming	Python 3.9, Sypder IDE, Jupyter Notebook
Cyber Forensics	TSK, Autopsy, WinHex, FTK Imager, LiME, Helix, OSForensics, Volatility, DB Browser for SQLite, IDA Pro, dex2jar, apktool, adb, Android Studio
Pentesting and Incident Response	Netsparker, Acunetix, Metasploit, Wireshark, w3af, Kali Linux, Nessus, Zed Attack Proxy, Retina, Sqlmap, Canvas, BEEF
Secure Programming	Metasploit Framework, Juice Shop, Wapiti, SonarQube
Security Operations and Management	Splunk, SolarWinds Security Event Manager

19. Address and Contact Details of C-DAC Training Centres where PG Diploma Courses are offered

All support landline and mobile numbers given below are available between 10 am - 1 pm and 2 pm - 5 pm on working days. Candidates are advised to write their queries and requests to the below given email address from their registered email, with details such as their name and C-CAT Form No, without which C-DAC may not be able to respond to these candidates.

Centre & City	Address	Contact Person	Email & Telephone No.
C-DAC Bengaluru	No. 68, 4th Cross, Electronics City Phase 1, Hosur Road, Opp. BSNL Tel Exchange, Bengaluru 560100	Ms. Uma Prasad	actsb@cdac.in 080-28523300
C-DAC Chennai	TIDEL Park, 8th Floor, D Block (North), No.4, Rajiv Gandhi Salai, Taramani, Chennai 600113	Ms. Sunandha D	chnacts@cdac.in 044-22542226 / 22542227 / 22542273
C-DAC Hyderabad	Plot No. 6 & 7, Hardware Park, Survey No 1/1, Srisailem Highway, Hyderabad 501510	Mr. BSRK Varaprasad	bsrkvprasad@cdac.in training-hyd@cdac.in 040-29564857, 7382053731 / 2
C-DAC Kochi	STDC, 40/8147, 2nd Floor, Narakathara Road, Near Shenoy Theatre, Kochi, Kerala 682035	Ms. Sunitha CS	stdckochi@cdac.in 0484-2372422 9447247984
C-DAC Kolkata	Plot E 2/1, Blok - GP, Sector - V, Salt Lake Electronics Complex, Bidhannagar, Kolkata 700091	Mr. Asok Bandyopadhyay	info-kolkata@cdac.in 033-23579846 / 23575989
C-DAC Mohali	A-34, Industrial Area, Phase - VIII, Mohali 160071	Ms. Amritpal Kaur Dr. Manjit Kaur	etd@cdac.in , manjeet@cdac.in 0172- 6619000 , 2237052-55
C-DAC Mumbai (Juhu)	Gulmohar Cross Road No. 9, Juhu, Mumbai 400049	Ms. Sudha Iyer	course-enquiry@cdac.in 022-26201606/04
C-DAC Mumbai (Kharghar)	Sector 7 – CBD Belapur, Next to Bharati Vidyapeeth, Near Kharghar Railway Station, Navi Mumbai 400614	Ms. Rekha S Ms. Mohini More Ms. Sudha Iyer	course_kh@cdac.in 022-27565308/04
C-DAC New Delhi	Plot No. 20, FC-33, Institutional Area, Jasola, New Delhi 110 025	Mr. Apoorva Kohli Mr. Ankit Khurana Mr. Shoyab Ali	actsdelhi@cdac.in 9899599807 , 9870320010 , 9166781294 , 011-29879513
C-DAC Noida	B-30, Sector 62, Institutional Area, Noida, U.P. 201307	Ms. Neha Upadhyay Mr. Ravi Payal Ms. Anu Mahajan Ms. Sidhidatri Nayak	recpacad-noida@cdac.in 0120-2210800 Extn 92 ravipayal@cdac.in 9711770748 9540833535 , 9990047877
C-DAC Patna	14th Floor, Biscomaun Tower, West Gandhi Maidan, Patna, 800001	Mr. Prince Raj	infocdacpatna@cdac.in 0612-2219021 , 8757570233
C-DAC Pune	ACTS, C-DAC Innovation Park, 4th floor, Sr. No. 34/B/1, Panchvati, Pashan, Pune, Maharashtra 411008	Ms. Heera Mohanan Mr. Prakash Devkule - Fees/Refund	actssupport@cdac.in 020-25503134/136/107
C-DAC Silchar (Silchar Campus)	IIPC Building, NIT Silchar Campus, Silchar, Assam 788010	Mr. Ranjan Singh Mr. Alok Dey	ranjan@cdac.in 8133029380 alokdey@cdac.in 8447130305 03842-242009
C-DAC Silchar (Guwahati Extn)	Assam Engineering College, AEC Road, Jalukbari, Guwahati, Assam 781013	Mr. David Ray	davidr@cdac.in 7002750884
C-DAC Thiruvananthapuram	STDC, Technopark Campus, Kariyavattom, Thiruvananthapuram, Kerala 695581	Mr. Hiron Bose	stdc@cdac.in 0471-2781500 , 8547882754

ATC & City	Address	Contact Person	Email & Telephone No.
Academy of IT (YCP) Mumbai	5th Floor, Y.B. Chavan Centre, General Jagannathrao Bhosale Marg, Nariman Point, Mumbai 400021	Mr. Hemant Takale	aitycpmumbai@gmail.com 022-22043619 /17
Astric Centre of Excellence, Patna	Pratiksha Bhavan, Khajpura, Bailey Road, Patna, Bihar 800014	Mr. Prabhat Kumar Sinha	atcpatna@astric.in 0612-2597031 , 8083997775
Bytes Softech New Delhi	T-8, Okhla Industrial Area Phase-II 011-46579380 New Delhi 110020	Mr. Lokesh Chaudhary	enquiry@bytessoftech.com 9350552415
Career Foresight Patna	Ist & 3rd Floors, Saraswati Basant Enclave, Near Vasundhara Mall, Beside Alankar Motors, Rajapur, East Boring Canal Road, Patna, Bihar 800014	Mr. Arun Kumar Singh	contact@careerforesightatc.in 0612-2573806 9031863496
IACSD Pune	Dr. D.Y. Patil Educational Complex, Sector 29, Near Akurdi Railway Stn, Pradhikaran, Nigdi, Pune 411044	Wg. Cdr. P.V.C. Patil (Retd)	ittrg@iacsd.com 020-27659509 9607690988
Infoway Technologies Pune	3rd Floor, Commerce Centre, Rambaug Colony, Opp. Krishna Hospital, Paud Road, Kothrud, Pune 411038	Ms. Ashwini Ovhal	coordinator@infowayltd.com 020-41312111
Institute of Emerging Technologies Pune	Office No. 401, A Wing, 4th Floor, Manikchand Galleria, Swastik Society, CTS No. 996, Model Colony, Shivajinagar, Pune 411016	Mr. Sangram Patil	info@ietpune.com 8263589466
Know-IT Pune	Office No: 2, 1st Floor, Gokhale Sanchit, Survey No 846, BMCC Road, Deccan Gymkhana, Pune 411004	Mr. Nachiketas Bhatkar	contact@know-it.co.in 9021479888 , 9823434616
Lakshya Bhubaneswar	4th Floor, IDCO Towers, 1 Janpath, Bhubaneswar, Odisha 751022	Mr. Priyabrata Kar	priyabrata.kar@lakshyatraining.org 9040022750
MET - IIT Mumbai	Bandra Reclamation, Gen. Arun Kumar Vaidya Chowk, Bandra (West), Mumbai 400050	Mr. Nilesh Shirke	metiit@met.edu 022-39554366
MET - IIT Nashik	MET - IIT, Bhujbal Knowledge City, Adgaon, Nashik, Maharashtra 422003	Mr. Akash Thakur	info_iit@bkc.met.edu 0253-2555896
NETCOM Jaipur	747, Janpath, Rani Sati Nagar, Nirman Nagar, Jaipur, Rajasthan 302019	Dr. Manoj Kumar Sharma	info@netcomedu.in 9649272709
Orlando Academy Indore	20-21 Press Complex, First Floor, Behind Danik Bhaskar, A.B. Road, Indore, M.P. 452001	Mr. Kunal Kansal	info@orlando.co.in 0731-4285004 9584894999
Soft Polynomials Nagpur	1 st Floor, Shree Ganesh Vighnaharta Apartments, South Ambazari Road, Mate Square, Shraddhanand Peth, Nagpur Maharashtra 440012	Mr. S.M. Deshpande	infocdac@softpolynomials.com 0712-2556808 7058018578
Sunbeam Institute of IT Karad	Anuda Chambers, 203 Shaniwar Peth, Near Gujar Hospital, Karad, Maharashtra 415110	Mr. Prashant Lad	siitkarad@sunbeaminfo.com 02164-225800 8068944544
Sunbeam Institute of IT Pune	Sunbeam IT Park, Phase-II, Rajiv Gandhi Infotech Park, Hinjawadi, Pune, Maharashtra 411057	Mr. Nitin Kudale	siit@sunbeaminfo.com 8447901102
USM's Shriram Mantri VITA Mumbai	5th Floor, Vidyanidhi School, Vidyanidhi Road, JVPD Scheme, Juhu, Mumbai 400049	Ms. Savita Thakur	training.vita@gmail.com 022-26255629