Prospectus

NIELIT Kolkata Offers National Forensic Sciences University (NFSU) Affiliated Formal Programs on

1. M.Sc. Cyber Security (2 Years)
2. P.G. Diploma in Cyber Security (PGDCS) (1 Year)

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Salt Lake Campus, Block-BF-267, Sector-I, Kolkata - 700064

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Message from the Executive Director

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Welcome to NIELIT Kolkata, one of the oldest Centres among all NIELIT offices in the country and a paradise of learning in the field of Information, Electronics and Communications Technology (IECT) resulting in Digital Literacy, Skill Development and Capacity Building towards a Digital Society. Since its inception in 1976, NIELIT Kolkata has established itself as a premier institution providing affordable quality education as per the job market requirements for candidates from all over India. Apart from these, we also offer customised courses for Government and Corporate clients. As a committed and dedicated institute, our aim is to provide quality computer training/services that exceed the expectation of our students. Apart from formal courses on Cyber Security, we offer various NSQF aligned Skill Oriented short and long-term courses starting from Digital Literacy courses (ACC, BCC, CCC, CCC Plus, ECC, etc.) to specialised courses like Data Science, AI, IoT, Multimedia and Animation Technology 'O' Level, ESDM, etc. as per industry demand leading to skill development in the area of IECT. Our Centre is also reaching out in rural areas by implementing the Capacity Building initiative of NIELIT for weaker section of the society, funded by Govt of India. We have started a cluster of Centre of Excellence in new emerging areas for Future Skills PRIME capacity building projects (Blockchain, Data Analytics, AR/VR, Robotic Process Automation, Cyber Securities, IoT, etc.) of Ministry of Electronics and Information Technology (MeitY), Government of India. The basket of activities of NIELIT Kolkata is further augmented by the wide range of projects that it undertakes. NIELIT has demonstrated its capability and capacity to undertake R&D projects, consultancy services, turnkey projects in office automation, software development, website development etc. In all training courses, our goal is to maintain a learner-centric focus towards producing competent professionals in Computer Science and Electronics and Communication technologies contributing towards the development of new technologies to achieve our Vision by contributing towards the welfare of entire mankind.

V. Krishnamurthy
Executive Director & Scientist 'G'
NIELIT Kolkata

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1. Introduction to NIELIT Kolkata

NIELIT Kolkata(formerly DOEACC Society Kolkata Centre since 14.12.2002 and prior to that Regional Computer Centre (RCC), Calcutta) is one of the oldest IT houses in eastern region imparting IT Education and Training for more than 40 years. The Centre was established in 1976 as a Registered Scientific Society (Autonomous Body) by the Central and West Bengal Governments.

In December 2002, RCC, Calcutta, was merged with DOEACC Society — An Autonomous Scientific Society of Department of Electronics & Information Technology under Ministry of Communications & Information Technology, Govt. of India. The Society has its Headquarters at Dwarka, New Delhi and pan India presence of more than fifty (50) offices. It is also well networked throughout India with the presence of about 700+ institutes.

NIELIT is making efforts to bridge the 'digital divide' through skill development leading to the employability of the youth. We also provide betterment schemes for the marginalized sections of the society. Accreditation and Registration processes have been simplified by self-certification of documents, which has considerably reduced the processing time.

Model Career Centre (MCC) has been set up at NIELIT Kolkata under the National Career Service Scheme of the Directorate General of Employment. It is a historic step which would facilitate the youth from all sections of the society to take advantage of career guidance, counseling services and also conducting several job fairs.

The basic objective of NIELIT Kolkata is described below:
  i.   To carry out human resource development related activities in the area of Information Electronics and Communication Technology (IECT) which would enable employment generation and IT-led economic growth.
  ii. Capacity building through various programmes such as Blockchain, Bigdata, Machine Learning, Data Analytics, AR-VR, Cyber Security, Solar Technology, Multimedia etc.
  iii. Capacity building through e-Governance to enable Citizen Centric Services, empowering through Digital Education by using the services of the Centre, accredited institutes and CSCs.
  iv. Development of several software for National level projects-Agricultural Census, NPR, Livestock, etc.
  v.   Assist the aspiring youth for their career either by assisting job plan or grooming to be future entrepreneur

2. Location
NIELIT Kolkata has at present two operational units:

Jadavpur Campus: Jadavpur University Campus, Kolkata – 700032.
Phone : +91-33-2414-6081/6054/6682, Fax: +91-33-2414-6549

Jadavpur Campus of NIELIT Kolkata Centre is located in a lush green environment inside Jadavpur University Campus**,** connected with bus and train services from different corners of the city.

Salt Lake Campus : Block-BF 267, Sector-I, Salt Lake, Kolkata – 700064, +91-33-46020938

Salt Lake Campus is a new building of NIELIT Kolkata at Sector-I, Salt Lake which has also started its operation. The building (B+G+3 storied) has an area of 20,000 sq.ft. and is well equipped with modern technological facilities needed for training in selected domains.

3. Centre's Thrust Areas

- NIELIT IT('O', 'A' & 'B' Level) ,CHM ('O' Level) Hardware & Networking Courses and Multimedia and Animation Technology courses
- Emerging Technologies like Blockchain, Big data, Machine Learning, Data Analytics, AR-VR, Cyber Security, Solar Technology, Multimedia
- AICTE approved summer training programmes.
- 'CCC' & 'BCC' Online examination
- Corporate Courses as per requirement
- Several Short Term Courses as per Market demand
- Directorate General of Employment (DGE) Training
- Directorate General of Defence (DGR) Training
- Execution of National Level Software Development Projects- Agricultural Census, NPR, Livestock, DoE etc.
- Model Career Centre (MCC) under National Career Service
- Implementing agency for the Govt. of India sponsored Training program in the area of Electronic System Design and Manufacturing (ESDM) in the state of West Bengal with the help of its Accredited Training Partners.
- Future Skills PRIME capacity building projects (Blockchain, Data Analytics, AR/VR, Robotic Process Automation, Cyber Securities, IoT, etc.) of Ministry of Electronics and Information Technology (MeitY), Government of India

4. The Courses —M.Sc. Cyber Security and P.G. Diploma in Cyber Security – an Overview

NIELIT Kolkata Centre offers Formal Courses under affiliation with National Sciences Forensics University (NFSU) as per detail available in Table 1.

The National Forensic Sciences University (NFSU) with the status of an Institution of National Importance is the world's first and only University dedicated to Forensic, behavioral, cybersecurity, digital forensics, and allied Sciences. It was established by the Government of India through Act, 2020 (32 of 2020) with the objective of fulfilling the acute shortage against the increasing demand for forensic experts in the country and around the world.

Table 1

Sl No.	Course Name	Duration	Eligibility	Course Fee per Semester
1	M.Sc. in Cyber Security	2 Year	B.E. / B.Tech. in Computer Engineering (CE) / Technology OR Computer Science and Engineering (CSE) OR Information Technology (IT) OR Information and Communication Technology (ICT) OR Electronics and Communication (EC) OR B.Sc. (Information Technology (IT) / Computer Science (CS) / Electronics) OR Bachelor of Computer Application (BCA) OR equivalent qualification from recognized University with minimum 55% (50% in case of SC / ST /PWD Candidates).	Tuition Fees per Semester INR: 1,10,000/-
2	P.G. Diploma in Cyber Security	1 Year	Bachelor's Degree in Science, Engineering & Technology in any field with minimum 55% marks (50% marks in case of candidates belonging to reserved category).	Tuition Fees per Semester INR: 50,000/-

Note: One time charges namely admission application/ registration fees, convocation fees, alumni fees, etc as per NFSU guidelines.

5. Curriculum Highlights

M.Sc. Cyber Security	
Semester	**Syllabus**
I	1. Essentials of Cyber Security and Cyber Warfare 2. Cyber Security Audit and Compliance 3. Web Application Security 4. Artificial Intelligence 5. Introduction to Forensic Science and Cyber Law 6. Essentials of Cyber Security and Cyber Warfare Laboratory 7. Web Application Security Laboratory 8. Artificial Intelligence Laboratory

II	1. Network Security 2. Malware Analysis 3. Mobile Security 4. Incident Response and Digital Forensics 5. Minor Project 6. Network Security Laboratory 7. Malware Analysis Laboratory 8. Mobile Security Laboratory I9. ncident Response and Digital Forensics Laboratory
III	1. Blockchain and Cryptocurrency 2. IoT Security and Forensics 3. Cloud Security and Forensics 4. Program Elective 1 5. Program Elective 2 6. Blockchain and Cryptocurrency Laboratory 7. IoT Security and Forensics Laboratory 8. Cloud Security and Forensics Laboratory 9. Program Elective 1 Laboratory 10. Program Elective 2 Laboratory
IV	Major Project

P.G. Diploma in Cyber Security	
Semester	**Syllabus**
I	1. Essentials of Cyber Security and Cyber Warfare 2. Incident Response and Digital Forensics 3. Network Security 4. Incident Response and Digital Forensics Laboratory 5. Network Security Laboratory
II	1. Introduction to Forensic Science and Cyber Law 2. Application Security, Vulnerability Assesment and Penetration Testing 3. Python and Scripting 4. Minor Project 5. Application Security, Vulnerability Assesment and Penetration 6. Testing Laboratory 7. Python and Scripting Laboratory

6. A few of the software / tools which shall be available in the laboratory:

- Virtualization Environment: Virtual Box
- Kali Linux
- OWASP Zap
- Nmap/ Zenmap
- Metasploit Framework
- Wire Shark
- Burp Suit community edition
- Python IDE
- Network Monitoring Software

- MITRE Framework
- Google CoLab
- Exploit-DB
- SQL Map
- Maltego
- theharvester
- Virus Total
- Forensic software (FTK Imager, Autopsy, YARA Rules, etc.)

7. Career Prospects of Cyber Security

Network Security Engineer/ Administrator	Cyber Security Analyst	Security Architect	Security Auditor
Cyber Security Manager	Chief/ Unit Information Security Officer	Information Security Manager	Cyber Security Engineer
Application Security Engineer	Ethical Hackers	Incident Manager	Cyber Security Cosultant
Cloud Security Engineer	Penetration Tester	Computer Forensics Analyst	

8. General Terms & Conditions:

- ✓ Shifting from one course to another is not permitted.
- ✓ Course Material for Courses offered does not include books.
- ✓ SC/ST candidates need to produce the Scan copy of Original Caste/Tribe Certificate issued by a Competent Authority in the prescribed format.
- ✓ Candidate must be ready with the relevant documents i.e. with the softcopy (scan copy) like Educational Qualification, 10th standard Admit Card etc.
- ✓ Refund of course fee will be as per NFSU Norms.
- ✓ Course Fees may get changed anytime as per the decision of appropriate authorities and students should pay as per new fees.
- ✓ Resources like classroom, lab faculty, library books, etc. are available only to students attending regular theory or lab classes as per schedule of respective courses.
- ✓ **Tuition Fee, Registration fees, etc. are FREE for SC/ST. See the admission procedures for details.**

✓ **Application Fees :**

Rs. 1000/- + 12% GST for General & Others Candidates.
Rs. 500/- + 12% GST for SC/ST candidates

Payment should be made in the following account:

Account Name: NIELIT KOLKATA TAX

Account No   3194198019

Branch   : Central Bank of India, Jadavpur, Kolkata

IFSC Code   : CBIN0281247

OR

Scan the QR Code for payment towards Application Fees

9. **Admission Procedures:**

- **Reservation of SC/ST/OBC:** SC-15% (5 numbers), ST-7.5% (2 numbers), OBC-27% (8 numbers). Total capacity: 30.

- **Admission is based on Merit and if selected, 1st semester course fees need to be deposited at the time of admission. Tuition Fee, registration fees, etc. are FREE for SC/ST.**

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- **Percentage (%) equivalence of CGPA, SGPA, etc. form the concerned institute needs to be submitted at the time of application.**

10. Certification:

Degree Certificate will be provided by NFSU.

11. Internship Program

NIELIT Kolkata offers Internship Program for suitable candidates.

12. Job Assistance/Placement & Industry Interaction

- NIELIT Kolkata has been identified as a Model Career Centre under National Career (MCC) Service, a mission mode project under Ministry of Labour & Employment.
- MCC conducts several jobs fairs in the campus and off the campus.
- The candidates get an opportunity to attend seminars held by industry personnel. Special grooming sessions are conducted for the candidates. Placement drives and job fairs are held regularly.
- Till date, more than 120 candidates were shortlisted in different job fairs and placement drives. 33 Candidates got the final offer letter.
- Under NCS portal 1000+ job seekers have been enrolled till date
- Total 76 SC Candidates of MeitY funded Capacity Building Project for Empowerment of SC Candidates at Cooch Behar District, West Bengal got placement in various Govt. and private houses especially in Multinational Company i.e. TCS (Tata Consultancy Service).

13. Excellent Lab Facility

1. The Centre has Labs where students can interact with Computer on 1:2 sharing basis as per class schedule. It provides an opportunity for hands-on learning and developing confidence in working environment Computer Programming – 23 PC
2. Computer Programming – 16 PC
3. Computer Programming – 12 PC
4. Computer Programming – 12 PC
5. Networking & Data Communication Lab – 15 PC
6. Hardware Lab – 05 PC
7. Multimedia & Animation – 15 PC
8. Data Centre – Server & PC
9. 24 X 7 NKN (Internet facility) Service – 100 Mbps (with 1 Gbps backup)

14. Faculty & Professionals

  a. The Centre has well-qualified professionals. Faculty support is also provided by several University, Academic Institutions and Industries on requirement basis.

15. Website

  a. Information pertaining to Education (General and Special Courses) and all other activities will be available on our website (www.nielit.gov.in/kolkata/index.php).

16. Code of Conduct for students of the Centre

a) Principles :

This code of conduct has been formulated to provide a clear statement of the Centre's expectations with respect to students in respect of academic matters and personal behavior.

NIELIT, Kolkata recognizes and values the diversity of students' experiences and expectations, and is committed to treating students, both academically and personally in a fair and transparent manner. All students in return, are required to comply both the requirements set down in this code of conduct.

b) Coverage :

This code of conduct applies to all full and part-time students of NIELIT Kolkata, in respect of all actions and activities relating to or impacting on the NIELIT Kolkata or its students and employees.

c) Definitions :

In this code of conduct, **student** means all full and part-time students whose names are enrolled at NIELIT Kolkata.

d) **Employee** means all officers and staff of NIELIT Kolkata (including full time & part time Faculty / employees, Contract Employees, Lab Assistants, Casual staff), and Employees from other organizations working for the Centre.

e) Personal Conduct :

- All students must treat all employees (as defined above) with respect, dignity, impartiality, courtesy and sensitivity.
- Maintain a co-operative and collaborative approach to interpersonal relationship.
- Ensure that they do not act in a manner that unnecessarily or unreasonably impedes the ability of other students, employees and vendors working with the Centre.
- Ensure that they do not become involved in or encourage discrimination against or harassment of employees or other students.

f) General Rules and Code of Conduct for Students :

In keeping with the tradition of the institution, all students of NIELIT Kolkata are required to maintain discipline and decorum in the building / campus and refrain from any activity that can tarnish the reputation of the institution. Violation of this will result in inviting appropriate disciplinary action. Following rules are to be strictly maintained by the students:

- Avoid any activity or behavior that unfairly provide advantage or disadvantage to any student academically.

- Read necessary official correspondences, meant for students, at the Notice Board on a regular basis.

- Online Registration for all Long term & Short term courses are periodically updated in the website (www.nielit.gov.in). All students must register themselves within the schedule, clear all the fees within scheduled time to avoid any embarrassment and / or penal action.

- Record complaints, if any, in the concerned register lying with the Reception. Authority will see to solve them as far as practicable at the earliest. They can not disturb activities of the Centre, faculty or others with their complaints. They can meet Teaching Staff, Coordinator or others with prior appointment only for explaining their views in a cordial way.

- Speaking loudly, using microphones within the Centre / Campus, using indecent language or behavior, sitting on a desk or using the chair of the faculty, writing indecent and / or objectionable things on board in the absence of faculty, damaging assets of the Centre are not allowed. Violation of the guidelines will attract penalty including suspension of students.

- Ragging in any form or type is banned in the Centre.

- Smoking and use of alcohol are strictly prohibited.

- All students are required to maintain the environment clean and not to litter the building & campus.

- Identity Card should always be kept by the students and produce on demand by the Security. Non-production of the same will lead to suitable action.

- Pasting posters and / or writing on classroom walls / corridor walls, doors, windows, toilets, are strictly banned.

- Indulging in any act of sexual harassment of any student is strictly prohibited, and it may be reported to Disciplinary committee and then to Police station.

- Bringing any political or other influence in a matter pertaining to a student's career, fees concession / waiver or any other favour not allowed.

- Strike, Picketing, Gherao are totally banned in the Institute. Any such act may attract appropriate penal action.

- Using Mobile Phone or equivalent in the Classroom / Lab will not be allowed. These are to be switched off while entering the classroom or lab. If any student is found using the same or it is heard ringing while class / lab is going, it will be forfeited.

g) Laboratories :

- All students are required to attend laboratory classes as per schedule, and the Centre is not liable to compensate any absence due to reason whatsoever.

- Students should enter Lab and use equipment as per schedule. They will not be allowed other than schedule time in the Lab under any circumstances.

- Lab Records should be brought, and instructions should be followed accordingly.

- A congenial atmosphere should be maintained in the Laboratory Classes.

- Misbehavior with Students / Staff is not allowed in any circumstances in Lab / Classroom / Centre Premises and will be seriously dealt with.

- Use of any personal media / equipment like CD, Pen Drive, etc. will not be allowed.

- Use of internet for a purpose other than academic or career advancement related activities is banned. Viewing Pornographic Sites or sites playing against social and national interest will be treated as a very serious offense.

17. Examination:

Examination and Certification will be as per NFSU norms.

18. List of Documents (Photocopy) for respective course

- Date of Birth Proof (10th Class Certificate/Birth Certificate*)
- Residential Certificate (Domicile Certificate/Driving License/Voter ID/Passport).
- Photo Identity (Aadhaar Card /Voter ID card)
- Recent Scan Copy of color Passport Photograph, Signature, Left Thumb Impression within 50 KB in jpeg/jpg/png image format.
- Original Scan copy of SC/ST/OBC Certificate required for SC/ST/OBC Candidate only.
- Transaction Details Scan copy is required after enrolment/ admission on respective courses.
- Migration Certificate
- TC (Transfer Certificate)
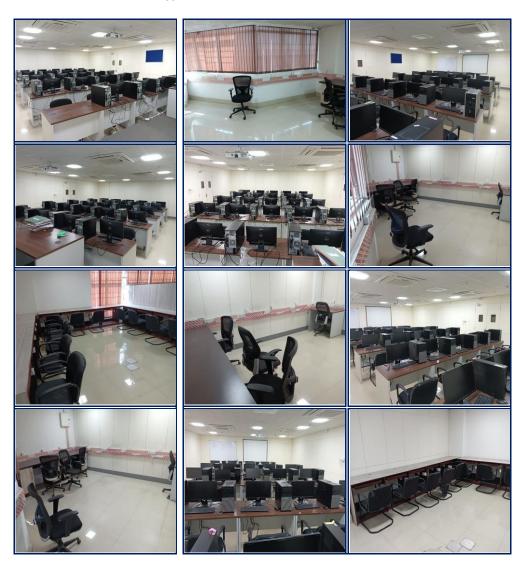- Undertaking that no additional regular degree shall be pursued at the same time.

Note:
- ✓ **Candidate must ensure that, all the relevant documents that** will be **enclosed/uploaded during online admission are correct.** Otherwise, candidates' **admission may be withheld or cancelled for the respective course, if any of the statements made above are found incorrect.**

- ✓ **Caution money / security deposit will be taken as per norms after the admission in the course.**

X

****Picture of Software Lab & Apple Lab**

National Institute of Electronics & Information Technology (NIELIT) Kolkata

[Under Administrative control of Ministry of Electronics & Information Technology (MeitY), Govt. of India]

Phone No.: Jadavpur : 033-2414-6054/6081
Saltlake :   033-4602-0938   Website : https://nielit.gov.in/kolkata/index.php

APPLICATION FORM NO.
(*Mandatory Field)

:

Paste a passport size photograph here.

Signature of the Candidate*

(To be filled in the BLOCK Letter)*

1. Name of the Course Applied for:*

2. Aadhaar Number:*

3. Name of the Candidate: (Full name as per the highest / latest qualification certificate or legal certificate) *

FIRST NAME														
MIDDLE NAME														
SURNAME														

4. Father's Name / Guardian Name:*

5. Mother's Name / Guardian Name:*

6. Address : (All fields need to be filled up if applicable)*

PREMISES NO./FLAT NO.															
ROAD/STREET NAME															
CITY/VILLAGE															
P.O															
P.S.															
PANCHAYAT OR MUNICIPALITY															
BLOCK															
SUB-DIVISON															
DIST															
STATE									PIN						

7. Date of Birth :*

D	D	M	M	Y	Y	Y	Y

8. Contact No. Details :*   i) Mobile No. :***

ii) Land Line No.

STD CODE						
PHONE NO.						

iii) E-mail Id : _____

9. Gender :*   **10. Cast :***   **11. Marital Status :***

☐ Male   ☐ Female   ☐ SC ☐ ST ☐ Other _____   ☐ Married ☐ Unmarried

1 2. Religion :*

☐ Hinduism   ☐ Islam   ☐ Buddhism   ☐ Jainism   ☐ Sikhism   ☐ Christianity   ☐ Other _____

13. (a)Identity Type :*

☐ Voter ID   ☐ Pass Port   ☐ Aadhaar No.

14. Visible Distinguishing Mark :* _____

15. Handicapped (Yes/No):* _____

16. Ex-Serviceman (Yes/No):* _____

17. Academic Qualification :*

QUALIFICATION	BOARD/UNIVERSITY	INSTITUTE/SCHOOL NAME	STREAM/SUBJECTS	PASS YEAR	% OF MARKS
X					
XII					
Diploma					
Graduation					

18. List of Enclosures (Self Attested) :

1. Date of Birth Proof (10th Class Certificate / Birth Certificate)
2. SC/ST Certificate (Copy of Caste Certificate issued from the competent issuing authority)
3. Aadhaar Card / Aadhaar Enrollment Slip
4. Copy of Highest Qualification Certificate
5. Recent color passport size photographs

I declare that all information furnishes above is true to the best of my knowledge and belief, In case any of the information given above is found incorrect or it is found that I have hidden some information while taking admission, I will abide by the decision of the Society.

I agree to abide by the rules and regulations as mentioned in the NIELIT Kolkata's Prospectus.

Yours Faithfully

Date : _____

Left Thumb Impression*

(Signature of the Applicant)