



**NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY
(NIELIT), CALICUT**

(Formerly DOEACC CENTRE CALICUT)

CDS/CA/7.5.1/F 40/R1

Name of the Group: *IT Group*

Name of the Course: *PG Diploma in Information System Security*

Course Code: *SW500*

Starting Date: *29th Feb 2012*

Duration: *6 Months*

Preamble: *Business @ the speed of thought has moved from a buzzword to a business reality owing to the integration of business and technology. Digital infrastructures and information networks have become central to any business activity. The information residing on these computers and networks are an essential asset and due care should be taken for its security. The impact of any loss of this asset or any downtime of the infrastructure is quite high. With the proliferation of easy-to-use tools and open how-to-discussions, the number of people aiming to hack in to or bring down the network is high, both in this country and abroad. Hence there is a need for heightened security measures to protect both infrastructure and data.*

Objective of the Course: *The Course is a six months program aimed at moldings candidates to Skilled System Administrator to maintain the Systems & Networks in a secured manner.*

Outcome of the Course: *This skill oriented course provides candidates with information required for maintenance and administration of Computer Network and also equip them with the skills required to protect & recover the computer systems & networks from various security threats.*

Eligibility: *BE/BTech, BSc/MSc(IT/Computer Science/Electronics), MCA, BCA, BCom (CA), MBA (System) or equivalent of any of these. Degree holders with PGDCA, DOEACC A or B level, Diploma in Computer Science, Electronics, or others with relevant experience).*

Course Structure:

Code	Module Name	Duration
SW501	<i>Advanced Diploma in System Administration with Shell Scripting (Includes MCSE & RHCE Syllabus)</i>	<i>3 Months [29th Feb 2012]</i>
SW502	<i>Advanced Diploma in Information Security Administration & Audit (Includes CISA & CISSP Syllabus)</i>	<i>3 Months [30th May 2012]</i>

Other Contents:

Course Fees in installments :

No of Installments	For General Category Students (Service Tax Extra)	For SC/ST Students[#] (Service Tax Extra)
<i>1st Installment</i>	<i>Rs 15000/-</i>	<i>Rs 2200/-</i>
<i>2nd Installment</i>	<i>Rs 30000/-</i>	<i>Nil</i>



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#Tuition Fees/Examination fees are waived for SC/ST students.

b. Mode of Payments :

1. Demand Draft to be drawn in favor of Director, National Institute of Electronics & Information Technology Calicut, Payable at State Bank of India, Calicut NIT Branch(2207). The DD should reach here before the last date to apply.
2. Using the pay in slip available in our web site ([Pay in slip](#)), through any branch of SBI (where this format is accepted). The **original counterfoil** should reach here before the last date to apply.
3. The fees can be paid directly into our account from any bank where core banking facility is available. The details required for direct payment are as given below.
 - Account No: 31732177476
 - Bank Name: SBI, NIT Chathamangalam
 - Bank Code: 2207
 - IFSC No: SBIN0002207
 - MICR Code:673002012

The depositor should obtain the UTR Number/Journal No from the branch while depositing cash directly into our account. Depositor should also obtain the counterfoil duly filled up and signed by the staff with seal of the bank through which the amount was deposited. The following details should reach here before the last date to apply.

1. Name of the Depositor
2. Name of the Student
3. Date of Payment
4. Amount Deposited
5. Name of Bank/branch through which amount deposited
6. Purpose – Course ID – Advance Deposit/Hostel Rent/Installment Fee etc.
7. Proof of Deposit (counterfoil/acknowledgement **in original**)
8. UTR Number

c. Number of Seats : 40

- d. How to Apply : *Students are advised to apply in the prescribed Application Form available with the course brochure/course prospectus or downloaded from our website. Filled in application forms along with a Demand Draft towards advance fee of Rs.1000/- drawn in favour of Director, NIELIT Calicut, Payable at State Bank of India, NIT Branch, Chathamangalam should be sent to the **Training Officer, NIELIT Calicut, P. B. No. 5, NIT Campus Post, CALICUT – 673 601, Kerala. The Name of the Course Applied for should be super scribed on the top of the cover in which the application form is forwarded.***

- e. Selection of candidates : *Selection of candidates who have passed in the qualifying examination will be based on their marks in the qualifying examination subject to eligibility and availability of seats.*



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The admission to the course shall be based on the following criteria:

1. *Should have passed the eligibility criteria as mentioned above.*
 2. *The list of selected students shall be published in our web site. Individual call letters **by email alone** will be sent to the candidates.*
 3. *The admission for the selected students shall be confirmed only after verifying their original certificates. The verification of certificates for such candidates shall be on the date of commencement of examination. Fee shall be refunded for those whose credentials are found to be incorrect.*
- f. Test/Interview (if applicable) : *Not Applicable*
- g. Counseling/Admission : **29th Feb 2012**
- h. Admission Procedure: *Students who have been selected for test/interview/counseling/admission are required to report to the Institute on the prescribed day by 9:30 hrs along with the following*
1. *Attested Copies of Proof of Age, Qualifications, etc*
 2. *Original Certificate of the above*
 3. *Two copies of photograph and one stamp size photograph for identity card.*
 4. *The SC/ST students are required to submit in **ORIGINAL a Community Certificate (in English or Hindi only)** issued by an Officer not below the rank of Tahsildar.*
- The students on reaching the Institute are required to meet the Front Office Councilor (FOC). The FOC then directs the student to the Course Coordinator. The student gets the enrollment form verified by the Course Coordinator and then meets the FOC who shall direct the student to the Accounts section for payment of fees. A student is thus admitted.*
- i. Discontinuing the course: *No fees under any circumstances shall be refunded in the event of a student discontinuing the course. A student can however, be eligible for module certificates (applicable only for courses which provide for modular admission) modules he has successfully completed provided he has paid the entire course fees.*
- j. Course Timings : *9.30 A.M to 12.45 PM and 2.00 P.M to 5.15 PM [Monday – Friday]*
- k. Location and How to reach : *NIELIT Calicut is located very near to NIT (REC) campus and is about 22Kms from the Calicut (Kozhikode) city. A number of buses [Buses to NIT via Kunnammangalam] are available from "Palayam Bus Stand or KSRTC Bus Stand". Our stop is called "Panthrand" & is one stop before NIT. The bus fare is Rs.13/- from Calicut City to NIELIT and is on the right side.*
The Calicut (Kozhikode) is well connected by Rail, Road and Air from different parts of the country. The climatic conditions in Calicut are perhaps one of the best in India throughout the year. The maximum and minimum temperatures range between 35 and 20°s. The cool breeze further adds the comfort.



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- l. Course enquiries : *Students can enquire about the various courses either on telephone or by personal contact between 9.30 A.M. to 5.15 P.M. (Lunch time 1.00 pm to 1.30 pm).*

Telephone Numbers:

Office 0495 - 2287266 / 2287268
Director's Office 0495 - 2287123
Training Officer 0495 – 2287266
SW500 Course Coordinator 0495 – 2287266 (239)
Office Fax 0495 - 2287168

E-mail: trng@doeaccalicut.ac.in

Website: www.doeaccalicut.ac.in

- m. Important Dates (if applicable) :

Last date to submit application form: 22/02/12
Selection intimation in website: 22/02/12
Last date to pay Ist Installment Fees: 27/02/12
Counseling/Admission: 29/02/12
Commencement of classes: 29/02/12
Last date to pay IInd Installment Fees: 26/03/12

- n. Placement : *Placement support will be provided*
- o. Hostel facilities : *Hostel Facility is available for boys and girls on daily or monthly chargeable basis. However, students are required to pay the hostel fees for the duration of the course for which they are seeking admission at the time of joining the course. The hostel fees varies from Rs.650 to Rs.1050 on monthly chargeable basis depending on the location of the accommodation and facilities available. Caution deposit to the tune of Rs.500 is required to be deposited in addition to the hostel fee.*
- p. Canteen facilities : *The Institute has a canteen functioning at the main campus and food at reasonable rates is available for breakfast, lunch, and dinner.*
- q. Lab Facilities: *The IT Lab is equipped with Intel Xeon Dual Processor based servers from HP,IBM,DELL,HCL, managed gigabit switches and more than 100 networked PCs with internet facility. A variety of software is available which include various flavors of Windows and Linux Operating Systems like Windows 2010, RedHat Enterprise Linux 5/6, RT Linux and various commercial and open source development tools and database servers.*



r. Course Contents :

SW501	<i>Advanced Diploma in System Administration with Shell Scripting (Includes MCSE & RHCE Syllabus)</i>	<i>3 Months</i>
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1. Computer Fundamentals [5 Days]

- I. Overview of PC architecture
- II. Different bus standards (ISA, PCI, PCMCIA)
- III. Different Add-on Cards like memory, Graphics etc.

2. OS Fundamentals [5 Days]

- I. Operating System Introduction
- II. OS Architecture
- III. Process Management
- IV. Memory Management
- V. File System Management
- VI. Introduction to Network OS

3. Networking Fundamental [5 Days]

- I. Basics of Communication Systems
- II. Transmission Media
- III. OSI Layers
- IV. Local Area Networks
- V. Wide Area Networks
- VI. Networking Protocols
- VII. IP addressing & Routing

4. Windows Fundamentals [5 Days]

- I. Introduction to Windows Operating System
- II. Installation and Configuration of Windows XP & Windows 7

5. Windows Server Configuration [15 Days]

- I. Windows Server 2008
- II. Server and Desktop Installation
- III. Installation and Managing Active Directory
- IV. Managing and Securing Resources
- V. Performance and Maintenance

6. Linux Fundamentals [5 Days]

- I. Introduction to Linux, Unix & Solaris
- II. File System
- III. Linux Installation
- IV. Simple Commands



7. Linux Administration [15 Days]

- I. Server & Client Installation
- II. Booting Procedures
- III. Linux Commands
- IV. System Administration
- V. X Windows
- VI. Performance Tuning

8. Shell Scripting [5 Days]

- I. Regular Expressions (grep, egrep, & sed)
- II. AWK
- III. Bash scripting
- IV. Perl language

9. Mini Project

SW502	Advanced Diploma in Information Security Administration & Audit (Includes CISA & CISSP Syllabus)	3 Months
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1. Advanced System Administration [15 Days]

- I. Securing Network Applications [Web, Mail, DNS, SAMBA, SSH, LDAP, MySQL]
- II. Fundamental of Web Application Security
- III. Core Defense Mechanisms
- IV. Web Application Technologies
- V. Client-side Exploit Frame Work
- VI. Bypassing Client-side Controls
- VII. Web Based Malware
- VIII. Securing Authentication
- IX. Securing Session Management
- X. Securing Access Controls
- XI. Securing Application Architecture
- XII. Web Server and Web Application Testing with Back Track
- XIII. Securing Web Based Services
- XIV. DB Integrity
- XV. DB Access Control
- XVI. Database Auditing

2. Advanced Security configuration [15 Days]

- I. PKI and Biometric Concepts
- II. Hardening OS & Protocols
- III. Hardening Networks [Firewall, IDS, IPS, Content filters, Proxy]
- IV. System Monitoring & Performance tuning
- V. Network Monitoring
- VI. Network Security Assessment
- VII. Wireless & Mobile Security Basics
- VIII. Cyber Forensics



3. Security Audit Process & Procedure [20 Days]

- I. Access Control
- II. Cryptography
- III. Telecomm and Network Security
- IV. Security Models and Architecture
- V. Physical Security
- VI. Security Risk Management Practices
- VII. Physical Security
- VIII. Disaster Recovery and Business Continuity
- IX. Law, Investigation, and Ethics
- X. Application and Operations Security
- XI. IS Audit Process
- XII. IT Governance
- XIII. System and Infrastructure Life Cycle Management
- XIV. IT Service Delivery and Support
- XV. Protection of Information Assets

4. ISO Audit [10 Days]

- I. Security Standards & Certifications
- II. ISO/IEC 27000 [IS Management Systems — Overview and vocabulary]
- III. ISO/IEC 27001 [IS Management Systems — Requirements]
- IV. ISO/IEC 27002 [Code of practice for information security Management]
- V. ISO/IEC 27003 [IS Management system implementation guidance]
- VI. ISO/IEC 27004 [IS Management — Measurement]
- VII. ISO/IEC 27005 [IS risk Management]
- VIII. ISO/IEC 27006 [Requirements for bodies providing audit and certification]
- IX. ISO/IEC 27011 [IS Management guidelines for telecommunications org.]
- X. ISO/IEC 27033-1 [Network Security overview and concepts]
- XI. Cyber Law

5. Mini Project

Project: During the mini project period students are required to Develop/Configure a security tool in any of the areas covered in the course, under the guidance of the faculty. Students can also take up relevant projects from the industry.

No.	Project Phases	Duration	Marks for each Phase
1	Analysis & Design	Last four weeks of Each module, no separate time for project	25 Marks
2	Coding/Tool Design		25 Marks
3	Testing and Implementation		25 Marks
4	Viva voice		25 Marks
	Total		100 Marks