National Institute of Electronics and Information Technology, Calicut

COURSE PROSPECTUS

Name of the Group: *IT Group*
Name of the Course: *PG Diploma in Cloud Computing*
Course Code: *IS500*
Starting Date: *18th September 2019*
Duration: *24 Weeks*
Course Coordinator: Sini S Nair, 9447335996

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, networks and in cloud 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: *This course is 24 weeks program aimed at molding candidates to Skilled System/Cloud Engineer with Information Security knowledge to maintain the Systems, Networks and cloud infrastructure in today's scenario.*

Outcome of the Course: *This skill-oriented course provides candidates with information required for configure and administration of OS Server, Cloud Deployment & its Security and equip them with the skills required to protect & recover the computer systems & networks from various security threats in dedicated or cloud environment.*

Course Structure:

Sl. No.	Module Name	Duration
1	Introduction to Network Management	2 Weeks
2	Introduction to Windows & Linux Server	3 Weeks
3	Advanced Linux Server	3 Weeks
4	Virtualization	3 Weeks
5	Cloud Computing	2 Weeks
6	Cloud Infrastructure	3 Weeks
7	Cloud Security	2 Weeks
8	Project	6 Weeks
	Total	24 weeks

Other Contents

    a. **Course Fees** :
        General Candidates: Course Fee is ₹ 60,000/- + GST at actuals

SC/ST Candidates: Tuition Fees/Examination fees are waived for SC/ST students admitted under SCSP/TSP. However they are required to remit an amount of ₹ 7080/- **as Advance caution/Security deposit**. This amount will be considered as caution/security deposit and will be refunded after successful completion of the course. If the student fails to complete the course successfully this amount along with any other caution/security deposits by the student will be forfeited.

Modular wise Course Fee: Not Applicable

b. **Registration Fee:** An amount of Rs.1000/- (including GST)(nonrefundable) should be paid at the time of registering for the course.

This fee shall be considered as part of course fee, if the student joins the course. If a student register and pay for more than one course and join for any one course, all such amount will be adjusted against the course fee payable.

If the student does not join for the registered course / any of the registered courses, fee paid shall be forfeited.

For SC/ST candidates, the registration fee is Rs.500/- and will be considered as part of caution/security deposit and will be refunded after successful completion of the course. If the candidate does not join or fails to complete the course the amount will be forfeited

However above the registration fee shall be refunded on few special cases as given below

➢ Course postponed and new date is not convenient for the student
➢ Course cancelled in advance, well before the admission date

c. **Course Fee Installment Structure**:

Students can pay the full fees of is ₹ 70,800/- *(is ₹ 60,000/- + GST(18%))* in advance or as installments as given below

Fees	*Amount for General Candidates	Amount for SC/ST Candidates. (considered as caution/security deposit)	Due Date (on or before)
Registration Fee	☐1000/-	☐500/-	During Registration
**Advance Fee	☐ 10000/-	₹ 6580	12-Sep-2019
1st Installment	☐ 24400/-	Nil	18-Sep-2019
*** 2nd Installment	☐ 35400/-	Nil	20-Nov-2019
Total Fee	₹ 70,800/-	₹ 7,080/- (refundable after successful completion of course)	-

* Above fees is inclusive *GST@actuals(18%)* and revision if any will be applicable at the time of payment.

** Advance fee - After publication of first selection list, the students in the first selection list have to pay the Advance Deposit within the due date to take the provisional admission. Students in the additional selection list should pay both Advance and First installment fee together on or before counseling day

*** 2nd Installment last date is **20-Nov-2019**

d. Eligibility: *ME / MTech, BE / BTech, MCA, MSc / BSc (IT / Computer Science / Electronics) or equivalent of any of these.*

e. Number of Seats : *20*

f. Selection of candidates: Selection of candidates who have the requisite qualifying degree will be based on the percentage of marks in their qualifying degree subject to eligibility and availability of seats. Selection of candidates who have completed the course but expecting the results shall be based on the aggregate percentage of marks mentioned in their final mark list and on the availability of seats.

g. Test/Interview: *Not applicable*

h. Counseling/Admission : *18th September 2019*

i. Important Dates (if applicable) :

Last date to apply online/offline with Reg. fee	*02nd September 2019*
Date of Selection list publication	*02nd September 2019(5:30 PM)*
Last date to pay the advance fee (Rs. 10,000/-)	*12th September 2019*
Counseling/Admission	*18th September 2019*
Last date to pay the first installment	*18th September 2019*
Commencement of classes	*19th September 2019*
Last date to pay the second installment	*20th November 2019*

j. Course Timings : *9.45 A.M to 12.45 PM and 01.45 PM to 5.00 PM [Monday – Friday]*

k. Placement: *Placement support will be provided, almost all the eligible students placed/working in Cisco, Intel, AT&T, Citrix, PricewaterhouseCoopers, SISA, HCL MHRx, Kane, NTT DATA, Sify, Infosys, Kuliza Technologies, NIT, IIM-K, CSI and IDRBT.*

l. 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. SaaS, PaaS and IaaS open source cloud servers. A variety of software is available which include various flavors of Windows and Linux Operating Systems like Windows, RedHat Enterprise Linux/CentOS 6/7, RT Linux, OpenStack, CloudStack, OpenVAS/Nesses and various commercial and open source development tools, database and cloud servers.*

m. Course Contents :

1. Introduction to Network Management (2 Weeks)

I.	Introduction to ISO & TCP/IP Stack
II.	DNS/UDP/IP
III.	TCP/HTTP/HTTPS
IV.	ICMP/DHCP
V.	Cabling
VI.	Addressing
VII.	Basic Switches
VIII.	Managed Switches
IX.	Routing in LAN & Internet

2. Introduction to Windows & Linux   Server (3 Weeks)

I.	Installing Windows Server
II.	Setting Active Directory
III.	Managing Active Directory
IV.	Managing User & Group
V.	Setting File, Web Server
VI.	Backup and Restore
VII.	Introduction to Linux Fundamentals & Commands
VIII.	Advanced Linux Commands

3. Advanced Linux Server (3 Weeks)

I.	Configuring DNS Server
II.	Configuring Web Server with Virtual Hosting
III.	Configuring MySQL Server
IV.	Configuring Mail Server
V.	Configuring File Servers

4. Virtualization (3 Weeks)

I.	Configuring Virtual Box
II.	Configuring VMware
III.	Configuring KVM Server
IV.	Configuring Xen
V.	Configuring Hyper-V
VI.	Deploying Vagrant

VII.   Setting Linux Container

5. **Cloud Computing with SaaS & PaaS Cloud**   (2 Weeks)

    I.   Introduction to Cloud Computing
    II.   Types of Cloud Services
    III.   Introduction to SaaS Cloud
    IV.   SaaS Cloud Deployment with Open Source Tools
    V.   Introduction to PaaS Cloud
    VI.   PaaS Cloud Deployment with Google App Engine
    VII.   PaaS Cloud Deployment with OpenShift
    VIII.   PaaS Cloud Deployment with Bluemix

6. **Cloud Infrastructure using OpenStack, XenServer & vSphere**   (3 Weeks)

    I.   Introduction to IaaS Cloud
    II.   Types of Cloud Deployment with Xen/KVM
    III.   Setting Private Cloud with OpenStack
    IV.   Setting Private Cloud with XenServer and XVP
    V.   Setting Private Cloud with vSphere
    VI.   Deployment with Public Cloud AWS

7. **Cloud Security**   (2 Weeks)

    VI.   Access Control Types
    VII.   Cryptography and Algorithm Analysis
    VIII.   Cloud Monitoring
    IX.   Cloud Auditing
    X.   Cloud Automation
    XI.   Cloud Security Best Practices
    XII.   Cloud Standards

8. **Project**   (6 Weeks)

Project: During the 6 weeks project period students are required to design and deploy private cloud server 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.

[Click here for General Terms and Conditions – Applicable to all courses](#)