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General Information About Kenyatta University

Who We Are

Kenyatta University is located 16 kilometres from Nairobi City along the Nairobi-Thika highway. Set on over 1,100 acres of land, the University offers a very quiet and conducive learning environment.

What is now known as Kenyatta University was the Templar Barracks during colonial Kenya. Kenyatta University began its long road to university status when the British government handed it over to the Kenya government in 1965. The college mainly catered for education certificates. It went through various transformations based on the academic needs of the country. Kenyatta University College achieved full University status on August 23, 1985 when its act received Presidential approval. The Act became operational on 1st September, 1985. Over the years, Kenyatta University has demonstrated an exceptional capacity to train highly qualified manpower. Today, Kenyatta University is one of the leading institutions of higher learning in this part of the world, offering a wide range of academic programmes.

The university operates under a Service Charter which is essentially a service manual that specifies the processes and timeframes for service delivery in all units within the University.

Our Vision

The vision of Kenyatta University is to be a dynamic, inclusive and competitive centre of excellence in teaching, learning, research and service to humanity.

Our Mission

The mission of Kenyatta University is to provide quality education and training, promote scholarship, service, innovation and creativity and inculcate moral values for sustainable individual and societal development.

Our identity statement

Kenyatta University is a community of scholars committed to the generation and dissemination of knowledge and cultivation of wisdom for the welfare of society.

Our Philosophy

Kenyatta University's philosophy is sensitivity and responsiveness to societal needs and the right of every person to knowledge.

Our Core Values

Excellence, Academic Freedom, Professionalism, Creativity, Innovation, Truth, Self-Reliance, Equal Opportunity, Relevance and Moral Integrity.

Kenyatta University

Strategic Plan

In order to guide our operations and improve service delivery, we have developed a Strategic & Vision Plan 2005-2015 which lays emphasis on the following areas:

Teaching and Learning

We endeavour to offer quality education and promotion of scholarship by transforming learners from being mere consumers of information to generators of knowledge and job creators.

Constituent Colleges, Campuses and Local Links

The University has one constituent college namely, Pwani University College situated in Kilifi. In order to meet the growing need for higher education, the University also has the following campuses where a wide variety of programmes are offered: Ruiru Campus, Kitui Campus, Parklands Campus and Mombasa Campus.

Academic Programmes

The academic programmes are offered under the following Schools: Education, Pure and Applied Sciences, Humanities and Social Sciences, Graduate School, Economics, Environmental Studies, Applied Human Sciences, Business, Health Sciences, Visual and Performing Arts, Agriculture and Entrepreneurship, Engineering and Technology, and Law.

Research, Development and Consultancy services

We are committed to strengthening these, through interventions related to research ethics and provision of adequate infrastructure and funding, to enable academic staff to undertake meaningful research.

Information and Communication Technology (ICT)

In order to achieve our mission of providing quality education and training, we will increasingly rely on ICT and E-Learning.



Physical Infrastructure and Facilities

For efficient service delivery, we are working to ensure the number of programmes and student enrolment correspond with the expansion of infrastructure and physical facilities such as teaching space, library, offices and other utilities.

Governance

The goal is to institutionalize the use of democratic principles in decision making and responsive administrative and management structures in the university.

Student Welfare

Our aim is to produce well-rounded students in terms of academics, leadership, moral and spiritual values, as well as physical and mental health and desirable conduct.

Human Resource Development

Through interventions to achieve desirable outcomes in the areas of staff recruitment, promotion, training, motivation and retention.

Equal Opportunity

We are committed to the principle of equal opportunity. No deserving person will be discriminated against on the basis of colour, creed, ethnicity, race, gender, place of origin, disability or political affiliation.

Quality Management

We will strengthen the Quality Management Office and put specific strategies in place to ensure continuous evaluation of standards in all areas of University operations.

Marketing and Corporate Image

We will engage in aggressive marketing and public relations strategies and policies.

Monitoring and Evaluation

This will be undertaken in all the priority areas set in the Strategic Plan.

Costs and Financing

We will make deliberate efforts to attract, solicit and generate financial support from various sources in order to ensure efficient service delivery.



Kenyatta University Cisco Academy

Background

In its Strategic and Vision Plan 2005-2015, Kenyatta University recognizes the central role of ICT in development and responsiveness to society in teaching, learning, research and service delivery. The plan emphasizes the need for developing strategic partnerships with like-minded institutions in achieving the university's goal. Kenyatta University has a good track record of training ICT graduates; however the university has always strived to improve its programs and products.

The addition of a Cisco academy is one such deliberate effort of enhancing skills and knowledge to its students and also to the surrounding communities. This will give Kenyatta university graduates and students of the academy a competitive edge in the job market. Kenyatta University is cognizant of the need to embrace IT for development purposes. This is in line with the national vision 2030. The Kenyatta university Cisco networking academy will be a tool of realizing the ICT goals of



the University and the nation at large. The Government initiated digital village programme plans to take ICTS to the rural areas, the successful implementation and continuous improvement will need a large number of qualified human resource in ICT skills.

Trainers and facilities

Kenyatta University has qualified and fully trained instructors for the Cisco Academy. The university has also provided two computer

laboratories with a combined capacity of 120 students. The two laboratories are fully equipped with PIV computers and internet connectivity. Kenyatta University has also provided an extra laboratory and is hoping to become a Cisco testing centre in the near future. The training will involve basic information technology knowledge to complex networking principles. These are information technology essentials (1&2) and CCNA1-4.

At a Glance: Cisco Networking Academy

The Cisco Networking Academy is a public-private partnership between Cisco, governments, education Institutions, non-government organisations (NGOs) and industry, created to teach students how to design, build and maintain computer networks.

Countries: 168
Academies: 9000+
Students: 465,000+ currently enrolled
Instructors: 16,000+
Daily exams: 30,000

Features:

- Preparation for industry-standard certifications
- Web-based content
- Online assessment
- Performance tracking
- Hands-on labs
- Instructor training and support

Study areas include:

- CCNA
- CCNP
- UNIX
- Java
- Panduit Network Infrastructure

Essentials

- Security
- Wireless
- IT Essentials (PC hardware and software, plus networking operating systems)

Locations include:

- High schools, technical schools, colleges and universities
- Community organisations
- Military academies
- Hospitals
- Prisons



History and Objectives

The Cisco Networking Academy began in 1997 as a high school network support curriculum and has developed into a highly successful worldwide educational programme. It offers students around the world an opportunity to pursue Internet technology curricula through Web-based instructor-led training and hands-on laboratory exercises. Teaching basic to advanced IT skills, the Networking Academy prepares students for industry-standard Certifications, including CCNA (Cisco Certified Network Associate) and CCNP (Cisco Certified Network Professional).

Background

The Cisco Networking Academy is designed to complement the type of technology training traditionally delivered by educational establishments and provides a hands-on introduction to the networking technologies that are driving business today.

This offers many benefits to the student:

- With much of the course material delivered direct to the student's desktop via the Internet, the NetAcad takes advantage of the latest computer-based training techniques, letting the student



work at their own pace, any time and anywhere.

- The NetAcad labs always contain new equipment, students learn on the actual devices they will be working on in the business.
- The programme qualifies students to pursue a number of industry standard certifications, including CCNA, CCNP and Network+.

Opportunity

We live in an increasingly connected world, creating a global economy and a growing need for technical skills. Cisco Networking Academy delivers information technology skills to over 500,000 students a year in more than 165 countries world-wide. Networking Academy students have the opportunity to participate in a powerful and consistent learning experience that is supported by high quality,

online curricula and assessments, instructor training, hands-on labs, and classroom interaction. This experience ensures the same level of qualifications and skills regardless of where in the world a student is located. Networking Academy students will become the architects of the networked economy; enabling everyday experiences on the global human network. With the ever-increasing demand for their skills, Networking Academy students have the chance to dream about business-critical positions never before imagined, in industries ranging from medicine and finance to entertainment and aerospace. Networking Academy opens doors to rewarding careers and opportunities for economic advancement and local community development. Students only need to be 'Mind Wide Open' to the possibilities.

Student Welfare and Facilities

Kenyatta University provides facilities for the development of all aspects of individual students. We are committed to facilitating not only the academic but also the overall mental, physical and spiritual well-being of our students. The Dean of Students is mandated to oversee most of the personal and socio-economic affairs of students in both Main and Satellite Campuses. The Dean is assisted by three deputies, of whom two are in Main Campus and one is in charge of Ruiru and Parklands Campuses.

In Parklands the Office of the Deputy Dean of Students is located on the ground floor next to the Health Clinic. The Office co-ordinates several welfare activities and services such as Counselling, Games and Sports, Matters of Faith, Students Governance, Students with Special Needs, Registration of Clubs and Societies among others.

Counselling Services

Counselling services are offered free of charge to students and staff. Students are advised on issues related to career development, academic matters, psychological and emotional concerns and

decision making in general. The Office deals with both individuals and groups as need may arise. Willing students are encouraged to join the peer counselling group who are of great help when dealing with fellow students.

In all its transactions, the highest sense of confidentiality is observed



by the counselling unit as per the ideals of the profession. Remember *“a problem shared is a problem half solved”*.

Co-curricular Activities

Co-curricular activities in Parklands are coordinated by a member of the Sports and Games Department from the Main Campus. He/she facilitates recreation and leisure time opportunities in activities

such as soccer, rugby, handball, table tennis, basketball, badminton, hockey, swimming and many others. Some games such as chess, scrabble and table tennis are held within the premises of Parklands Campus while others are held at various hired venues outside the Campus. These include soccer and rugby at Parklands Primary School; Basketball, volleyball and badminton at Parklands Sports Club and swimming at Hospital Hill School. Students are regularly taken to the Main Campus for practice with their colleagues.

The University conducts inter-years, inter-campus and inter-university competitions regularly. Games and Sports activities are organized by respective Games Captains in collaboration with the Games Officer In-charge. You are encouraged to take part in various activities and discover your talents. Remember *“all work and no play makes Jack or Jill a dull boy or girl”*.

Health Services

The University has a Health Unit in Main Campus and a Health Clinic in Parklands which serves all students and staff for minor ailments.

For ailments that require admission, the University takes the patient to Kenyatta National Hospital and notifies the parents/guardians for care and settlement of bills.

Aids Control Unit

The Aids Control Unit (ACU) offers training in peer education and reproductive health. Their vision is to have an HIV/AIDS free Africa by creating a caring student community that supports informed and responsible choices with regard to life and HIV/AIDS. Every year the University holds an AIDS Testing Week where both staff and Students test their status.

Matters of Faith

Matters of faith are coordinated by chaplains for the Protestant, Catholic and Seventh Day Adventist students and an Imam for the Muslims. Offices of the above faith groups are located at the basement of Parklands Campus. Students are expected to liaise with their respective leaders in order to know when and where to go for worship or spiritual counseling.

Students with Special Needs

Kenyatta University welcomes applications from students with special needs. Students who are physically or otherwise impaired



have a special place in the University. The Dean of Students office has a Resource Room where students with special needs are assisted in debrailing written material while others are provided with wheelchairs. There is a well established internal transport system (tuk tuk) which ferries students with special needs to and from lecture halls.

Student Governance

Kenyatta University Students Association (KUSA) is the students governing body comprising of all registered students in the University. Students elect leaders among themselves to form the Students Governing Council (SGC) and Congress. Parklands Campus is represented in the SGC by the Campus Representative. Two more Congress persons (one male and one female) are elected to sit in Congress.

The Dean of Students Office coordinates students activities such as KUSA elections, representation and participation in the University, running of the Tuck Shops and other student related activities. ***“Know your students’ leaders well and especially your campus representative”.***

Clubs and Societies

The Office of the Dean of Students registers all Student Clubs and Societies in the University. Some clubs are professional or academic. Others provide opportunity for community-based fraternization and support. We have more than one hundred (100) registered clubs and societies. ***“Make a point of joining some of the clubs and societies”.***

Mentoring Services

Students face barriers in academic and social success for many different reasons throughout the course of their education. It is in this regard that the University has a mentoring programme that helps to nurture the students in order to make the right decisions and career choices.

Mentoring entails pairing students with adult volunteers or older students who provide friendship, guidance and support as they navigate new and ever

more challenging circumstances. Interested students are encouraged to join the mentoring team.

Catering and Accommodation Services Board

Kenyatta University has a Catering and Accommodation Services Board (CASB). The Board is concerned with providing highly affordable and quality meals and allocation of hostel rooms to students. In Parklands the Board operates a modern cafeteria located next to the Health Clinic. Students are expected to pay for meals before being served i.e. “Pay-As-You-Eat”.

The Board is also concerned with off-Campus accommodation for students who reside outside the

University hostels. The University through CASB links the students with landlords who provide off campus accommodation. Make sure you have understood the conditions and terms of tenancy but more importantly have signed a written agreement before you pay for any accommodation. *“Get advice from CASB Directorate concerning recommended hostels”.*

Information and Communication Technology (ICT)

Kenyatta University has undertaken major ICT initiatives to propel its ICT utilization capacity to that of a World Class University. This is being extended to Satellite Campuses. Parklands Campus has a computer laboratory that provides

students with adequate computing and internet services.

Center for Career Development and Placement

The Centre administers programmes and provides services in career development for its prospective and continuing students as well as alumni. This is achieved through individual and group counseling programmes, reference and resources, guidance in securing attachment, internship and employment opportunities. The Centre also coordinates practicum and attachment programmes in the University. The Centre manages a national placement and posting programme for Kenyatta University students, their field supervision and assessment, as well as the administration of a data-base. This also applies to linkages with organizations that offer attachments, including firms and industry.

For more information you may visit the Dean of Students column in the university website www.Kenyatta University.ac.ke The following contacts will be of great help to you:
Deputy Dean of Students
(Parklands and Ruiru Campuses)
– 0722 933 857
Dean of Students 0725893878
Landline 810901 ext 57028



Curriculum

ITE Essentials 1

- Chapter 1 Introduction to the Personal Computer
- Chapter 2 Safe Lab Procedures and Tool Use
- Chapter 3 Computer Assembly-Step by Step
- Chapter 4 Basics of Preventive maintenance and Troubleshooting
- Chapter 5 Fundamentals of Operating Systems
- Chapter 6 Fundamentals of Laptops and Portable Devices
- Chapter 7 Fundamental Printers and Scanners
- Chapter 8 Fundamental Networks
- Chapter 9 Fundamental Security
- Chapter 10 Communication Skills
- Chapter 11 Advanced Personal Computers
- Chapter 12 Advanced Operating Systems
- Chapter 13 Advanced Laptops and Portable Devices
- Chapter 14 Advanced Printers and Scanners
- Chapter 15 Advanced Networks
- Chapter 16 Advanced Securities

CCNA 1 Network Fundamentals

- Chapter 1 Living in A Network Centric World
- Chapter 2 Communicating Over the Network
- Chapter 3 Application Layer Functionality and Protocols
- Chapter 4 OSI Transport Layer
- Chapter 5 OSI Network Layer
- Chapter 6 Addressing The Network Ipv4
- Chapter 7 Data Link Layer
- Chapter 8 OSI Physical Layer
- Chapter 9 Ethernet
- Chapter 10 Planning and Cabling Networks
- Chapter 11 Configuring and Testing the Network

CCNA 2 Routing Protocols

- Chapter 1 Introduction to Routing and Packet Forwarding
- Chapter 2 Static Routing
- Chapter 3 Introduction To Dynamic Routing Protocols
- Chapter 4 Distance Vector Routing Protocols
- Chapter 5 Rip Version 1
- Chapter 6 VLSM And CIDR
- Chapter 7 Rip V2
- Chapter 8 the Routing Table
- Chapter 9 EIGRP
- Chapter 10 Link State Routing Protocols
- Chapter 11 Open Shortest Path First (OSPF)

CCNA3 Lan Switching And Wireless

- Chapter 1 Introduction to LAN Switching
- Chapter 2 Basic Switch Components and Configuration
- Chapter 3 VLANS
- Chapter 4 VLAN Trunking Protocol (VTP)
- Chapter 5 Spanning-Tree Protocol (STP)
- Chapter 6 Inter-Vlan Routing
- Chapter 7 Basic Wireless Concepts and Configuration

CCNA 4 Accessing the WAN

- Chapter 1 Introduction To Wans
- Chapter 2 Point-To-Point Protocol (PPP).
- Chapter 3 Frame Relay+++
- Chapter 4 Network Security
- Chapter 5 Access Control Lists (ACLS).
- Chapter 6 Teleworker Services
- Chapter 7 Addressing Services
- Chapter 8 Network Troubleshooting

Cisco Networking Academy Program

More than two million students have successfully completed Cisco Networking Academy Program courses in high schools, colleges and universities, technical and military schools, and community-based educational organizations around the world. The courses use a blended learning model to integrate face-to-face teaching with challenging Online curricula, hands-on lab exercises, and an Internet-based assessment tool.

Since being launched in 1997, the Networking Academy program has been implemented in more than 165 countries, with curricula taught in nine languages. This industry-leading program provides an educational framework that prepares students for networking and IT-related careers in the public and private sectors, as well as for higher education in engineering, computer science, and related fields.

Network Security

There is a growing need for professionals trained in network security techniques. Companies are frequently attacked through their connections to remote users or business partners who have less stringent security policies

or implementation. Companies, Governments and organizations must guard against hackers, and outsiders who threaten their information security, integrity, and daily business operations.

Network Security is designed to prepare students for certification in this field. Faculty, students, university and college administrators have requested a course that teaches students to design and implement security solutions to reduce the risk of revenue loss and network vulnerability. This course combines hands-on experience, instructor-led lectures, and a Web-based curriculum for students. This 140-hour, two-part course is an introduction to network security and overall security processes. The first component of the course, Network Security 1 (NS1), focuses on the overall security processes in a network with an emphasis on hands-on skills in the following areas:

- Security policy design and management
- Security technologies, products, and solutions
- Firewall and secure router design, installation, configuration, and maintenance

- AAA implementation using routers and firewalls
- Securing the network at Layers 2 and 3 of the OSI model

Network Security 2 (NS2) builds on the topics introduced in NS1 with additional emphasis on the following areas:

- Intrusion prevention implementation using routers and firewalls
- VPN implementation using routers and firewalls

The Network Security course advances students on a career path toward occupations such as network security analyst, senior systems analyst, and systems architect. This course also helps students prepare for degree programs in computer and management information systems.

Industry-Recognized Certifications

Network Security prepares students for the Securing Networks with PIX and ASA (SNPA), and Securing Networks with Cisco Routers and Switches (SNRS) exams in preparation for the Cisco Firewall Specialist certification. These exams also count toward the professional-level Cisco CCSP certification.

The Networking Academy Program Curricula Overview

Each Networking Academy program course is led by certified instructors who deliver standards-based, high-quality curricula in specially-equipped labs, where students practice on standard equipment that enables them to apply what they learn. The courses are updated regularly with information about new technologies and improved instructional techniques. From basic networking skills to VLAN troubleshooting, the Networking Academy program prepares students for career opportunities.

Networking Academies offer a range of courses for a variety of careers in network design and administration, technical support, programming or software engineering, and database development and administration. The associate-level Cisco CCNA course covers the basic foundations of networking and promotes each student's expertise in this area. The professional-level Cisco CCNP course builds on the CCNA curriculum with more complex network configurations, network diagnosis, and troubleshooting.

Fundamentals of Wireless LANs is an introductory course about the design, planning, implementation,

operation, and troubleshooting of wireless networks. Additional Networking Academy program courses include IT Essentials I and IT Essentials II, which cover PC main-tenance and support as well as network operating systems; Panduit Network Infrastructure Essentials, which is sponsored by Panduit Corporation and teaches all aspects of the physical layer of the network; Fundamentals of Java Programming; and Fundamentals of UNIX. Cisco Networking Academy Program courses prepare students for industry-standard certifications as well as vendor-neutral certifications.

Cisco CCNP Courses for Network Professionals

Cisco Networking Academy

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consistent learning experience that is supported by high quality, online curricula and assessments, instructor training, hands-on labs, and classroom interaction. This experience ensures the same level of qualifications and skills regardless of where in the world a student is located. Networking Academy students will become the architects of the networked economy; enabling everyday experiences on the global human network. With the ever-increasing demand for their skills, Networking Academy students have the chance to dream about business-critical positions never before imagined, in industries ranging from medicine and finance to entertainment and aerospace. Networking Academy opens doors to rewarding careers and opportunities for economic advancement and local community development. Students only need to be 'Mind Wide Open' to the possibilities.

CCNP Overview

The Cisco CCNP curriculum includes four modules, which align with the four exams required for CCNP certification. The CCNP curriculum builds on Cisco CCNA courses with more complex network configurations, diagnosis, and troubleshooting.

The curriculum is intended for those interested in continuing their post-CCNA preparation to become network administrators, Level 2 support engineers, Level 2 systems engineers, network technicians, or deployment engineers. Students interested in this course should have completed CCNA 1-4, or the equivalents. CCNA certification is also desirable; however, it is not a prerequisite.

CCNP Curriculum

The CCNP curriculum teaches the advanced skills required to manage end-to-end network infrastructures, and applications deployed on the edge of a network, such as wireless, security, and voice. Additional topics include converged networks, quality of service (QoS), VPNs, and broadband technologies. CCNP integrates next-generation network devices and services engineered to provide wire-speed delivery of concurrent data, voice, video, and wireless services with optimized security. Each course is designed to be delivered in a 70-hour timeframe. Approximately 45 hours will be designated to lab activities and 25 hours will be spent on curriculum content. A case study is also required. The new CCNP courses can be taken in any order. However it is recommended that

students take Building Multilayer Switched Networks before taking Optimizing Converged Networks.

CCNP Course Description

Building Scalable Internet works
In this course, students will learn how to create an efficient and expandable enterprise network. Students will also learn how to install, configure, monitor, and troubleshoot network infrastructure equipment. Topics include configuration of EIGRP, OSPF, IS-IS, and BGP routing protocols, and how to manipulate and optimize routing updates between these protocols. Other topics include multicast routing, IPv6, and DHCP configuration.

Implementing Secure Converged Wide-Area Networks
Students are introduced to secure enterprise-class network services for teleworkers and branch sites. Students will learn how to secure and expand the reach of an enterprise network with a focus on VPN configuration and securing network access. Topics include teleworker configuration and access, frame-mode MPLS, site-to-site IPSEC VPN, Cisco EZVPN, strategies used to mitigate network attacks, Cisco device hardening, and IOS firewall features. **Building Multilayer Switched Networks**
This course covers the deployment of

state-of-the-art campus LANs. The primary focus is on the selection and implementation Cisco IOS services to build reliable, scalable, multilayer-switched LANs. Focus areas of the course include VLANs, Spanning Tree Protocol, wire-less client access, minimizing service loss, and minimizing data theft in a campus network. This hands-on, lab-oriented course stresses the design, implementation, operation, and troubleshooting of multilayer switched networks. **Optimizing Converged Networks**
Optimizing Converged Networks introduces students to effective QoS techniques for optimization in converged networks with voice, wireless, and security applications. Topics include implementing a VoIP network, specific mechanisms for implementing the Diff Serv QoS model, AutoQoS, wireless security, and basic wireless management.

Skills Development and Industry Recognized Certification

CCNP certification validates a network professional's ability to install, configure, and troubleshoot converged local and wide-area networks with 100 to 500 or more nodes. Network professionals who obtain the CCNP certification have demonstrated the knowledge and

skills required to manage routers and switches at the network core, as well as edge applications that integrate voice, wireless, and security into the network.

The following are skills students will be able to perform after completing each CCNP course, and corresponding certification exams.

Building Scalable Networks

- Explain routing in the enterprise network
 - Implement and verify multicast forwarding using PIM
 - Implement IPv6 in an enterprise network
 - Implement and verify EIGRP operations
 - Build a scalable multi-area network with OSPF
 - **Certification Exam:** BSCI v3.0, Routing Protocols at Campus Edge, and 642-901
- #### Implementing Secure Converged Wide-Area Networks

- Implement secure broadband connections for teleworkers
 - Describe Cisco network architecture alignment with connectivity requirements
 - Describe MPLS conceptual data and control planes
 - Describe and configure a site-to-site IPsec VPN
 - Describe and configure Cisco device hardening strategies to mitigate network attacks
 - **Certification Exam:** ISCW v1.0 and 642-825
- #### Building Multilayer Switched Networks
- Define VLANs to segment network traffic
 - Explain Cisco hierarchy network model for campus networks
 - Implement Spanning Tree Protocol and implement and verify InterVLAN routing
 - Design and implement security features
 - Implement high-availability technologies and techniques

- Describe and configure wireless LAN access and switch to support voice
 - **Certification Exam:** BCMSN v3.0 exam and 642-812
- #### Optimizing Converged Networks
- Describe the converged network requirements within Cisco conceptual network models, with a focus on wireless security
 - Describe basic principles of VoIP network bandwidth requirements, VoIP packet encapsulation, and VoIP implementation
 - Explain the need for QoS and the methods to implement QoS
 - Explain the key IP QoS mechanisms used to implement the DiffServ QoS model
 - Configure Cisco AutoQoS model
 - Describe and configure wireless security and basic wireless management
 - Certification Exam: ONT and 642-845

