



COURSE OUTLINE

FACULTY OF TECHNOLOGY INFORMATION TECHNOLOGY

COURSE NAME: VoIP Network Technologies
COURSE CODE: COMP 2118
CREDIT HOURS: 3 Hours X 14 weeks =42 Hours
PREREQUISITES: COMP 1159, COMP1161
COREQUISITES: None
EFFECTIVE DATE: SEPTEMBER 06, 2005
PLAR ELIGIBLE: YES NO

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NOTE TO STUDENT: We urge you to retain this Course Outline for future reference.

FOR OFFICE USE ONLY		
ORIGINATOR: _____	SIGNATURE	DATE
CHAIR: _____	SIGNATURE	DATE
DATE OF REVISION: _____		

EQUITY STATEMENT: George Brown College values the talents and contributions of its students, staff and community partners and seeks to create a welcoming environment where equity, diversity and safety of all groups are fundamental. Language or activities which are inconsistent with this philosophy violate the College policy on the Prevention of Discrimination and Harassment and will not be tolerated. The commitment and cooperation of all students and staff are required to maintain this environment. Information and assistance are available through your Chair, Student Affairs, the Student Association or the Human Rights Advisor.

STUDENT RESPONSIBILITIES: Students should obtain a copy of the *Student Handbook* and refer to it for additional information regarding the grading system, withdrawals, exemptions, class assignments, missed tests and exams, supplemental privileges, and academic dishonesty. Students are required to apply themselves diligently to the course of study, and to prepare class and homework assignments as given. Regular attendance, though not a requirement, is strongly advised. Past student performance shows a strong relationship between regular attendance and success.

COURSE DESCRIPTION:

VOIP Network Technologies course is designed to provide technical level of understanding of VoIP network design and trouble shooting VoIP networks.

This course focuses on VoIP theory, practical implementation of VoIP technology in the enterprise networks .It Explores various VoIP protocols, its configurations, and troubleshooting VoIP Networks and Signaling issues.

COURSE OUTCOMES:

1. Explain the basics of Analog and Digital Voice Technologies
2. Discuss Voice over IP Signaling and Call Control
3. Explain standards for voip communications , VoFR and VoATM
4. Explain AVVID, Cisco IP Telephony (CIPT) components, Cisco Catalyst Switches and Gateways (H.323, MGCP)
5. Describe Call Manager Cluster and Deployment Options
6. Identify why, where and when to use Route Plans and Telephony Class of Service
7. Explain Call Admission Control (CAC), Survivable Remote, Site Telephony (SRST) and VoIP network security issues
8. Explain Call Manager Tools

9	Explain QoS Classification and Marking , Congestion Management and Congestion Avoidance, Policing, Shaping, Queuing, QoS Management Tools and QoS Design
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DELIVERY METHODS:

The instructional methods of this course are comprised of a combination of lectures, lab work and assignments.

LIST OF TEXTBOOKS AND OTHER TEACHING AIDS:

Cisco IP Telephony by [David Lovell](#). ISBN: 1587050501
Cisco Call Manager Fundamental by John Alexander ISBN: 1587050080

(Additional handouts, as required)

TESTING POLICY:

Missing a Test or Examination

Arriving Late for a Test, Quiz, Examination or Other Graded Activity

It is the responsibility of the student to arrive on time for all exams, tests, quizzes, and other graded activities (examinations). A student who arrives late for any examination will be permitted to write the examination only if no other student has completed the examination and left the room. A student who is given late admission will not receive any additional time to complete the activity. If any student has completed the exam and left the room, late admission will be denied and the student arriving late will receive a mark of zero for the missed activity.

Missed Tests, Quizzes, Examinations or Other Graded Activities

A student who misses an exam, test, quiz, or other graded activity (examination) will receive a grade of zero for that examination. A student will not be allowed a deferred examination unless they have a verifiable medical reason, supported by a Doctor's certificate. The Chair of the department may consider other situations on a case-by-case basis. A deferred examination will not be granted for students who missed the examination because they overslept, experienced transportation delays, did not know about the exam, or did not feel ready for the exam.

ASSIGNMENT POLICY:

All assignments submitted for evaluation must adhere to the requirements defined when the assignment is distributed to the class. An assignment is due on the date and time announced when the assignment is distributed to the class unless prior arrangements have been made with the professor or unforeseen extraneous circumstances prevent compliance. An assignment submitted after the due date is subject to a 10% penalty per day for a specific period of time also announced when the assignment is distributed, after which the assignment will not be accepted for credit.

EVALUATION SYSTEM:

1. A score of zero will be recorded for a missed quiz, exercise, assignment, or test unless the student presents the professor with official substantiation of the absence the first day s/he returns to class
2. Students are responsible for informing their Instructor/Professor at the completion of their work in lab so that a record is kept for the work accomplished. In case of a missed lab student marks will be proportionately deducted from assignments as shown above
3. If the student can provide official substantiation for his/her absence, that student may be allowed to increment the weight of the final test by the weight of one missed quiz, exercise, or assignment
4. When due to extraordinary circumstances beyond his/her control, a student may be allowed to write a test immediately on his/her return to the College, if the amount of time elapsed is minimal and official documentary evidence is provided
5. The course description and topic outline serves as a guide for study and preparation. Additional material may be introduced to reflect more current information

1. TEST #1	30%
2. TEST #2	35%
3. Assignments/Labs	35%
Total	100%

GRADING SYSTEM

GEORGE BROWN COLLEGE				
A+/A 85-100	B+ 77-79	C+ 67-69	D+ 57-59	Below 50 F
A- 80-85	B 73-76	C 63-66	D 50-56	
	B- 70-72	C- 60-62		

Excerpt from the College Policy on Academic Dishonesty:

The *minimal* consequence for submitting a plagiarized, purchased, contracted, or in any manner inappropriately negotiated or falsified assignment, test, essay, project, or any evaluated material will be a grade of zero on that material.

TOPICAL OUTLINE:

Topic/ Week	Outcome	Content
1	1	An introduction to Analog and Digital Voice Technologies
2	2	Voice over IP Signaling and Call Control
3	3	Standards for voip communications , VoFR and VoATM
4	4	AVVID, Cisco IP Telephony (CIPT) components, Cisco Catalyst Switches and Gateways (H.323, MGCP)
5	5	Introduction to Call Manager, Call Manager Cluster and Deployment Options, Call admission control techniques, Survivable Remote site telephony
6	5, 6,10	Route Plans and Telephony Class of Service Wireless Security protocols
7		Mid-term Exam
8	8	Call Manager Tools
9	9,11	QoS Classification and Marking How to secure data and voip over wireless communications
10	9	Congestion Management and Congestion Avoidance techniques
11	9	QoS Management Tools and QoS Design
12	7,12	Integrity, availability and network security for VoIP Networks Devices used in VoIP wireless
13	Project	Enterprise VoIP design
14		Course review
		Final Exam