1. SEMINAR RUBRIC

Seminar Title	: Collaboration Primer
Total Curriculum Hours	: 60 hours (7 - 8 hours per day x 9 days)
Pre-requisite/s Needed	: Preferable CCNA

2. SEMINAR AIMS AND SYNOPSIS

This seminar introduces enterprise collaboration with reference to the underlying delineating technologies in messaging, voice and video technologies. It provides an understanding of the journey that telephony has taken, progressively from initial implementation of voice on telephone wires, to the addition of the Internet Protocol, through to the use and integration of video technologies.

The aim of the seminar is to equip participants with the skills and knowledge to appreciate and apply various technological concepts which constitute collaboration technologies at the enterprise level. At the end of the seminar, using the skills and knowledge acquired, participants should be able to implement a configuration which would be representative of certain basic components found in a typical enterprise messaging and collaboration network architecture.

3. SEMINAR SCOPE AND LEARNING OUTCOMES

General Learning Outcomes

Participants should be able to:

(1) describe telephony concepts and collaboration technologies at a fundamental level

(2) explain the Voice over IP technologies

(3) implement Voice over IP on routers and CUCM server

(4) understand certain basic components of an enterprise messaging and voice system

3.1 Topics/ Themes

General Learning Outcome Participants should be able to:	Specific Learning Outcome Participants should be able to:	Topic/Theme (as applicable)
1. describe telephony concepts and collaboration technologies at a fundamental level	1.1 identify the fundamental concepts used in telephony; 1.2 describe the principles of collaboration technologies; 1.3 describe the concepts of messaging over mobile and enterprise architecture	Fundamentals of telephony and collaboration
2. explain the technologies which comprise voice over IP	2.1 describe components which constitute building blocks of VoIP 2.2 describe the architecture and design of the traditional telephony system 2.3 describe the signalling protocols in telephony and VoIP 2.4 describe the Cisco CUCM architecture 2.5 describe mobile architecture, in reference to collaboration technologies 2.6 describe Cisco Jabber in the context of mobile and enterprise systems	Voice over IP & architecture
3. configure certain basic components of an enterprise voice system	3.1 configure Cisco CME 3.2 configure Cisco CUCM servers and components 3.3 configure VoIP, QoS and other aspects of the CUCM	Configuring enterprise messaging and voice

4. LEARNING ACTIVITIES AND TEACHING METHODS

Lectures will focus on the foundational concepts and technologies used in collaboration technologies. These concepts will be further reinforced by the use of e-learning videos demonstrating the concepts, and practical sessions allowing hands-on configuration of basic hardware constituent components. Case studies & labs will be used in tutorials to enhance the understanding and application of the concepts learnt.

	Session	Topic	Lecture	Tutorials / Labs
Day 1	AM (3 hrs)	Topic 1 Overview of Collaboration Technologies Topic 2 PSTN	1 hour 2 hours	
	PM (4 hrs)	Topic 3 Intro to VoIP	1 hour	3 hours
Day 2	AM (3 hrs)	Topic 4 Voice & PCM	1 hour	2 hours
	PM (4 hrs)	Topic 4 Voice & PCM		4 hours
Day 3	AM (4 hrs)	Topic 5 Vocoder & RTP	1 hour	3 hours
	PM (4 hrs)			4 hours
Day 4	AM (3 hrs)	Topic 6 Voip Peripherals	1 hour	2 hours
	PM (4 hrs)			4 hours
Day 5	AM (3 hrs)	Topic 7 CME	1 hour	2 hours
	PM (4 hrs)	Topic 7 CME Topic 8 Dial Plan Topic 9 VoIP Signalling Protocol Topic 10 QoS	2 hours	2 hours

	Session	Topic	Lecture	Tutorials / Labs
Day 6	AM (3 hrs)	Topic 11 Call Manager & call Restriction Topic 12 CUCM Architecture	1 hour 1 hour	2 hours
	PM (4 hrs)	Topic 13 Administrator and End-User Interfaces in CUCM Topic 14 Managing Endpoints and End Users in CUCM	1 hour 1 hour	2 hours
Day 7	AM (3 hrs)	Topic 15 Understanding CUCM Dial-Plan Elements and Interactions	1 hour	2 hours
	PM (4 hrs)	Topic 16 Enabling Telephony Features with CUCM	1.5 hours	2.5 hours
Day 8	AM (2 hrs)	Topic 17 Enterprise Software Solutions Topic 18 Mobile Applications	1 hour 1 hour	
	PM (4 hrs)	Topic 19 Jabber SDK	1.5 hour	2.5 hours
Day 9	AM (1 hr)	Topic 20 Telepresence	1 hour	
	AM (3 hrs)	Assessment		3 hours

5. FORMATIVE ASSESSMENT

Formative assessments include:

- diagnostic questions during formal lessons;
- discussions on various case studies during formal lessons;

Instructors will make use of these opportunities to provide feedback on the participants' progress. Participants would be able to identify gaps in their understanding and clarify their queries on the subject.

6. SUMMATIVE ASSESSMENT

There will be a summative assessment at the end of the Primer whereby students will be graded.

7. CONTRIBUTORS

This seminar is a community-led, Cisco-enabled initiative.

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About Cisco

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