Computer Technology Department
Business and Technology Division
GREENVILLE TECHNICAL COLLEGE

COURSE SYLLABUS

Course Title: Fundamentals of Voice Over IP

Course Number: IST 295

READ THIS SYLLABUS CAREFULLY
You should read this syllabus carefully and ask your instructor about *any* aspects that you do not understand. The syllabus is an agreement between you and your instructor concerning course objectives, course content, grading, and other policies and procedures particular to this course. The following information is specific to the course. Three additional documents are provided as attachments and *are considered a part of this syllabus*:

Attachment I:

Each instructor will provide a supplement to this syllabus. The supplement will include: a week-by-week plan of instruction based on the section in which you are enrolled; your instructor's name, office hours and/or office location; and your instructor's contact information and recommended best methods to contact your instructor.

Attachment 2:

The Department responsible for developing and teaching has policies and procedures in place to assure quality instruction for all students. These are attached as "Departmental Policies and Procedures."

Attachment 3:

Please note that it is your responsibility to read the current Student Handbook included in Greenville Technical College's Catalog. (See website.) The Student Handbook addresses specific academic and student conduct policies and procedures. Excerpts from the Student Handbook representing the policies and procedures most often referred to in working with students are provided for your convenience as "Attachment 3."

Approved by:

Phillip Cluley, Department Head for Computer Technology
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Approved by: Date: _____

Joel D. Welch, Ph.D., PE
Dean, Technology Division

This syllabus will remain in effect until revised or reviewed no later than August 2016.

COURSE SYLLABUS

Course Title: Fundamentals of Voice Over IP

Course Number: IST 295

Lecture hours per week: 3.0   **Semester credit hours:** 3.0

Prerequisite: IST 203

Purpose of the Course: This course provides the knowledge and concepts required to understand and implement Voice over IP (VoIP) telephony and what components are necessary in these environments.

Catalog Course Description: This course is an introduction to features of Voice Over IP protocols, including VoIP hardware selection and network design considerations. Concepts include analog and digital voice encoding, signaling, and Quality of Service (QOS); and, troubleshooting and configuration of VoIP networks.

Required text(s) or other materials:

1. CCNA Voice 640-461 Official Cert Guide; Cisco Press; ISBN: 978-1587204173: CCNA Voice Lab Manual 978-1587132995; Cisco Press, ; ISBN: 978-1587132995: CCNA Voice Portable Command Guide; Cisco Press; ISBN: 978-1587204425

2. NOTE: Students in traditional classes must access Blackboard for course-related information. Students in hybrid and online classes will access their online content through Blackboard.

COLLEGE-WIDE GENERAL EDUCATION OUTCOMES

1. Communication – Students will demonstrate the ability to use active reading and listening skills and to produce effective written and oral communication for varying audiences.

2. Information Technology and Technological Literacy – Students will demonstrate competency in using computer technology within a field of study.

3. Critical Thinking/Reasoning – Students will demonstrate the ability to apply the scientific method, mathematical processes, and research skills to analyze and solve problems/issues by using reflection and reasoning to justify conclusions.

4. Professional and Personal Responsibility – Students will demonstrate the ability to exhibit conduct, attitudes, and etiquette appropriate to the student's community and chosen career. Students will demonstrate the ability to manage time, to use effective interpersonal skills, and to display responsible behavior.

5. Diversity – Students will demonstrate the ability to recognize diversity and to demonstrate respectful conduct and attitudes toward all. Students will demonstrate the ability to explain how global issues impact life, work, and opportunities.

Revised December 31, 2012

COMPUTER TECHNOLOGY PROGRAM LEVEL STUDENT LEARNING OUTCOMES

Upon successful completion of the Computer Technology Degree students will be able to:

1. Install computer and network hardware.

2. Install computer operating systems and application software.

3. Design, create and test computer programming solutions.

4. Demonstrate the ability to take initiative, assume responsibility, and work under pressure with minimum supervision by successfully completing "hands-on" computer assignments.

5. Analyze, troubleshoot, and correct computer related technical problems.

Revised August 2012

IST 295 COURSE OUTCOMES

Upon completion of the course, the student will be able to successfully complete 70 % of the following tasks:

1. The student will be able to explain the functions and features of the Public Switched Telecommunications Network (PSTN).

2. The student will be able to identify the various requirements, benefits and components of a VoIP telephony system.

3. The student will be able to explain the importance of IP Quality of Service (QoS) for VoIP.

4. The student will be able to perform routine end point and end user device configuration.

5. The student will be able to identify and troubleshoot common VoIP system issues.

6. The course will aid the student in the preparation of the Cisco CCNA voice 640-641 exam.

The outcomes of the IST 295 course are intended to meet the Computer Technology program level student learning outcomes.

IST 295 – MAIN TOPICS
Tentative Schedule of Topic and Class/Lab Meetings

Please refer the Syllabus Attachment 1 to review the Tentative Course Schedule. The schedule outlines the chapters that will be reviewed, when tests will be given and when assignment and labs will be due.

IST 295 – COURSE SPECIFIC REQUIREMENTS

The Cisco curriculum is based on the Cisco unified communications system, Call Manager Express (CME) and Cisco Unified Communications manager (CUCM). The course is instructor led with hands on lab exercises. The text is used as an enhancement to the instructor led curriculum. Additional course materials and tests can be accessed with your Blackboard user name and password.

The final exam will consist of a written assessment and a skill-based assessment taken in class on-campus.

IST 295 – EVALUATION AND GRADING INFORMATION

Grades for this course will be calculated as follows:

Unit Tests (Cisco Online)	50 percent
Class Assignments	10 percent
Final Examination (Cisco Online)	20 percent
Skills Based Assessment	20 percent
Total	100 percent

Final letter grades will be issued as follows:

A	=	90 - 100
B	=	80 - 89
C	=	70 - 79
D	=	60 - 69
F	=	0 - 59