

**Computer Programming Department**  
**Business/Public Service Division**  
**GREENVILLE TECHNICAL COLLEGE**

**COURSE SYLLABUS**

**Course Number:** IST 192

**Course Title:** Linux Network Applications

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

**Prerequisite:** IST 191

**Catalog Course Description:** This course will provide students with the skills necessary to deploy and administer the core network services in a Linux system, such as Apache Web Server, Samba File Server, BIND Domain Name Service, Network File Service (NFS), and others.

**Purpose of the Course:** Students will learn how to install and configure Linux network services including Apache Web Server, Squid Proxy Server, Berkley Domain Name Service (BIND), Network File Service (NFS), Dynamic Host Configuration Protocol (DHCP), Samba File Service (SMB), and Sendmail E-mail Service.

**Required text(s) or other materials:**

1. RHCSA™/RHCE® Red Hat® Linux Certification Study Guide, Sixth Edition; Michael Jang; McGraw Hill/Osbourne; ISBN-13: 978-0-07-176565-7
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.

**Students for Whom the Course is Intended:** For individuals who design, implement, maintain, and administer Red Hat Enterprise Linux servers.

**COLLEGE-WIDE STUDENT LEARNING 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.

*Approved March 26, 2009*

## COMPUTER PROGRAMMING PROGRAM LEVEL STUDENT LEARNING OUTCOMES

Upon successful completion of the CPT/Programming program, the graduate will be able to:

1. Students will be able to analyze, design, develop, and document solutions that will satisfy the information needs of business users using established design methodologies and standards.
2. Students will be able to design, create, test, and document logical programming solutions to prescribed specifications following established standards and using current development environments and languages for application development and database management.
3. Students will be able to demonstrate the knowledge and ability to install and maintain microcomputer hardware and operating system software.
4. Students will be able to demonstrate the use of a minimum of three business application software packages.
5. Students will be able to demonstrate fundamental team building, project management, and presentation skills by participating in team projects that include team goals and values, a development methodology for documentation and coding, group presentations, and exposure to topics such as diversity, time management, and goal setting.
6. Students will be able to demonstrate the ability to take initiative, assume responsibility, and work under pressure with minimum supervision by successfully completing "hands-on" computer lab assignments.

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## IST 192 LINUX NETWORK APPLICATIONS COURSE OUTCOMES

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Upon successful completion of this course, students will be able to do the following with 70 percent accuracy:

1. Install, configure, and administer Apache Web Server and Squid Proxy Server.
2. Install, configure, and administer Berkley Domain Name Service (BIND) and Dynamic Host Configuration Protocol (DHCP).
3. Install, configure, and administer Network File Service (NFS).
4. Install, configure, and administer Samba (SMB File Server).
5. Install, configure, and administer Sendmail E-mail Server.

*The outcomes of the IST 192 course are intended to meet the CPT/Networking Administration program level student learning outcomes.*

*Revised 1/2009*

## IST 192 - LINUX NETWORK APPLICATIONS – MAIN TOPICS

- Linux Apache Web Server
- Linux Squid Proxy Server
- Linux/UNIX Network File System (NFS) File Server
- Linux Windows (Samba) File Server
- Linux BIND Domain Name Service (DNS) Nameserver
- Linux Postfix Mail Server
- Linux Sendmail Mail Server

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### IST 192 – Grading Information and Departmental Grading Scale

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The Red Hat Academy curriculum is available at the website [academy.redhat.com](http://academy.redhat.com). The text is a printed version of the online curriculum. The online curriculum and tests can be accessed with your user name and password. To receive full benefit from the online curriculum, be sure to visit links recommended.

#### Grading Policy

A numeric grade will be given for each of the following items:

<b>Workbook Tests (Red Hat Online Tests)</b>	<b>50 percent</b>
<b>Labs</b>	<b>15 percent</b>
<b>Workbook Assignments</b>	<b>10 percent</b>
<b>Final Examination</b>	<b>25 percent</b>
(Written Final Exam 65% and Skill-Based Assessment 35%)	

Notebooks should be maintained containing notes from the Red Hat curriculum, the text, lectures, and labs.

There are 11 online tests. The tests are intended for the Red Hat Certified Technician (RHCT) exam preparation. The final exam will consist of a written assessment and a skill-based assessment.

Final letter grades will be issued as follows:

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

**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 above information is specific to the course. Three additional documents are provided as attachments and *are considered a part of this syllabus*:

Attachment 1:

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.

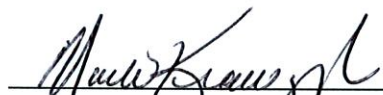
Attachment 2:

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:

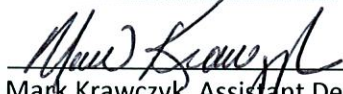
Please note that it is your responsibility to read the current Student Handbook included in Greenville Technical College's Catalog. (See website.) The Student Handbook addresses specific academic and student conduct policies and procedures. Excerpts from the Student Handbook representing the policies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

Approved by:



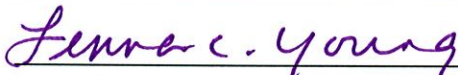
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Date

*This syllabus will remain in effect until revised or reviewed no later than August 2012.*