El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	**Information Technology Systems**
COURSE RUBRIC AND NUMBER	**ITSC 2325**
COURSE TITLE	**Advanced Linux**

COURSE CREDIT HOURS	**3**	**3**	**:**	**1**
	Credits	**Lec**		**Lab**

I.   Catalog Description

Provides an Advance Open-source Linux operating system. Develops LDAP directory services to all your clients, support users remotely, installing and configuring Network services**. (3:1).**

II.   Course Objectives

A. Unit I. Web Services

1. Install and configure an Apache web server for network implementation.
2. Configure an Apache web server to use virtual hosts, Secure Sockets Layer (SSL), and customized file access.
3. Install and configure a proxy server with access policies, authentication, and resource usage.

B. Unit II. File and Service Sharing

1. Set up a SAMBA server for client login.
2. Set up a workgroup in which a server participates and define shared directories and printers.
3. Export file systems using NFS.
4. Mount an NFS file system on a client and secure NFS.

C. Unit III. Network Client Management

1. Configure a DHCP setting default and per client options.
2. Configure a DHCP relay agent.
3. Maintain the DHCP server.
4. Configure PAM (Pluggable Authentication Module) authentication.
5. Perform queries and updates to a LDAP (Lightweight Directory Access Protocol) server.
6. Manage adding both items and users.

D. Unit IV. E-Mail Services

1. Install and configure a mail server using sendmail.
2. Configure e-mail aliases, e-mail quotas, and virtual e-mail domains.
3. Implement client e-mail management software to filter, sort, and monitor incoming user e-mail.
4. Install and configure POP and IMAP daemons.

E. Unit V. System Security

1. Configure a system to perform network address translation (NAT, IP masquerading).
2. Configure port redirection, manage filter rules, and avert attacks.

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     3. Configure an FTP server for anonymous use.
     4. Configure user access.
     5. Configure and secure an SSH daemon.
     6. Configure TCP Wrapper.
     7. Install, configure, and run intrusion detection systems
     8. Apply security patches and bugfixes.

  F. Unit VI. Troubleshooting

     1. Identify boot stages and troubleshoot the cause of errors in loading and usage of bootloaders.
     2. Identify and correct common boot and run time issues.
     3. Identify, diagnose, and repair local system issues when using the command line.
     4. Identify common local system and user environment configuration issues and common repair techniques.

III.   THECB Learning Outcomes (WECM)
1. Install, administer, and manage advance network environment using a Linux system.
2. Demonstrate advance skills and proficiency with Linus utilities, configurations, deploy secure networks.
3. Integrate Linux networks with existing networks.

IV.   Evaluation

A. There will be three (3) skill-based examinations and one final exam.

B. There will be six (6) hands-on lab assignments.

Final Grade

    The final grade will be based on the percentage of the total points earned.

Percentage	Final Letter Grade
90% +	A
80% to 89%	B
70% to 79%	C
60% to 69%	D
0% to 59%	F

V.   Disability Statement (Americans with Disabilities Act [ADA])
EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI.   6 Drop Rule
Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.

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