

EL CAMINO COLLEGE
MINUTES OF THE COLLEGE CURRICULUM COMMITTEE
September 13, 2016

CALL TO ORDER

Meeting called to order at 2:35 p.m. by Chair Carr.

Members:

Present: M. Anderson, S. Bartiromo, A. Carr, M. Chaban, R. Donegan, E. French-Preston, A. Hockman, L. Houske, J. Minei, S. Rodriguez, J. Shankweiler, A. Sharp, C. Striepe

Absent: K. Iino

Ex-Officio Members:

Present: Q. Chapman, L. Clowers, A. Osanyinpeju, L. Suekawa, L. Young

Absent: P. McDermott

Guests: W. Cox, R. Davis, L. Linka, C. Neumann, B. Stradling

APPROVAL OF MINUTES

The committee approved the minutes of the College Curriculum Committee of April 26 and May 3, 2016.

CURRICULUM REVIEW

A. Full Program Review

The committee reviewed the following program proposal, which is ready for final action:

1. Retail Management Certificate of Achievement

The committee reviewed the following program inactivation, which is ready for final action:

1. Real Estate Assistant Certificate of Achievement

B. Full Course Review

The committee reviewed the following courses, which are ready for final action:

1. Computer Aided Design/Drafting 31 (CADD 31)
2. Computer Information Systems 30 (CIS 30)
3. Computer Information Systems 40 (CIS 40)
4. Computer Information Systems 134 (CIS 134)
5. Fire and Emergency Technology 40A (FTEC 40A)
6. Fire and Emergency Technology 40B (FTEC 40B)
7. Fire and Emergency Technology 100 (FTEC 100)
8. Fire and Emergency Technology 110A (FTEC 110A)
9. Physical Education 5abc (PE 5abc)
10. Sign Language/Interpreter Training 120 (SLAN 120)

11. Sign Language/Interpreter Training 131 (SLAN 131)

C. Standard Review/Consent Agenda Proposals

The committee reviewed the following courses, which are ready for final action:

1. Automotive Technology 35 (ATEC 35)
2. Business 27 (BUS 27)
3. Business 29 (BUS 29)
4. Computer Science 40 (CSCI 40)
5. Construction Technology 121 (CTEC 121)
6. Construction Technology 122 (CTEC 122)
7. Construction Technology 131 (CTEC 131)
8. Construction Technology 132 (CTEC 132)
9. Construction Technology 141 (CTEC 141)
10. Construction Technology 142 (CTEC 142)

The committee reviewed the following course inactivations, which are ready for final action:

1. Educational Development 8 (EDEV 8)
2. Educational Development 9 (EDEV 9)

CURRICULUM DISCUSSION

A. Full Program Review

Business Division

1. Retail Management Certificate of Achievement

It was moved by A. Hockman, seconded by E. French-Preston, that the committee approve change in course requirements for Retail Management Certificate of Achievement. Motion carried.

2. Real Estate Assistant Certificate of Achievement

The division has decided to inactivate this certificate because the program is not supportive, as it is for a real estate office assistant, and not a licensed broker or salesperson.

It was moved by A. Sharp, seconded by E. French-Preston, that the committee approve inactivation of Real Estate Assistant Certificate of Achievement. Motion carried.

B. Full Course Review

Business Division

Computer Information Systems 134 – ASP.NET with C# Business Web Programming

Edit *Evaluation Methods and Assignments* in the Course Checklist:

Critical Thinking Assignment #1 – Correct grammar in second sentence “Design and develop the components that allow a seller to list ~~their~~ his or her auction items.” Action: A. Carr

It was moved by A. Sharp, seconded by E. French-Preston, that the committee approve course proposals for Computer Information Systems 30, 40, and amended Computer Information Systems 134. Motion carried.

Fine Arts Division

Dance 221 – Ballet Variations

Dance 221 was tabled. Major Topic VII in the Outline of Subject Matter lists “Final Performance” as a subject, which the committee determined is not a subject.

Health Sciences and Athletics Division

1. Physical Education 5abc – Men's Intercollegiate Baseball Team

Edit *Outline of Subject Matter* in the Course Checklist: Add subtopics for Major Topic II.
Action: S. Bartiromo

Edit *Evaluation Methods and Assignments* in the Course Checklist:

Critical Thinking Assignment #2 – Correct second sentence

“Demonstrate ~~and compare~~ the hitting skills involved in bunting and hitting deep fly balls to all fields.” Action: Q. Chapman

2. Sign Language/Interpreter Training 120 – Fingerspelling and Numerical Concepts

Edit *Course Review* in the Course Checklist: Provide a justification for the change from lecture hours to all lab hours. Action: S. Bartiromo

It was moved by M. Chaban, seconded by L. Houske, that the committee approve course proposals for Physical Education 5abc, Sign Language/Interpreter Training 120, and amended Sign Language/Interpreter Training 131. Motion carried.

Industry and Technology Division

Fire and Emergency Technology 40A, 40B, 100, and 110A are being reactivated due to demand from local fire agencies.

It was moved by M. Chaban, seconded by A. Sharp, that the committee approve course proposals for Computer Aided Design/Drafting 31, Fire and Emergency Technology 40A, 40B, 100 and 110A. Motion carried.

It was moved by M. Chaban, seconded by A. Sharp, that the committee approve new distance education courses for Fire and Emergency Technology 40A, 40B, 100 and 110A. Motion carried.

C. Standard Review/Consent Agenda Proposals

Dean Rodriguez requested a minor edit to the conditions of enrollment for Construction Technology 141 and 142 to read as “Prerequisite: Construction Technology 100 or Construction Technology 110 with a minimum grade of C in prerequisite or equivalent skills.” Action: Q. Chapman

It was moved by A. Hockman, seconded by S. Bartiromo, that the committee approve the twelve standard review/consent agenda proposals. Motion carried.

VICE PRESIDENT’S REPORT

Vice President Academic Affairs – Dr. Shankweiler

Dr. Shankweiler welcomed new committee members and thanked the committee for their work. Many proposals are coming through for review, and Dr. Shankweiler looks forward to working with the committee this semester.

CHAIR’S REPORT

College Curriculum Committee Chair – A. Carr

Chair Carr reviewed the Course Identification Number System (C-ID) announcements. The Chancellor’s Office C-ID Curriculum Development Team is hosting several reviews this fall. The committee is encouraged to engage ECC faculty to visit the C-ID.net website, register for the Discipline Input Group meetings, and complete surveys on the C-ID URL links for the 5-Year TMC & Descriptor Review by September 16, 2016.

Chair Carr provided an overview of the CCC Representative Duties & Flow Chart.

Chair Carr made a request for volunteers to support the fall 2016 Standard Technical Review Subcommittee. The following assignments were made:

September 15	A. Sharp
September 29	M. Chaban
October 13	A. Hockman
October 27	E. French-Preston
November 10	L. Houske

CURRICULUM ADVISOR REPORT

Curriculum Advisor – Q. Chapman

Curriculum Advisor Q. Chapman provided the committee with a list of courses that were not reviewed in 2014-2015. These courses will be the priority this semester and need to be submitted to the Division Curriculum Committee for review between October 17 and October 31. The Curriculum Review Timeline for fall 2016 is available on the CurricUNET home page.

ADJOURNMENT

Chair Carr called a motion to adjourn the meeting. M. Chaban moved, C. Striepe seconded, and the motion carried. The meeting adjourned at 4:00 p.m.

**EL CAMINO COLLEGE
COLLEGE CURRICULUM COMMITTEE
September 13, 2016
Approved Curriculum Changes for 2017-2018**

BUSINESS

CTE TWO-YEAR COURSE REVIEW; DISTANCE EDUCATION REVIEW

1. Business 27 – Effective English for Business

CTE TWO-YEAR COURSE REVIEW; CHANGE IN CONDITIONS OF ENROLLMENT (Recommended Preparation)

1. Business 29 – Oral Business Communications

Current Status/Proposed Changes

Recommended Preparation: ~~eligibility for English A B~~

Recommendation

Recommended Preparation: English B

CTE TWO-YEAR COURSE REVIEW; DISTANCE EDUCATION REVIEW, CHANGES IN CONDITIONS OF ENROLLMENT (Prerequisite, Recommended Preparation), CATALOG DESCRIPTION

1. Computer Information Systems 30 – Introduction to eCommerce

Current Status/Proposed Changes

Recommended Preparation: Computer Information Systems 13 or equivalent experience and ~~eligibility for English 84 82~~

This introductory course will acquaint the student with fundamentals of Electronic Commerce. The primary focus will be the study of current eCommerce practices, business models, techniques and opportunities for conducting business via the Internet. This course will help to prepare students for employment as ~~webmasters, website designers, and e-commerce~~ web content managers, eCommerce market research analysts and eCommerce business managers.

Recommendation

Recommended Preparation: Computer Information Systems 13 or equivalent experience and English 82

This introductory course will acquaint the student with fundamentals of Electronic Commerce. The primary focus will be the study of current eCommerce practices, business models, techniques and opportunities for conducting business via the Internet. This course will help to prepare students for employment as web content managers, eCommerce market research analysts and eCommerce business managers.

2. Computer Information Systems 134 – ASP.NET with C# Business Web Programming

Current Status/Proposed Changes

Prerequisite: Computer Information Systems 13 or equivalent experience

~~Recommended Preparation: Computer Information Systems 13 or 133 or equivalent experience~~

This introductory programming course incorporates the basic concepts of web programming, problem solving, programming logic, and design techniques using the Microsoft.NET web programming languages. The student will be able to build a dynamic data-driven web application using ~~SQL Server~~ an SQL (Structured Query Language) database. Emphasis is placed on emerging web programming skills and technologies to prepare students for advanced programming applications and to enter the e-Business industry.

Recommendation

Prerequisite: Computer Information Systems 13 or equivalent experience

Recommended Preparation: Computer Information Systems 133

This introductory programming course incorporates the basic concepts of web programming, problem solving, programming logic, and design techniques using the Microsoft.NET web programming languages. The student will be able to build a dynamic data-driven web application using an SQL (Structured Query Language) database. Emphasis is placed on emerging web programming skills and technologies to prepare students for advanced programming applications and to enter the e-Business industry.

CTE TWO-YEAR COURSE REVIEW; CHANGES IN DESCRIPTIVE TITLE, CONDITIONS OF ENROLLMENT (Recommended Preparation), CATALOG DESCRIPTION

Current Status/Proposed Changes

1. Computer Information Systems 40 – Personal Computer ~~Operations~~ Support and Networking

Recommended Preparation: Computer Information Systems 13 ~~and one other microcomputer course~~ or equivalent experience

In this course, students will become familiar with managing and supporting personal computers and basic networking within an organization. The class will emphasize ~~both computer hardware and applications software~~ networks and devices such as tablets, routers, office servers, personal computers, and systems software management. Topics ~~covered~~ will include network fundamentals, personal computer concepts, computer devices, hardware management, applications and operating system software installation, maintenance and troubleshooting, ~~and~~ small network configuration, wireless LAN (Local Area Network), and ethical concerns within the information systems environment.

Recommendation

Computer Information Systems 40 – Personal Computer Support and Networking
Recommended Preparation: Computer Information Systems 13 or equivalent experience

In this course, students will become familiar with managing and supporting personal computers and basic networking within an organization. The class will emphasize networks and devices such as tablets, routers, office servers, personal computers, and systems software management. Topics will include network fundamentals, personal computer concepts, computer devices, hardware management, applications and operating system software installation, maintenance and troubleshooting, small network configuration, wireless LAN (Local Area Network), and ethical concerns within the information systems environment.

CHANGE IN CERTIFICATE; COURSE REQUIREMENTS

1. Retail Management Certificate of Achievement

Current Status/Proposed Changes

A Certificate of Achievement will be granted upon completion of the program requirements. A minimum of 12 units must be completed at El Camino College.

Certificate Requirements		Units
BUS 1A	Financial Accounting	4
or		
BUS 11	Accounting for Small Business	3
BUS 14	Marketing	3

BUS 19	Principles of Retailing Management	3
BUS 20	Business Management	3
BUS 21	Human Resources Management	3
BUS 22	Human Relations in Organizations	3
BUS 28	Written Business Communications	3
BUS 29	<u>Oral Business Communications</u>	<u>3</u>
CIS 13	Computer Information Systems	3
Total Units: 24-25		

INACTIVATE PROGRAM

1. Real Estate Assistant Certificate of Achievement

HEALTH SCIENCES AND ATHLETICS

COURSE REVIEW; CHANGES IN CONDITIONS OF ENROLLMENT (Enrollment Limitation, Recommended Preparation)

1. Physical Education 5abc – Men’s Intercollegiate Baseball Team
Current Status/Proposed Changes
~~Enrollment Limitation: tryout (high school varsity experience or equivalent skill)~~
Recommended Preparation: high school varsity experience or equivalent skill

Recommendation
Recommended Preparation: high school varsity experience or equivalent skill

CTE TWO-YEAR COURSE REVIEW; CHANGES IN COURSE DISCIPLINE, LECTURE CONTACT HOURS, LAB CONTACT HOURS, FACULTY LOAD

1. Sign Language/Interpreter Training 120 – Fingerspelling and Numerical Concepts
Current Status/Proposed Changes
Course Discipline: Sign Language/~~English Interpreting~~, American
Units: 1.0 ~~Lecture: 1 hour~~ Lab: 2 3 hours Faculty Load: ~~16.67~~ 15.00%

Recommendation
Course Discipline: Sign Language, American
Units: 1.0 Lecture: 0 hours Lab: 3 hours Faculty Load: 15.00%

COURSE REVIEW; CHANGES IN COURSE DISCIPLINE, CONDITIONS OF ENROLLMENT (Recommended Preparation), GENERAL EDUCATION REQUIREMENTS, CATALOG DESCRIPTION

1. Sign Language/Interpreter Training 131 – Perspective on Deafness

Current Status/Proposed Changes

Course Discipline: Sign Language/~~English Interpreting~~, American

Recommended Preparation: ~~eligibility for English 84 B~~

El Camino College AA/AS General Education - Area 3

Proposed CSU General Education – Areas C2, D7

Proposed IGETC – Areas 3B, 4G

In this course, students will explore the realm of deafness from both a hearing and deaf perspective. Current topics and issues include sign language, language acquisition, educational trends, experiments and research. Students will gain an understanding of ~~the psychological and social~~ cultural implications of deafness. Causes of deafness and modern technological advances are explored.

Recommendation

Course Discipline: Sign Language, American

Recommended Preparation: English B

El Camino College AA/AS General Education – Area 3

Proposed CSU General Education – Areas C2, D7

Proposed IGETC – Areas 3B, 4G

In this course, students will explore the realm of deafness from both a hearing and deaf perspective. Current topics and issues include sign language, language acquisition, educational trends, experiments and research. Students will gain an understanding of cultural implications of deafness. Causes of deafness and modern technological advances are explored.

INACTIVATE COURSES

1. Educational Development 8 – Basic Mathematics Preparation for Deaf and Hard-of-Hearing Students
2. Educational Development 9 – Advanced Mathematics Preparation for Deaf and Hard-of-Hearing Students

INDUSTRY AND TECHNOLOGY

CTE TWO-YEAR COURSE REVIEW

1. Automotive Technology 35 – Manual Transmission, Drive Train and Drive Axles
2. Construction Technology 121 – Concrete and Formwork
3. Construction Technology 122 – Rough Framing
4. Construction Technology 131 – Roof Framing
5. Construction Technology 132 – Stair Framing

CTE TWO-YEAR COURSE REVIEW; CHANGE IN CONDITIONS OF ENROLLMENT (Prerequisite)

1. Construction Technology 141 – Interior Subcrafts
Current Status/Proposed Changes
Prerequisite: Construction Technology 100 or Construction Technology 110 with a minimum grade of C in prerequisite or equivalent skills

Recommendation

Prerequisite: Construction Technology 100 or Construction Technology 110 with a minimum grade of C in prerequisite or equivalent skills

2. Construction Technology 142 – Exterior Subcrafts
Current Status/Proposed Changes
Prerequisite: Construction Technology 100 or Construction Technology 110 with a minimum grade of C in prerequisite or equivalent skills

Recommendation

Prerequisite: Construction Technology 100 or Construction Technology 110 with a minimum grade of C in prerequisite or equivalent skills

CTE TWO-YEAR COURSE REVIEW; DISTANCE EDUCATION REVIEW, CHANGES IN CONDITIONS OF ENROLLMENT (Recommended Preparation), CATALOG DESCRIPTION

1. Computer Aided Design/Drafting 31 – Orientation to CATIA
Current Status/Proposed Changes
Recommended Preparation: Computer Aided Design/Drafting 5 or equivalent ~~and eligibility for English 84~~

This course provides an orientation to and an overview of the CATIA* Computer Aided Design (CAD)/Computer Aided Manufacturing (CAM) system. Emphasis is on system structure and ~~three-dimensional~~ Three-Dimensional (3-D) geometry creation and manipulation. Most 3-D work is done as solid models based on wireframe profiles created on sketch planes. Basic assemblies and basic drafting techniques are also covered. (*CATIA is a registered trademark of Dassault Systems.)

Recommendation

Recommended Preparation: Computer Aided Design/Drafting 5 or equivalent

This course provides an orientation to and an overview of the CATIA* Computer Aided Design (CAD)/Computer Aided Manufacturing (CAM) system. Emphasis is on system structure and Three-Dimensional (3-D) geometry creation and manipulation. Most 3-D work is done as solid models based on wireframe profiles created on sketch planes. Basic assemblies and basic drafting techniques are also covered. (*CATIA is a registered trademark of Dassault Systems.)

REACTIVATE CTE COURSE; CHANGES IN LECTURE CONTACT HOURS, TERM LENGTH, CONDITIONS OF ENROLLMENT (Recommended Preparation), CATALOG DESCRIPTION

1. Fire and Emergency Technology 100 – Fire Management 1

Current Status/Proposed Changes

Units: 2.0 Lecture: ~~20~~ 2.0 hours Lab: 0 hours

Faculty Load: 13.33% Term Length: ~~2-weeks~~ Full-Term

Recommended Preparation: Fire and Emergency Technology 1 or current employment in the field ~~and Fire and Emergency Technology 4~~

Grading Method: Letter

Credit Status: Associate Degree Credit

CSU Transfer

This course parallels the Management and Supervision for Company Officers course offered by the California Fire Service Training and Education Systems (CFSTES). The course is designed to prepare or enhance the first line supervisor's ability to supervise subordinates in a fire company and it introduces key management concepts and practices utilized in the California fire service. The course includes discussions about decision-making, leadership styles, personnel evaluations, and counseling guidelines. This course applies to Fire Officer certification requirements established by the California State Board of Fire Services.

Recommendation

Fire and Emergency Technology 100 – Fire Management 1

Units: 2.0 Lecture: 2.0 hours Lab: 0 hours
Faculty Load: 13.33% Term Length: Full-Term
Recommended Preparation: Fire and Emergency Technology 1 or current employment in the field
Grading Method: Letter
Credit Status: Associate Degree Credit
CSU Transfer

This course parallels the Management and Supervision for Company Officers course offered by the California Fire Service Training and Education Systems (CFSTES). The course is designed to prepare or enhance the first line supervisor's ability to supervise subordinates in a fire company and introduces key management concepts and practices utilized in the California fire service. The course includes discussions about decision-making, leadership styles, personnel evaluations, and counseling guidelines. This course applies to Fire Officer certification requirements established by the California State Board of Fire Services.

REACTIVATE CTE COURSE; CHANGES IN DESCRIPTIVE TITLE, UNITS, LECTURE CONTACT HOURS, FACULTY LOAD, TERM LENGTH, CONDITIONS OF ENROLLMENT (Recommended Preparation)

Current Status/Proposed Changes

1. Fire and Emergency Technology 110A – Fire ~~Prevention~~ Inspector 1A
Units: ~~2.0~~ 1.5 Lecture: ~~20~~ 1.5 hours Lab: 0 hours
Faculty Load: ~~13.33%~~ 10.00 % Term Length: ~~2-weeks~~ Full-Term
Recommended Preparation: Fire and Emergency Technology 1 ~~or equivalent~~ or current employment in the field
Grading Method: Letter
Credit Status: Associate Degree Credit
CSU Transfer

This course parallels the first course in the series of fire prevention courses offered by the California Fire Service Training and Education System (CFSTES). It provides a broad, technical overview of fire prevention codes and ordinances, inspection practices, key hazards, and extinguishing systems. This course meets National Fire Protection Association 1031, Fire Inspector Professional Qualifications Standards, and applies to Fire Officer, Fire Prevention Officer I, and Public Education Officer certification requirements established by the California State Board of Fire Services.

Recommendation

Fire and Emergency Technology 110A – Fire Inspector 1A
Units: 1.5 Lecture: 1.5 hours Lab: 0 hours

Faculty Load: 10.00 % Term Length: Full-Term
Recommended Preparation: Fire and Emergency Technology 1 or current employment in the field
Grading Method: Letter
Credit Status: Associate Degree Credit
CSU Transfer

This course parallels the first course in the series of fire prevention courses offered by the California Fire Service Training and Education System (CFSTES). It provides a broad, technical overview of fire prevention codes and ordinances, inspection practices, key hazards, and extinguishing systems. This course meets National Fire Protection Association 1031, Fire Inspector Professional Qualifications Standards, and applies to Fire Officer, Fire Prevention Officer I, and Public Education Officer certification requirements established by the California State Board of Fire Services.

REACTIVATE CTE COURSE; CHANGES IN DESCRIPTIVE TITLE, LECTURE CONTACT HOURS, TERM LENGTH, CONDITIONS OF ENROLLMENT (Recommended Preparation)

Current Status/Proposed Changes

1. Fire and Emergency Technology 40A – ~~Fire~~ Command 1A
Units: 2.0 Lecture: ~~20~~ 2.0 hours Lab: 0 hours
Faculty Load: 13.33% Term Length: ~~2-weeks~~ Full-Term
Recommended Preparation: Fire and Emergency Technology 1 or current employment in the field ~~Fire and Emergency Technology 4 and Fire and Emergency Technology 5 or equivalent~~
Grading Method: Letter
Credit Status: Associate Degree Credit
CSU Transfer

This course parallels the Command Principles for Company Officers course offered by the California Fire Service Training and Education Systems (CFSTES). The topics include the role of fire officers, fire behavior, fireground resources, operations, and management procedures. The course applies to Fire Officer certification requirements established by the California State Board of Fire Services.

Recommendation

Fire and Emergency Technology 40A – Command 1A
Units: 2.0 Lecture: 2.0 hours Lab: 0 hours
Faculty Load: 13.33% Term Length: Full-Term
Recommended Preparation: Fire and Emergency Technology 1 or current employment in the field

Grading Method: Letter
Credit Status: Associate Degree Credit
CSU Transfer

This course parallels the Command Principles for Company Officers course offered by the California Fire Service Training and Education Systems (CFSTES). The topics include the role of fire officers, fire behavior, fireground resources, operations, and management procedures. The course applies to Fire Officer certification requirements established by the California State Board of Fire Services.

Current Status/Proposed Changes

2. Fire and Emergency Technology 40B – ~~Fire~~ Command 1B
Units: 2.0 Lecture: ~~20~~ 2.0 hours Lab: 0 hours
Faculty Load: 13.33% Term Length: ~~2-weeks~~ Full-Term
Recommended Preparation: Fire and Emergency Technology 40A 1 or current employment in the field
Grading Method: Letter
Credit Status: Associate Degree Credit
CSU Transfer

This course parallels the Hazardous Materials Command Principles for Company Officers course offered by the California Fire Service Training and Education System (CFSTES). The topics include the Incident Command System (ICS), multi-casualty incidents, hazardous materials incidents, wildland fire incidents, environmental concerns and legal issues. The course applies to Fire Officer certification requirements established by the California State Board of Fire Services.

Recommendation

Fire and Emergency Technology 40B – Command 1B
Units: 2.0 Lecture: 2.0 hours Lab: 0 hours
Faculty Load: 13.33% Term Length: Full-Term
Recommended Preparation: Fire and Emergency Technology 1 or current employment in the field
Grading Method: Letter
Credit Status: Associate Degree Credit
CSU Transfer

This course parallels the Hazardous Materials Command Principles for Company Officers course offered by the California Fire Service Training and Education System (CFSTES). The topics include the Incident Command System (ICS), multi-casualty incidents, hazardous materials incidents, wildland fire incidents, environmental concerns and legal issues. The course applies to Fire Officer certification requirements established by the California State Board of Fire Services.

NEW DISTANCE EDUCATION ONLINE COURSE VERSION

1. Fire and Emergency Technology 40A – Command 1A
2. Fire and Emergency Technology 40B – Command 1B
3. Fire and Emergency Technology 100 – Fire Management 1
4. Fire and Emergency Technology 110A – Fire Inspector 1A

MATHEMATICAL SCIENCES

CTE TWO-YEAR COURSE REVIEW

1. Computer Science 40 – Introduction to UNIX and LINUX Operating Systems