

Information Technology, Business & Personal Services

GUIDED PATHWAY: NETWORKING TECHNOLOGIES: CLOUD COMPUTING

(Certificate, AAS Degree)

Computer Technology Department



This template provides information for students interested in pursuing a career in Networking Technologies. It does not represent a contract, nor does it guarantee course availability. Completing this pathway will earn students a Computer Information Systems, Networking Technologies with a Specialization in Cloud Computing, Associate of Applied Science (D) degree in Networking Technologies or a Certificate I in Network Technologies Cloud Computing (C1).

The Networking Technologies curriculum incorporates instruction in the areas of general network design, Microsoft Server administration technology, server virtualization technology, network administration in Red Hat Linux, and Cloud Computing. The Computer Technology Department is a Microsoft, CISCO, Red Hat Linux, and Amazon Web Services (AWS) Academy. This distinction allows the program the privilege of incorporating Microsoft (Server), Red Hat Linux, and AWS certification topics throughout its curriculum. *All CIS courses require a grade of "C" or better.*

COLLEGE READINESS REQUIREMENTS (only for the AAS)

Enrolling in one or more courses may be necessary if assessment activities and previous academic experiences indicate a need for additional knowledge and skills:

READING & WRITING PLACEMENT

TSI MET: YES NO

IF NO, ADVISOR INSERT COURSE(S) NEEDED

INRW _____

OTHER: _____

MATH PLACEMENT

TSI MET: YES NO

IF NO, ADVISOR INSERT COURSE(S) NEEDED

DEV MATH _____

OTHER: _____

ENGLISH LANGUAGE PROFICIENCY

TSI MET: YES NO

IF NO, ADVISOR INSERT COURSE(S) NEEDED

ESOL _____

OTHER: _____

Exemptions/waivers may exist. Speak with an academic advisor regarding placement in college readiness courses and your ability to enroll in core academic coursework.

SEMESTER BY SEMESTER MAP FOR FULL-TIME STUDENTS ²

D	C1	SEMESTER 1	ACTION ITEMS
◆	◆	ITSC 1405 – Introduction to PC Operating Systems	<input type="checkbox"/> Meet with your advisor to confirm academic and career goals before the end of the semester. <input type="checkbox"/> Meet with a career advisor or instructor to research your career options and opportunities for job shadowing.
◆	◆	ITNW 1425 – Fundamentals of Networking Technologies	
◆	◆	ITSY 1400 – Fundamentals of Information Security	
◆	◆	ITSE 1429 – Programming Logic & Design - Python	

D	C1	SEMESTER 2	ACTION ITEMS
◆	◆	ITNW 1309 – Fundamentals of Cloud Computing	<input type="checkbox"/> Meet with your advisor to file and official degree plan, confirm or update your academic/career path and program of study.
◆	◆	ITNW 1316 – Network Administration I	
◆	◆	ITSC 1358 – UNIX System Administration I	
◆	◆	ITSE 1359 – Introduction to Scripting Languages	

D	C1	SUMMER SESSION I	SUMMER SESSION II
◆		ELECTIVE – Language, Philosophy and Culture/Creative Arts Elective (C)	ELECTIVE – Mathematics Elective (C)

D	C1	SEMESTER 3	ACTION ITEMS
◆	◆	ITSY 1342 – Information Technology Security	<input type="checkbox"/> Meet with a career advisor or coach for assistance in preparing for job search.
◆	◆	ITSE 1303 – Introduction to MySQL	
◆	◆	ITNW 1313 – Computer Virtualization	
◆		ELECTIVE – American History/Government/Political Science/Social and Behavioral Science Elective (C)	

TOTAL SEMESTER CREDIT HOURS: 12

D	C1	SEMESTER 4	ACTION ITEMS
◆		ITNW 2427 – Advanced Cloud Concepts	After reviewing your degree plan and program of study apply for graduation.
◆		ITNW 1436 – Cloud Deployment & Infrastructure Management ³	
◆		ENGL 1301 – Composition I (C)	<input type="checkbox"/> Meet with your advisor to apply for the AAS. Sign up for commencement
◆		ELECTIVE – Speech Elective (C)	

TOTAL SEMESTER CREDIT HOURS: 14

AAS DEGREE MINIMUM: 60 SEMESTER CREDIT HOURS/PATHWAY TOTAL: 60 SEMESTER CREDIT HOURS

1. Degree plans may change in later catalogs. Be sure to consult with your advisor if following an older degree plan.
 2. Students must earn at least 25% of the program credit hours (15 hours) through instruction by Laredo College.
 3. CAPSTONE Course: The learning experience in this course involves consolidation of all program skillsets to reinforce program curricula.
- (C) This course is included in the LC Core, if core complete, credits transfer to any public college or university in Texas.

Certification and Licensure Information

AWS Certified Cloud Practitioner
 AWS Certified Sys Ops Administrator Associate

Career Information

Common Job Titles

Database Administrators, Cloud Computing Architect, Cloud Infrastructure Architect

Regional Labor Market Information

A Cloud Infrastructure Architect is an IT professional who supervises an organization's cloud computing ecosystem. This includes cloud adoption, cloud application design, and cloud management and monitoring. Cloud architects manage application architecture and its deployment in a cloud-based environment. This includes the public cloud, the private cloud, and the hybrid cloud. Architects also negotiate technical support contracts with cloud providers, which include service level agreements. Architects can be involved in projects consisting of thousands of applications running on tens of thousands of servers. Cloud Infrastructure Architects must have a degree in Computer Science, IT, or related discipline, and they must know about cloud computing. Architects should also have in-depth skills relating to server hardware, OpenStack, cloud storage and the integration of tools. As per PayScale, the average salary of Cloud Infrastructure Architects is \$113,801 per year. Professionals with proven cloud computing skills are currently in high demand, and 40% of businesses are right now struggling to find qualified employees. Architects should further continuously learn new skills and gain new certifications.

Source: <https://www.fieldengineer.com/skills/cloud-infrastructure-architect#:~:text=A%20Cloud%20Infrastructure%20Architect%20is,in%20a%20cloud%2Dbased%20environment.>

Career and labor market research tools

(see Quick Reference Guide Bureau of Labor Statistics: <http://www.bls.gov/ooh/>, O*NET: <https://www.onetonline.org/>)

Career Resources: Students are encouraged to consult with their area of study advisor for additional career assistance. The above information is provided as a guide and reference tool for occupations related to this program. This is not a guarantee of job placement in any of these occupations after successful completion of an LC program. The common job titles listed are representative titles and are provided for career research. These are not the only occupations possible in this area of study.

Transfer Information

The Associate of Applied Science prepares students to directly enter the workforce; however, a Bachelor of Applied Arts and Sciences (BAAS) or Bachelor of Technology (BAT) degree can further a student's knowledge and probability for employment success. Baccalaureate degrees must meet general education requirements and completion of upper level courses.

Transfer Guides: The universities listed here do not constitute a Laredo College endorsement. Transfer course evaluations and determination of which courses will count toward a Bachelor's degree are made by the receiving transfer institution.

Texas A&M University @San Antonio: <https://www.tamusa.edu/>

South Texas College: <https://www.southtexascollege.edu/>

Western Governors University: <https://partners.wgu.edu/Pages/Transfer.aspx?iid=340>

Additional Transfer Resources: Students are encouraged to consult with a faculty advisor, area of study advisor, and/or their chosen transfer institution to ensure courses taken at LC will apply toward their bachelor's degree program.