Tohono O'odham Community College

Associate of Arts in Computer Information Systems

The Computer Information Systems program covers developing and maintaining information systems that support organizations technical infrastructure. Students will learn about computer hardware and software, creating and supporting databases, building a network, configuring networks, cyber-security fundamentals, and project management which prepares students for entry-level positions as system administrators, network administrators, support technicians, and applications specialists in the computer information services industry. Graduates may enter a Baccalaureate Degree program and/or sit for the Certified Information Systems Security Professional (CISSP), Project Management Professional (PMP), and/or the Certified Cisco Network Associate (CCNA) network certification examinations.

Areas of Focus

Coding (C) - Software development using programming language to accomplish tasks using a computer. Design and build executable programs and applications to solve problems.

Networking (Nt) - A group of two or more computer systems linked together. Local area networks to wide area networks are configured and maintained using skills obtained in network courses.

Security (S) - Understanding and applying layers of protection for computer systems. From firewalls to penetration testing learn how to protect your digital assets.

GIS (G) - Geographic Information Systems (GIS), solving real world problems creating and using digital maps and layered satellite imagery to reveal patterns, trends, and relationships.

Sample Path Progression

If you are a part time student, take half of the classes each semester (fall 1 and spring 1). The following year, take the second half of the classes (fall 1 again and spring 1 again) until you complete the suggested sequence.

<table>
<tr><th colspan="2">Summer 1 (6 cr hr)</th></tr>
<tr><td colspan="2">✓ STU 101 Becoming a Master Student (Recommended if student has been out of school for several years)
✓ CIS 100</td></tr>
<tr><th>Fall 1 (13 cr hr)</th><th>Spring 1 (14 cr hr)</th></tr>
<tr><td>✓ WRT 101
✓ HIS 122
✓ MAT 142H
✓ Lab-loaded Science</td><td>✓ WRT 102
✓ CIS 127
✓ MAT 151
✓ Lab-loaded Science</td></tr>
<tr><th colspan="2">Summer 2 (6 cr hr)</th></tr>
<tr><td colspan="2">✓ SOC 101
✓ PSY 101</td></tr>
<tr><th>Fall 2 (16 cr hr)</th><th>Spring 2 (Nt, S: 13 cr hr; C: 13 cr hr; G: 12 cr hr)</th></tr>
<tr><td>✓ THO 101
✓ CIS 130
✓ CIS 140
✓ CIS 210
✓ MAT 225</td><td>✓ CIS 280
✓ CIS 297
✓ CIS 240N (Nt, S)
✓ CIS 250N (C -4 cr hr) or GIS 103 (G - 3 cr hr)
✓ Any ART course</td></tr>
</table>

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Associate of Arts in Computer Information Systems

NAME:	TOCC ID:
TOCC EMAIL:	PHONE NUMBER:
TERM OF ADMISSION:	EXPECTED GRADUATION YEAR/TERM:
ACADEMIC ADVISOR:	FACULTY ADVISOR:

General Education Courses:

- Tohono O'odham Himdag (7 cr): HIS 122 (3 cr) and select one from the following: THO 101, THO 106 (4 cr)
- MAT 225 Basic Statistics (3 cr)
- Humanities and Fine Arts (3 cr): Any courses from the General Education selection
- Social and Behavioral Sciences (6 cr).
- Lab-loaded Science course (courses with N in the prefix; 8 cr): Any course with prefix ANR, AST, BIO, CHM, PHY

Note: MAT 142H and courses ending in N (e.g., BIO 100N) are 4 cr. hrs unless otherwise indicated. The rest of the courses are 3 cr. hrs unless otherwise indicated.

COURSE PREFIX	COURSE NAME	REPLACEMENT COURSE	SEMESTER	YEAR	CREDITS	GRADE	MET
HIS 122	Tohono O'odham History and Culture						
THO							
WRT 101	Writing I						
WRT 102	Writing II						
MAT 225	Basic Statistics						
Humanities and Fine Arts (3 cr hr):							
Social and Behavioral Sciences (6 cr hr):							
CIS 100	**Intro to Computers**						
Two Lab-loaded Science Courses (8 cr hr):							
Total General Education Credits Needed: 36			**Total Earned Credits:**				

Core Requirements:

COURSE PREFIX	COURSE NAME	REPLACEMENT COURSE	SEMESTER	YEAR	CREDITS	GRADE	MET
CIS 127	Programming and Problem Solving I						
CIS 130	Fundamentals of Computer Networking						
CIS 140	Introduction to Risk Management						
CIS 210	Introduction to System Administration						
CIS 280	IT Project Management						
CIS 297	Internship/Practicum						

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Total Core Credits Needed: 18	**Total Earned Credits:**

Electives:

Choose courses according to desired concentration area:

COURSE PREFIX	COURSE NAME	REPLACEMENT COURSE	SEMESTER	YEAR	CREDITS	GRADE	MET
CIS 230N	Networking Fundamentals – Nt., S						
CIS 240N	Network Security – Nt., S						
CIS 250 N	Coding Fundamentals-C						
GEO 267	Introduction to GIS - G						
Total Core Credits Needed: 7-8			**Total Earned Credits:**				
Total Program Credits Needed: 61-62			**Total Earned Credits:**				

Program Learning Outcomes:

1. Technical Skills: Develop advanced proficiency in programming languages, database management, and network administration.
   a) Measurable Objective: Students will demonstrate proficiency in at least one programming languages and complete projects showcasing their ability to use databases, adjust network configurations, and apply cybersecurity processes.
2. Problem-Solving: Enhance critical thinking abilities to troubleshoot and solve complex IT problems.
   a) Measurable Objective: Students will successfully troubleshoot and resolve at least three simulated IT problems during lab exercises or projects, including more advanced issues.
3. Communication: Improve communication skills for effective customer service, technical documentation, and presentations.
   a) Measurable Objective: Students will deliver a technical presentation or write a report demonstrating clear communication of advanced IT concepts and solutions.
4. Ethical Awareness: Understand and apply ethical principles in IT practices.
   a) Measurable Objective: Students will analyze complex ethical dilemmas in IT scenarios and propose solutions aligned with professional standards and Tohono O'odham Himdag.
5. Collaboration: Work effectively in teams on advanced IT projects.
   a) Measurable Objective: Students will lead and participate in group projects, demonstrating effective leadership and teamwork in achieving project goals.

Students:

You must secure official approval by your advisor(s) before submitting the **final** Program of Study. By signing or entering your name below, you agree to the following statement: "Students are responsible for complete knowledge of Academic Catalog requirements in their degree plan and for adhering to all policies in Academic Catalog and Student Handbook."

Signature Panel:

Please indicate approval of the curriculum on the Program of Study by placing your signature (formal electronic signatures are permitted) in the space provided.

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Student:	Date:
Academic Advisor:	Date:
Faculty Advisor:	Date:
Registrar:	Date:
Dean of Academics:	Date: