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**PROGRAM/DEGREE REQUIREMENT CHANGE (MAJOR/MINOR)**

**SUBMITTED BY:**

Department	CITS	College/School	CRCD
Prepared by	Keith Swarner	Phone	455-2820
Email Contact	keith.swarner@alaska.edu	Faculty Contact	Keith Swarner

See <http://www.uaf.edu/uafgov/faculty/cd> for a complete description of the rules governing curriculum & course changes.

**PROGRAM IDENTIFICATION:**

DEGREE PROGRAM	Information Technology Specialist
Degree Level: (i.e., Certificate, A.A., A.A.S., B.A., B.S., M.A., M.S., Ph.D.)	Certificate and A.A.S.

**A. CHANGE IN DEGREE REQUIREMENTS: (Brief statement of program/degree changes and objectives)**

This Format 5 Program/Degree Requirement Change form provides details for proposed changes to the IT Specialist Certificate and A.A.S. degree.

**Proposed Certificate changes:**

Current Certificate requirements permit students to satisfy computer hardware and operating system support requirements by completing both CITS F201 and F202 or by completing only CITS F203. Because both CITS F201 and F202 are no longer consistently offered, changes proposed within this Format 5 form will reflect that this requirement is to be satisfied by completing CITS F203.

Current Certificate requirements also require students to complete 9 credits from a list of courses. Changes proposed within this Format 5 form will 1) adjust the number of credits that need to be completed to be 8-9 credits and 2) will remove two courses and add five courses to the course list.

**Proposed A.A.S. degree changes:**

This Format 5 proposes changes to the concentrations offered through the associates degree program. Current concentrations offered through the associate degree program include: Computer Technology Support, Network and Systems Administration, and Web Development and Administration. Changes proposed within this Format 5 form will result in the following changes to the concentrations offered through the associate degree program:

- Computer Technology Support will be renamed Computing Technology to better reflect general skills and knowledge in computing technology developed through this concentration.
- Network and Cybersecurity will be added as a new concentration to satisfy an increasing demand for information technology workers skilled and knowledgeable in the area of network and information systems security.
- Web Development and Administration will be eliminated due to diminishing demand for web development skill sets developed at the associate level.

Changes proposed in this Format 5 form also reflect a change in how associate degree requirements and concentrations are organized and presented through the catalog. Currently, separate degree requirements are listed in the catalog for each concentration. The changes proposed in this Format 5 form would result in a single listing of the degree requirements that are common to all concentrations followed by a statement that students should select and complete one of the following concentrations.

**B. CURRENT REQUIREMENTS AS IT APPEARS IN THE CATALOG:**

**Information Technology Specialist**

College of Rural and Community Development

Community and Technical College

907-455-2800

Department of Computer and Information Technology Systems

[www.ctc.uaf.edu/its/](http://www.ctc.uaf.edu/its/)

Certificate; A.A.S. Degree

Minimum Requirements for Certificate: 30 credits; for A.A.S. Degree: 60 - 61 credits

The Information Technology Specialist certificate and associate programs teach students how to use, support, implement, and troubleshoot the computer and information technology systems found in educational, governmental and corporate settings.

The certificate program focuses on foundation-level support skills required to effectively use and troubleshoot computer and information technology systems. Students completing the certificate program will be prepared for entry-level IT positions and to continue their education in the Information Technology Specialist A.A.S. degree program.

The A.A.S. degree program prepares individuals to implement, support, and troubleshoot computer and information technology systems and obtain employment as an IT professional. Associate degrees in computer technology support, network and system administration, and web development and administration are offered.

Students entering either the certificate or A.A.S. degree program should meet with a faculty advisor to discuss program content requirements and develop an education plan that matches the current skills and goals of the student.

This degree program is delivered collaboratively within the UA system.

**Certificate Program**

1. Complete the general university requirements.
2. Complete the certificate requirements. As part of the certificate requirements, complete ABUS F154 or ANTH F100X/SOC F100X for the human relations requirement.)
3. Complete the following program (major) requirements\*:
  - a. Complete the following IT support foundation courses:
    - CITS F201--Microcomputer Operating Systems Support (3)
    - and CITS F202--Microcomputer Hardware Support (3)
    - or CITS F203--Information Technology Support Fundamentals--4 - 6 credits
    - CITS F204--Introduction to Network Support and Administration--3 credits
    - CITS F212--Server Operating Systems--3 credits
    - CITS F261--Computer and Information Security--3 credits
  - b. Complete 9 credits from the following or program coordinator approved:
    - CIOS F128--Using and Configuring PC Operating Systems (3)
    - CIOS F130--Microcomputer Word Processing (3)
    - CIOS F133-- Microcomputer Presentation Software (3)
    - CIOS F135--Microcomputer Spreadsheets (3)
    - CIOS F146--Using Internet Tools and Technologies (3)
    - CIOS F150--Computer Business Applications (3)
    - CIOS F189--Microcomputer Applications: Topics (3)\*\*
    - CIOS F233--Desktop Publishing (3)
    - CIOS F240--Microcomputer Databases (3)
    - CIOS F255--Microcomputer Graphics (3)
    - CIOS F258--Digital Photography (3)
    - CITS F219--Microcomputer Operating Systems: Topics (3)\*\*

CITS F220--Implementing Internet Tools and Technologies (3)  
 CITS F221--Graphics and Multimedia for the Web (3)  
 CITS F222--Internet Authoring and Design (3)  
 CITS F240--System and Network Services Administration (3)  
 CITS F265--Directory Services Administration (3)  
 CITS F282--IT Troubleshooting Skills (3)  
 CITS F289--Information Technology: Topics (1 - 3)--9 credits

4. Pass a certification review requiring students to demonstrate proficiency in the following skill areas: operating systems, hardware, and network support and troubleshooting.\*\*\*
5. Minimum credits required--30 credits

**Major -- A.A.S. Degree**

**Concentrations: Computer Technology Support, Network and System Administration, Web Development and Administration**

**Computer Technology Support**

1. Complete the general university requirements.
2. Complete the A.A.S. degree requirements. (As part of the A.A.S. degree requirements, complete DEVM F105 or any course at the F100-level or above in mathematical sciences (computer science, math or statistics) for the computation requirement, and ABUS F154, ANTH F100X/SOC F100X for the human relations requirement.)
3. Complete the following program (major) requirements:\*
  - a. Complete the following computer technology support courses:
    - CITS F201--Microcomputer Operating Systems Support (3)  
and CITS F202--Microcomputer Hardware Support (3)  
or CITS F203--Information Technology Support Fundamentals (4)--4 - 6 credits
    - CITS F204--Introduction to Network Support and Administration(3)  
or CITS F241--Networking and LAN Infrastructure Basics--3 - 4 credits
    - CITS F205--Introduction to Microcomputer Programming (3)  
or CS F103--Introduction to Computer Programming (3)  
or CS F201--Computer Science I (3)--3 credits
    - CITS F212--Server Operating Systems--3 credits
    - CITS F261--Computer and Network Security--3 credits
  - b. Complete 15 - 16 credits from the following or program coordinator approved:
    - CITS F219--Microcomputer Operating Systems: Topics \*\* (3)
    - CITS F220--Implementing Internet Tools and Technologies (3)
    - CITS F221--Graphics and Multimedia for the Web (3)
    - CITS F222--Internet Authoring and Design (3)
    - CITS F224--Web Scripting (3)
    - CITS F225--Web Databases and Programming (3)
    - CITS F228--Advanced Website Design and Development (3)
    - CITS F240--System and Network Services Administration (3)
    - CITS F241--Networking and LAN Infrastructure Basics (4)
    - CITS F242--Routers and Routing Concepts (4)
    - CITS F243--Intermediate Networking and LAN Infrastructure (4)
    - CITS F244--Advanced Networking Infrastructure Services (4)
    - CITS F249--Networking and Communications: Topics\*\* (3)
    - CITS F265--Directory Services Administration (3)
    - CITS F282--IT Troubleshooting Skills (3)
    - CITS F289--Information Technology: Topics (1 - 3) \*\*--15 - 16 credits
  - c. Complete the following IT professional courses:
    - CITS F281--Professional Practice in IT--3 credits
    - CITS F284--Independent Project (3)

- or CITS F285--Cooperative Work Experience (3)--3 credits
- 4. Complete CIOS, CITS or CS electives--6 credits
- 5. Complete general electives--0 - 3 credits
- 6. Pass a certification review requiring students to demonstrate proficiency in the following skill areas: operating systems and hardware support and troubleshooting; network support and troubleshooting; independent thinking; human relations and support; and professional practices.\*\*\*
- 7. Minimum credits required--60 credits

### **Network and System Administration**

- 1. Complete the general university requirements.
- 2. Complete the A.A.S. degree requirements. (As part of the A.A.S. degree requirements, complete DEVM F105 or any course at the F100-level or above in mathematical sciences (computer science, math or statistics) for the computation requirement, and ABUS F154, ANTH F100X/SOC F100X for the human relations requirement.)
- 3. Complete the following program (major) requirements:\*
  - a. Complete the following system administration courses:\*\*\*\*
    - CITS F204--Introduction to Network Support and Administration--3 credits
    - CITS F205--Introduction to Microcomputer Programming (3)
      - or CS F103--Introduction to Computer Programming (3)
      - or CS F201--Computer Science I--3 credits
    - CITS F212--Server Operating Systems (3)--3 credits
    - CITS F240--System and Network Services Administration--3 credits
    - CITS F261--Computer and Network Security--3 credits
    - CITS F265--Directory Services Administration--3 credits
  - b. Complete the following network infrastructure courses:
    - CITS F241--Networking and LAN Infrastructure Basics--4 credits
    - CITS F242--Routers and Routing Concepts--4 credits
    - CITS F243--Intermediate Networking and LAN Infrastructure--4 credits
    - CITS F244--Advanced Network Infrastructure Services--4 credits
  - c. Complete the following IT Professional courses:
    - CITS F281--Professional Practice in IT--3 credits
    - CITS F284--Independent Project (3)
      - or CITS F285--Cooperative Work Experience--3 credits
  - d. Complete 6 credits of CIOS, CITS or CS electives--6 credits
- 4. Pass a certification review requiring students to demonstrate proficiency in the following skill areas: network infrastructure and system administration skills, independent thinking skills, human relations and support skills, and professional practices.\*\*\*
- 5. Minimum credits required--61 credits

### **Web Development and Administration**

- 1. Complete the general university requirements.
- 2. Complete the A.A.S. degree requirements. (As part of the A.A.S. degree requirements, complete DEVM F105 or any course at the F100-level or above in mathematical sciences (computer science, math or statistics) for the computation requirement, and ABUS F154, ANTH F100X/SOC F100X for the human relations requirement.)
- 3. Complete the following program (major) requirements:\*
  - a. Complete the following system administration courses:\*\*\*\*
    - CITS F204--Introduction to Network Support and Administration--3 credits
    - CITS F205--Introduction to Microcomputer Programming (3)
      - or CS F103--Introduction to Computer Programming (3)
      - or CS F201--Computer Science I--3 credits

CITS F212--Server Operating Systems--3 credits  
CITS F240--System and Network Services Administration--3 credits  
CITS F261--Computer and Network Security--3 credits  
CITS F265--Directory Services Administration--3 credits

b. Complete the following web development courses:

CITS F220--Implementing Internet Tools and Technologies--3 credits  
CITS F221--Graphics and Multimedia for the Web--3 credits  
CITS F222--Website Design--3 credits  
CITS F224--Web Scripting--3 credits  
CITS F225--Web Databases and Programming--3 credits  
CITS F228--Advanced Website Design and Development--3 credits

c. Complete the following IT Professional courses:

CITS F281--Professional Practice in IT--3 credits  
CITS F284--Independent Project (3)  
or CITS F285--Cooperative Work Experience--3 credits

d. Complete 3 credits of CIOS, CITS or CS electives--3 credits

4. Pass a certification review requiring students to demonstrate proficiency in the following skill areas: web development and system administration skills, independent thinking skills, human relations and support skills, and professional practices.
5. Minimum credits required--60 credits

*\* Students must earn a C grade (2.0) or better in each course.*

*\*\* May be repeated for different topics.*

*\*\*\* Prior to graduation, all students are required to pass a certification review that includes a hands-on scenario task and the development and presentation of a portfolio of work.*

*\*\*\*\* Students are expected to have completed CITS F201 and F202 or CITS F203 or possess equivalent skills prior to beginning course work in this area.*

*Note: Upon admission to the certificate or degree program, each student will be assigned a mentor/committee chairperson who will be responsible for determining the student's current level of competency in the various skill areas; assisting the student in determining the courses/experiences necessary for gaining competency in the deficient skill areas; setting up the student's committee to consist of the mentor and at least one other individual who may be a UA faculty member, an adjunct faculty member, or an expert in the student's community; arranging for practical experiences in the student's community; and organizing the committee's final assessment of the student's work and recommending award of the certificate or degree.*

C. **PROPOSED REQUIREMENTS AS IT WILL APPEAR IN THE CATALOG WITH THESE CHANGES:**  
(Underline new wording ~~strike through old wording~~ and use complete catalog format )

### **Information Technology Specialist**

College of Rural and Community Development

Community and Technical College

907-455-2800

Department of Computer and Information Technology Systems

www.ctc.uaf.edu/its/

Certificate; A.A.S. Degree

Minimum Requirements for Certificate: 30 credits; for A.A.S. Degree: 60 - 61 credits

The Information Technology Specialist certificate and associate programs teach students how to use, support, implement, and troubleshoot the computer and information technology systems found in educational, governmental and corporate settings.

The certificate program focuses on foundation-level support skills required to effectively use and troubleshoot computer and information technology systems. Students completing the certificate program will be prepared for entry-level IT positions and to continue their education in the Information Technology Specialist A.A.S. degree program.

The A.A.S. degree program prepares individuals to implement, support, and troubleshoot computer and information technology systems and obtain employment as an IT professional. Associate degrees in computer computing technology support, network and cybersecurity, and network and system administration, and ~~web development and administration~~ are offered.

Students entering either the certificate or A.A.S. degree program should meet with a faculty advisor to discuss program content requirements and develop an education plan that matches the current skills and goals of the student.

This degree program is delivered collaboratively within the UA system.

#### **Certificate Program**

1. Complete the general university requirements.
2. Complete the certificate requirements. (As part of the certificate requirements, complete ABUS F154 or ANTH F100X/SOC F100X for the human relations requirement.)
3. Complete the following program (major) requirements\*:
  - a. ~~Complete the following IT support foundation courses:~~  
~~CITS F201 Microcomputer Operating Systems Support (3)~~  
~~— and CITS F202 Microcomputer Hardware Support (3)~~  
~~— or CITS F203 Information Technology Support Fundamentals 4 6 credits~~  
CITS F203—Information Technology Support Fundamentals—4 credits  
CITS F204—Introduction to Network Support and Administration—3 credits  
CITS F212—Server Operating Systems—3 credits  
CITS F261—Computer and Information Security—3 credits
  - b. ~~Complete 9 credits from the following or program coordinator approved:~~
4. Complete 8-9 credits from the following or program coordinator approved\*:  
CIOS F128—Using and Configuring PC Operating Systems (3)  
CIOS F130—Microcomputer Word Processing (3)  
~~CIOS F133—Microcomputer Presentation Software (3)~~  
CIOS F135—Microcomputer Spreadsheets (3)  
~~CIOS F146—Using Internet Tools and Technologies (3)~~  
CIOS F150—Computer Business Applications (3)  
CIOS F189—Microcomputer Applications: Topics (3)\*\*  
CIOS F233—Desktop Publishing (3)  
CIOS F240—Microcomputer Databases (3)

CIOS F255--Microcomputer Graphics (3)  
 CIOS F258--Digital Photography (3)  
CITS F201--Microcomputer Operating Systems Support (3)  
 CITS F219--Microcomputer Operating Systems: Topics (3)\*\*  
 CITS F220--Implementing Internet Tools and Technologies (3)  
 CITS F221--Graphics and Multimedia for the Web (3)  
 CITS F222--Internet Authoring and Design (3)  
 CITS F240--System and Network Services Administration (3)  
CITS F241--Networking and LAN Infrastructure Basics--4 credits  
CITS F242--Routers and Routing Concepts--4 credits  
CITS F262--Cybersecurity Defense and Countermeasures--3 credits  
CITS F263--Network Security Penetration Testing--3 credits  
 CITS F265--Directory Services Administration (3)  
 CITS F282--IT Troubleshooting Skills (3)  
 CITS F289--Information Technology: Topics (1 - 3)\*\*--8-9 credits

4. 5. Pass a certification review requiring students to demonstrate proficiency in the following skill areas: operating systems, hardware, and network support and troubleshooting.\*\*\*
5. 6. Minimum credits required--30 credits

### **Major -- A.A.S. Degree**

**Concentrations: Computer Computing Technology Support, Network and Cybersecurity, and Network and System Administration, Web Development and Administration**

#### **Computer Technology Support**

1. Complete the general university requirements.
2. Complete the A.A.S. degree requirements. (As part of the A.A.S. degree requirements, complete DEVM F105 or any course at the F100-level or above in mathematical sciences (computer science, math or statistics) for the computation requirement, and ABUS F154, ANTH F100X/SOC F100X for the human relations requirement.)
3. Complete the following program (major) requirements:\*
  - a. ~~Complete the following computer technology support courses:~~
    - ~~CITS F201--Microcomputer Operating Systems Support (3)~~
    - ~~— and CITS F202--Microcomputer Hardware Support (3)~~
    - ~~— or CITS F203--Information Technology Support Fundamentals (4) 4-6 credits~~
    - ~~CITS F204--Introduction to Network Support and Administration(3)--3 credits~~
    - ~~or CITS F241--Networking and LAN Infrastructure Basics 3-4 credits~~
    - ~~CITS F205--Introduction to Microcomputer Programming (3)~~
    - ~~or CS F103--Introduction to Computer Programming (3)~~
    - ~~or CS F201--Computer Science I (3)--3 credits~~
    - ~~CITS F212--Server Operating Systems--3 credits~~
    - ~~CITS F261--Computer and Network Security--3 credits~~
    - ~~CITS F281--Professional Practice in IT--3 credits~~
    - ~~CITS F284--Independent Project (3)~~
    - ~~— or CITS F285--Cooperative Work Experience (3)--3 credits~~
  - b. ~~Complete 15-16 credits from the following or program coordinator approved:~~
    - ~~CITS F219--Microcomputer Operating Systems: Topics \*\* (3)~~
    - ~~CITS F220--Implementing Internet Tools and Technologies (3)~~
    - ~~CITS F221--Graphics and Multimedia for the Web (3)~~
    - ~~CITS F222--Internet Authoring and Design (3)~~
    - ~~CITS F224--Web Scripting (3)~~
    - ~~CITS F225--Web Databases and Programming (3)~~
    - ~~CITS F228--Advanced Website Design and Development (3)~~
    - ~~CITS F240--System and Network Services Administration (3)~~
    - ~~CITS F241--Networking and LAN Infrastructure Basics (4)~~

~~CITS F242 Routers and Routing Concepts (4)~~  
~~CITS F243 Intermediate Networking and LAN Infrastructure (4)~~  
~~CITS F244 Advanced Networking Infrastructure Services (4)~~  
~~CITS F249 Networking and Communications: Topics\*\* (3)~~  
~~CITS F265 Directory Services Administration (3)~~  
~~CITS F282 IT Troubleshooting Skills (3)~~  
~~CITS F289 Information Technology: Topics (1 - 3) \*\* 15-16 credits~~

e. Complete the following IT professional courses:

~~CITS F281 Professional Practice in IT 3 credits~~  
~~CITS F284 Independent Project (3)~~  
~~—or CITS F285 Cooperative Work Experience (3) 3 credits~~

4. Complete an additional 6 credits from CITS, CIOS, or CS—6 credits

5. Complete one of the following concentrations:\*

**a. Computing Technology**

Complete 21 - 22 credits from the following or program coordinator approved:

~~CITS F201—Microcomputer Technology Support (3)~~  
~~CITS F203—Information Technology Support Fundamentals (4)~~  
~~CITS F220—Implementing Internet Tools and Technologies~~  
~~CITS F221—Graphics and Multimedia for the Web (3)~~  
~~CITS F222—Internet Authoring and Design (3)~~  
~~CITS F240—System and Network Services Administration (3)~~  
~~CITS F241—Networking and LAN Infrastructure Basics (4)~~  
~~CITS F242—Routers and Routing Concepts (4)~~  
~~CITS F243—Intermediate Networking and LAN Infrastructure (4)~~  
~~CITS F244—Advanced Networking Infrastructure Services (4)~~  
~~CITS F262—Cybersecurity Defense and Countermeasures—3 credits~~  
~~CITS F263—Network Security Penetration Testing—3 credits~~  
~~CITS F265—Directory Services Administration (3)~~  
~~CITS F282—IT Troubleshooting Skills (3)~~  
~~CITS F289—Information Technology: Topics (1 - 3) \*\*—21 - 22 credits~~

**b. Network and Cybersecurity**

Complete the following:

~~CITS F241—Networking and LAN Infrastructure Basics—4 credits~~  
~~CITS F242—Routers and Routing Concepts—4 credits~~  
~~CITS F243—Intermediate Networking and LAN Infrastructure—4 credits~~  
~~CITS F244—Advanced Network Infrastructure Services—4 credits~~  
~~CITS F262—Cybersecurity Defense and Countermeasures—3 credits~~  
~~CITS F263—Network Security Penetration Testing—3 credits~~

**c: Network and System Administration**

Complete the following:

~~CITS F240—System and Network Services Administration—3 credits~~  
~~CITS F241—Networking and LAN Infrastructure Basics—4 credits~~  
~~CITS F242—Routers and Routing Concepts—4 credits~~  
~~CITS F243—Intermediate Networking and LAN Infrastructure—4 credits~~  
~~CITS F244—Advanced Network Infrastructure Services—4 credits~~  
~~CITS F265—Directory Services Administration—3 credits~~

4. Complete CIOS, CITS or CS electives—6 credits

5. Complete general electives—0-3 credits

6. Pass a certification review requiring students to demonstrate proficiency in the following skill areas: ~~operating systems and hardware support and troubleshooting;~~ network support and troubleshooting; system administration; cybersecurity; independent thinking; human relations and support; and professional practices.\*\*\*

7. Minimum credits required—60 credits



## **Network and System Administration**

1. Complete the general university requirements.
2. Complete the A.A.S. degree requirements. (As part of the A.A.S. degree requirements, complete DEVM F105 or any course at the F100 level or above in mathematical sciences (computer science, math or statistics) for the computation requirement, and ABUS F154, ANTH F100X/SOC F100X for the human relations requirement.)
3. Complete the following program (major) requirements:<sup>‡</sup>
  - a. Complete the following system administration courses:<sup>\*\*\*\*</sup>
    - ~~CITS F204 Introduction to Network Support and Administration—3 credits~~
    - ~~CITS F205 Introduction to Microcomputer Programming (3)~~
    - ~~—or CS F103 Introduction to Computer Programming (3)~~
    - ~~—or CS F201 Computer Science I—3 credits~~
    - ~~CITS F212 Server Operating Systems (3)—3 credits~~
    - ~~CITS F240 System and Network Services Administration—3 credits~~
    - ~~CITS F261 Computer and Network Security—3 credits~~
    - ~~CITS F265 Directory Services Administration—3 credits~~
  - b. Complete the following network infrastructure courses:
    - ~~CITS F241 Networking and LAN Infrastructure Basics—4 credits~~
    - ~~CITS F242 Routers and Routing Concepts—4 credits~~
    - ~~CITS F243 Intermediate Networking and LAN Infrastructure—4 credits~~
    - ~~CITS F244 Advanced Network Infrastructure Services—4 credits~~
  - c. Complete the following IT Professional courses:
    - ~~CITS F281 Professional Practice in IT—3 credits~~
    - ~~CITS F284 Independent Project (3)~~
    - ~~—or CITS F285 Cooperative Work Experience—3 credits~~
  - d. Complete 6 credits of CIOS, CITS or CS electives—6 credits
4. Pass a certification review requiring students to demonstrate proficiency in the following skill areas: network infrastructure and system administration skills, independent thinking skills, human relations and support skills, and professional practices.<sup>\*\*\*</sup>
5. Minimum credits required—61 credits

## **Web Development and Administration**

1. Complete the general university requirements.
2. Complete the A.A.S. degree requirements. (As part of the A.A.S. degree requirements, complete DEVM F105 or any course at the F100 level or above in mathematical sciences (computer science, math or statistics) for the computation requirement, and ABUS F154, ANTH F100X/SOC F100X for the human relations requirement.)
3. Complete the following program (major) requirements:<sup>‡</sup>
  - a. Complete the following system administration courses:<sup>\*\*\*\*</sup>
    - ~~CITS F204 Introduction to Network Support and Administration—3 credits~~
    - ~~CITS F205 Introduction to Microcomputer Programming (3)~~
    - ~~—or CS F103 Introduction to Computer Programming (3)~~
    - ~~—or CS F201 Computer Science I—3 credits~~
    - ~~CITS F212 Server Operating Systems—3 credits~~
    - ~~CITS F240 System and Network Services Administration—3 credits~~
    - ~~CITS F261 Computer and Network Security—3 credits~~
    - ~~CITS F265 Directory Services Administration—3 credits~~
  - b. Complete the following web development courses:
    - ~~CITS F220 Implementing Internet Tools and Technologies—3 credits~~
    - ~~CITS F221 Graphics and Multimedia for the Web—3 credits~~
    - ~~CITS F222 Website Design—3 credits~~
    - ~~CITS F224 Web Scripting—3 credits~~

~~CITS F225 Web Databases and Programming 3 credits~~  
~~CITS F228 Advanced Website Design and Development 3 credits~~

~~c. Complete the following IT Professional courses:~~  
~~CITS F281 Professional Practice in IT 3 credits~~  
~~CITS F284 Independent Project (3)~~  
~~—or CITS F285 Cooperative Work Experience 3 credits~~

~~d. Complete 3 credits of CIOS, CITS or CS electives 3 credits~~

4. Pass a certification review requiring students to demonstrate proficiency in the following skill areas: web development and system administration skills, independent thinking skills, human relations and support skills, and professional practices.

5. Minimum credits required 60 credits

\* Students must earn a C grade (2.0) or better in each course.

\*\* May be repeated for different topics.

\*\*\* Prior to graduation, all students are required to pass a certification review that includes a hands-on scenario task and the development and presentation of a portfolio of work.

\*\*\*\* ~~Students are expected to have completed CITS F201 and F202 or CITS F203 or possess equivalent skills prior to beginning course work in this area.~~

*Note: Upon admission to the certificate or degree program, each student will be assigned a mentor/committee chairperson who will be responsible for determining the student's current level of competency in the various skill areas; assisting the student in determining the courses/experiences necessary for gaining competency in the deficient skill areas; setting up the student's committee to consist of the mentor and at least one other individual who may be a UA faculty member, an adjunct faculty member, or an expert in the student's community; arranging for practical experiences in the student's community; and organizing the committee's final assessment of the student's work and recommending award of the certificate or degree.*

D. **ESTIMATED IMPACT**

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

These Program/Degree Requirement changes will have no impact on facilities/space. Four of the six courses (CITS F241, F242, F243, and F244) in the Network and Cybersecurity concentration are currently being taught and have the capacity to support students electing to complete this concentration. The IT Specialist program currently has sufficient resources (budget, facilities/space and faculty) to teach the two new courses (CITS F262 and F263) that will be incorporate into this concentration.

E. **IMPACTS ON PROGRAMS/DEPTS:**

What programs/departments will be affected by this proposed action?  
 Include information on the Programs/Departments contacted (e.g., email, memo)

The IT Specialist program is the only program that will be affected by this proposed action.

**F. IF MAJOR CHANGE - ASSESSMENT OF THE PROGRAM:**

*Description of the student learning outcomes assessment process.)*

Our current student learning outcomes assessment process requires, prior to graduation, that all students complete a Certification Review process. This process consists of students demonstrating their technical skills through a hands-on scenario task and also developing and presenting a portfolio of work that demonstrates their professional and critical thinking skills.

We will continue to implement the same student learning outcomes assessment process once these changes have been adopted and will adjust the hands-on scenario task and portfolio to include tasks designed to assess student learning in the area of cybersecurity.

More information about how our current outcomes assessment plan is implemented can be found at <http://www.ctc.uaf.edu/its/review>

**JUSTIFICATION FOR ACTION REQUESTED**

The purpose of the department and campus-wide curriculum committees is to scrutinize program/degree change applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. If you drop a course, is it because the material is covered elsewhere? Use as much space as needed to fully justify the proposed change and explain what has been done to ensure that the quality of the program is not compromised as a result.

The degree requirement changes within this Format 5 form have been developed with the input and collaboration of IT Specialist faculty within CRCD and information gained through program faculty advising, program outcomes assessment, and program review.

The changes to the IT Specialist Certificate are being proposed for the following reasons:

- First, the change to have students use only CITS F203 to satisfy computer hardware and operating system support requirements reflects how students currently satisfy these requirements. Approximately three years ago, we stopped offering both CITS F201 and CITS F202; however, we decided to keep these two courses listed to allow for transition. We believe enough time has passed to allow the majority of the students who completed these requirements using CITS F201 and CITS F202 to graduate. We will use a petition for the few remaining students needing to graduate and use CITS F201 and CITS F202 to meet their computer hardware and operating system support requirements.
- Second, we are currently using the petition process to allow students to use credits earned through completion of CITS F201, CITS F241 and CITS F242 towards their 9 additional credits required for the Certificate. The omission of these classes turned out to be an oversight and adding them now will eliminate the need to use the petition process. CITS F262 and CITS F263 are new courses being proposed to be added to the IT Specialist curriculum and their inclusion in this list makes sense. The proposals to adjust the number of credits in this section of the Certificate to be 8-9 credits instead of 9 is because CITS F241 and CITS F242 are both 4-credit classes and accumulation of 8 credits in this section is sufficient to meet the 30 credit minimum of the Certificate.

The changes proposed to the IT Specialist A.A.S. are being proposed for the following reasons:

- First, the changes to the concentrations offered through the associate program are to more accurately reflect the knowledge students develop through each concentration and to reflect changes in demand within the IT workforce.

Changing the name of the Computer Technology Support concentration to Computing Technology more accurately reflects the general and broad computing knowledge students develop through the completion of this concentration.

The addition of the Network and Cybersecurity concentration and the elimination of the Web Development and Administration concentrations are a reflection of changes in demand within the IT workforce.

Currently, cybersecurity has been identified as one of the most serious economic and national

security challenges we face as a nation. The National Initiative for Cybersecurity Education (NICE) was established to help face this challenge head on with a strategy to build a cyber savvy nation through training, awareness, K through post-graduate educational programs, and professional development for federal security professionals. (<http://www.nist.gov/itl/csd/nice.cfm>. Retrieved September 14, 2012).


NICE's Strategic Plan, which is currently in a draft format, states within the Executive Summary that: "Our nation is at risk. The cybersecurity vulnerabilities in our government and critical infrastructure are a risk to national security, public safety, and economic prosperity. Now is the time to begin a coordinated national initiative focused on cybersecurity awareness, education, training, and professional development. The United States must encourage cybersecurity competence across the nation and build an agile, highly skilled workforce capable of responding to a dynamic and rapidly developing array of threats." ([http://csrc.nist.gov/nice/documents/nicestratplan/Draft\\_NICE-Strategic-Plan\\_Aug2011.pdf](http://csrc.nist.gov/nice/documents/nicestratplan/Draft_NICE-Strategic-Plan_Aug2011.pdf). Retrieved September 14, 2012).


Our proposed addition of a concentration in Network and Cybersecurity addresses this need identified by NICE to increase the skills and knowledge within the IT workforce. The addition of this concentration will enable the IT Specialist degree program to better prepare students to meet employer expectations of today's IT worker.


The need for associate-level web developers has declined in recent years and we have fewer and fewer students expressing interest in pursuing the Web Development and Administration concentration offered through the IT Specialist program. This trend is making it increasingly difficult to offer the advanced courses required as a part of this concentration. Currently there are fewer and fewer students pursuing this concentration. We no longer see this concentration as sustainable and are proposing to eliminate it as an option.

- Second, we believe that the changes in how associate degree requirements and concentrations are organized and presented through the catalog are more concise and that it will be easier for students needing to select a concentration to see the similarities and differences between each concentration.

**APPROVALS:**

	Date	09/27/2012
Signature, Chair, Program/Department of:	Computer and Information Technology Systems	

	Date	10/4/12
Signature, Chair, College/School Curriculum Council for:	College of Rural and Community Development	

	Date	10/5/12
Signature, Dean, College/School of:	College of Rural and Community Development	

**ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE**

	Date	
Signature, Chair, UAF Faculty Senate Curriculum Review Committee		