Dallas Approval Chart for Curriculum Changes

A = Approve I = Information Item R = Respond In Writing

Course Number: **or Degree Plan(s):**

Creation of Certificate in Cybersecurity 2 (Essential System Forensics and Defense). See attached documents.

	Campus-Level Academic Review				
	Change to a Course Include signatures from all program directors/chairs for cross-listed courses.[1]				
1.	Title (description unchanged)	A	A	I	I
2.	Description (not affecting content)	A	A	I	I
3.	Course term(s)	A	A	I	I
4.	Content (change of course outcomes)	A	A	I	A
5.	Number of credit hours	A	A	A	A
6.	Course number within the hundred	A	A	I	I
7.	Course number beyond the hundred	A	A	A	A
8.	Prerequisites	A	A	A	I
9.	Course restriction (e.g., majors only, junior standing)	A	A	A	A
10.	Level change (U to G *or* G to U)	A	A	A	A
11.	Cross list course	A	A	A	A
12.	Program/department of record	A	A	A	A
13.	Open or close a course	A	A	A	A
	Change to a Degree Plan				
14.	Educational Program — Revise	A	A	A	A
15.	Educational Program — Adopt or change admission requirements	A	A	A	A
16.	GPA — Revise program or cumulative requirement	A	A	A	A
17.	Minor — Revise	A	A	A	A

	Full Review	Dept	Dean	Gen. Ed.	Sr. VPAA	Sys
	Change to Catalog Information (for Campus)					
18.	General requirements for Bachelor's and Associate Degrees	–	–	A	A	I
19.	Policies governing academic probation and suspension	–	–	A	A	I
20.	Requirements for graduating with honors	–	–	A	A	I
	Change to a Degree Plan					
21.	Educational Program — Add or Discontinue[2]	A	A	A	A	I
22.	Educational Program — Discontinue (proposed by Senior VPAA)	R	R	A	A	I
23.	Minor — Add or Discontinue	A	A	A	A	I
24.	Minor — Discontinue (proposed by Senior VPAA)	R	R	A	A	I
25.	Degree — Add or Discontinue (proposed by Program or College)	A	A	A	A	I
26.	Degree — Discontinue (proposed by Senior VPAA)	R	R	A	A	I

	Change to General Education Requirements for Undergraduates (System)	Dept	Dean	Gen. Ed.	Sr. VPAA	Sys
27.	Change course outcomes of an included course	A	A	A	A	–	A	I
28.	Add or drop a required course from the General Education Requirements	A	A	–	A	A	A	I
29.	Add or drop a course from a menu within the General Education Requirements	A	A	–	A	–	A	I
30.	Comprehensive revision of General Education Requirements	–	–	–	A	A	A	I

Notes

[1] Any change to a cross-listed course requires the signature of both department chairs or program directors overseeing the course to ensure that the courses stay in sync. This includes courses taught at other campuses (e.g. BIBL 101 and BIBO 101).

[2] For undergraduate majors, a minimum of 30 hours is required. These programs must have a minimum of 6 elective hours, unless the requirements of external accrediting bodies make it impossible. Master's programs must include a minimum of 30 hours, and doctoral programs must include a minimum of 30 hours beyond the master's.

[3] When a program faculty or dean proposes closing a program, approval routing follows the typical process beginning with the program. A proposal by campus academic administration or senior vice president for academic affairs would follow the "proposed by the Senior VPAA" routing on the chart.

Updated 8/1/2023

Program Director/Department Chair

Dr. Joe Feliciano Oct 16, 2023

Program Director Signature Date

Program Director/Department Chair Signature Date

Dean(s)

Signature Date

Signature Date

Campus Academic Council

Chair's Signature Date

University General Education Council

Chair's signature Date

University Faculty

Dallas Faculty Council Chair's signature Date

Abilene Faculty Senate Chair's signature Date

Senior Vice President for Academic Affairs

Signature Date

President

Signature Date

Certificate of Essential System Forensics and Defense
New Program Application

1. Program Identification

a. Program title: **Essential System Forensics and Defense**
b. Degree type: Undergraduate certificate
c. Home department or unit: School of Professional Studies, College of Graduate and Professional Studies
d. Program developer(s) and credentials: Dr. Joe Feliciano
e. Where program will be offered and delivery method: ACU Dallas, Online
f. Proposed date of implementation: Fall 2023
g. CIP: 11.1003 - Computer and Information Systems Security
h. Formstack:
    i. Program Code:
    ii. Concentration Code:
    iii. Degree Type: Undergraduate Certificate
    iv. Program Category:
    v. Minimum Education Required: High School
    vi. Credit Hours: 16
    vii. Program Length (Months):
    viii. Number of Tracks: 0
    ix. Track Names:

2. Program Details

a. Program description.
The Certificate of essential system forensics and defense prepares students to immediately start working in the IT field by teaching them various areas of computing such as programming, networking and cybersecurity. The primary focus is on securing an organization's digital infrastructure. Computer hardware, operating systems, hardening devices, securing networks, and avoiding social engineering scams are all part of the program curriculum. This is the second certificate in the circuit and students will need the first certificate in order to register for this one as this introduces more advanced IT concepts.

b. Program mission statement.
The mission of the Certificate of essential system forensics and defense is to equip students to secure digital infrastructures with a set of professional skills that provides opportunities to offer Christian service and leadership in their careers and communities.

c. Program outcomes.

The Program Outcomes (POs) for the Undergraduate Essential System Forensics and Defense are as follows. All students will meet Outcomes 2,3,4 and 5.

PO #2 Managing Data
Students will be able to apply current tools and techniques to manage organizational data.

PO #3 Networks and Communication Infrastructure
Students will be able to apply current tools and techniques to manage an organization's network and communications infrastructure.

PO #4. System Defense, Testing, and Breach Investigation
Students will be able to apply current tools and techniques to secure an organization's information and communications infrastructure.

PO #5. Computer hardware, Operating Systems, and User technological Support
Students will be able to apply current tools and techniques to support client/server software and hardware systems.

d. Description of target audience.
The Essential System Forensics and Defense is intended for working students seeking a technical IT certificate with a focus on cybersecurity online to advance their career. The certificate is also designed for students who would like to quickly enter the field of IT specializing in cybersecurity.This certificate builds on Cybersecurity Certificate 1 so the target audience would be students who have successfully completed that certificate or students who have completed the courses contained in that certificate.

e. Admission requirements.

i. ACU Undergraduate Certificate of essential system forensics and defense or completion of certificate courses, ITA 110, CSO 115, ITO 221, ITO 310, and ITA 332. ITO 435 Incident detection, prevention, and response
ii. Application and processing fee.
iii. Purpose statement addressing career goals.
iv. Resume or CV.
v. There are no prerequisites for this program
vi. International applicants will be required to provide TOEFL scores (if applicable) and transcript assessment for degrees completed outside of the United States.

f. Projected total enrollment for each of the first five years.
The following estimate is based on a percentage of students that we will be able to attract through our relationship with Infosec. Based on the number of their student base we anticipate that some students will opt for this university level certification to compliment their Infosec training, Students entering the field may wish to follow this track which can facilitate their expedited entry into the IT job market. Executive Education and Professional Advancement will also be promoting this certificate through their corporate partnerships. Organizations can send cohorts of their employees through this training path in an effort to develop their IT and cyber skills for rapid deployment.

   i. Year 1: 25
   ii. Year 2: 50
   iii. Year 3: 75
   iv. Year 4: 100
   v. Year 5: 115

g. CIP code. 11.1003

3. Rationale and Need for Program

i. Mission fit.
CGPS already provides academic programs for Information Technology at the undergraduate and graduate levels and a certificate in Cybersecurity at the graduate level. This innovative program addresses the needs of an emerging market in cybersecurity and offers students the opportunity to serve businesses and communities from personal devices to critical infrastructure; a demand which couples knowledge and skill in technology with ethics and integrity in character. In short, this prepares students for Christian service in a vital and growing need.

j. Societal need.
Cybersecurity personnel play a crucial role in protecting our society from cyber threats. With the increasing reliance on technology in all aspects of our lives, from personal devices to critical infrastructure, the need for individuals with the skills to secure these systems has never been greater. Cybersecurity personnel work to detect and prevent cyber attacks on networks and systems and also to develop strategies and plans to mitigate the effects of those attacks when they do occur. They help to ensure the confidentiality, integrity, and availability of sensitive information and play a key role in protecting individuals and organizations from financial loss, reputational damage, and other harm. Additionally, as the nature of cyber threats is constantly evolving, cybersecurity personnel must continuously update their knowledge and skills to stay ahead of

the latest threats and to protect against them effectively.

k. Employment demand and career possibilities.

   i. Identify jobs that graduates would be qualified to pursue.: Occupations include the following titles… [1]
      - Information security analyst
      - Software security engineer
      - Security architect
      - Penetration tester
      - Chief information security officer
      - Information security crime investigator
      - Security consultant

   ii. Employment demand in the State of Texas:[2]
      - There are currently 289,480 jobs in the state that map to this CIP code (using Lightcast mapping heuristic). There has been a growth of 15.6% over the past three years in Texas, compared to national growth of 8.3% in this field.
      - There are currently 41,081 positions open annually. There were 629,011 jobs posted over the past 12 months, with a posting intensity of 3:1 (average).
      - Median income for this field in Texas is $95.2K/year

l. Prospective student interest.
   There are currently 179 distance programs with this CIP nationally (award less than 1 academic year AND aware if at least 1 but less than 2 academic years), with 7,396 completions in 2021 (most recent data available from IPEDS). This represents a 141% growth for the last five years in this program.[3] Only 12 institutions in Texas offer this program in distance format, and those programs have enjoyed a growth of 442% over the past five years.[4]

m. Disciplinary benchmarking.
   Twenty Four (24) universities were reviewed to provide data for the benchmarking analysis. The selected universities were deemed similar to ACU Dallas in that they had similar characteristics and/or demographics such as size (student population), provided an online forum, and were faith based. Of the universities only reviewed only five (5) had cybersecurity certificates that were

[1] Indeed Editorial Team (2022, Apr 14). What does a cybersecurity specialist do? A definitive guide. Indeed Career Guide. Retrieved from https://www.indeed.com/career-advice/finding-a-job/what-does-cyber-security-specialist-do

[2] These data are for employment for professionals with a Bachelor's degree; Lightcast data do not allow us to map to professionals with a certificate. Given that this field requires the skills and certifications afforded in the certificate, we believe that they are the best representation available.

[3] Lightcast National Distance Dataset

[4] Lightcast Texas Distance Dataset

similar. Undergraduate certificates were identified by the course numbers but some did not speify if they were geared for undergraduate or graduate students. Programs that were clearly geared for graduate students were excluded. Certificates were deemed similar if they had similar course structures and were between 9 and 15 credit hours.

4. Curriculum

ITO 220 - Introduction to Databases and Database Management Systems Credit Hours: 3
ITA 121 – PC Service and Support 1 1 Credit Hours: 3
ITA 122 PC Service and Support 2 Credit Hours: 3
ITO 415 - Networks and Security Administration Credit Hours: 3
ITA 336 System Forensics Credit Hours: 3
ITO 435 Incident detection, prevention, and response Credit Hours: 1

Total Hours: 16

Other Graduation Requirements
Minimum GPA in major: 2.00
Minimum GPA for graduation: 2.00
Minimum advanced hours: N/A
Minimum total hours: 16
*Courses numbered 0** do not count in minimum hours required for degree.*

a. Courses.

Course	Req'd or Menu	Aligned POs (i) = Introduced (r) = Reinforced (m) = Mastered	Rotation and Frequency	Faculty Credentialed to Teach

ITO 220 - Introduction to Databases and Database Management Systems	Req'd	PO #2 (i)	Every second part of term (fall2, spring 2, summer 2)	MS in CS, IT or related field
IT 415 - Networks and Security	Req'd	PO#3 (r)	Run every three terms.(Spring 1 and Summer 2)	MS in CS, IT or related field
ITA PC Service and Support 1	Req'd	PO#5 (i)	Add to course planning calendar	MS in CS, IT or related field
ITA 122 PC Service and Support 2	Req'd	PO#5 (m)	Add to course planning calendar	MS in CS, IT or related field
ITA 336 System Forensics	Req'd	PO#4 (m)	Add to course planning calendar	MS in Cybersecurity, Information Assurance, or related field
ITO 435 Incident detection, prevention, and response	Req'd	PO#4 (m)	Add to course planning calendar	MS in Cybersecurity, Information Assurance, or related field

b. New courses.

i. Courses

ITO 435 - Incident detection, prevention, and response

This course prepares students for the CompTia CySA+ certification exam.

Prerequisite is ITA 332 Cloud and Network Defense

Course Outcomes:

Examine all domains included in the Cysa+ certification exam.
Complete the certification exam pre-test.
Identify focus areas after completing the certification exam pretest.

ii. Curriculum approval schedule will be negotiated with the provost's office during initial review.

- These courses are offered regularly with multiple paths for the student to complete the certificate in one calendar year, potentially in 3 terms.

5. Assessment Plan

a. The associate provost for curriculum and assessment has confirmed that the proposed certificate curriculum represents a subset of the Cybersecurity B.S. No separate assessment for the Certificate of essential system forensics and defense would be necessary because assessment of the B.S. will be ongoing.

8. Supporting Documentation

c. Approval Chart for Curriculum Changes:
d. Memo of support from the department chair of each department outside the home department that will provide a course for the program.:
e. When the new program application is complete, provide the full proposal to the following individuals for review. Each will provide a memo to attach to the proposal.:
   i. Assistant provost for institutional effectiveness and SACSCOC liaison for substantive change review.:
   ii. Dean of the library for library resources review.:
   iii. Dean of the college of the program for a statement of commitment to the items in Required Institutional Support.:
   iv. Assistant provost for curriculum and assessment for review of the program outcomes, curriculum map, and assessment plan and evaluation of compliance with academic policies.:

Approvals

The proposal aligns with institutional policies and processes, and the campus is prepared to support the proposed program as presented.

Assistant Provost Date

The library has sufficient resources to support the program, or the comments below outline additional acquisitions required and their associated costs.

Associate Dean of the Library Date
Comments, if needed:

This proposal connects the program's student learning outcomes, curriculum, and assessment plan completely and is prepared to begin assessment.

Assistant Vice President for Academic Affairs Date

This proposal does not require additional review for institutional accreditation purposes, or I have worked with the faculty to gather the information necessary to notify SACSCOC or gain its approval.

SACSCOC Liaison Date

Step 3: Curriculum Approval Process

When all signatures are complete, attach a Dallas Approval Chart for Curriculum Changes, conduct the department faculty vote to approve the new program, and continue the approval process as specified by the approval chart.

ABILENE CHRISTIAN UNIVERSITY

LIBRARY

M E M O R A N D U M

DATE: October 12, 2023

TO: Dr. Joe Feliciano

FROM: Mark McCallon, Library Associate Dean for Library Information Services

RE: New Certificate Application - Essential System Forensics and Defense

Thank you for the opportunity to review the application for the proposed Certificate of Essential System Forensics and Defense. The Library can support the proposed certificate program. Thank you for letting us review the certificate application.