CTE Program Proposal

NAME OF COLLEGE: Bakersfield College

FACULTY CONTACT: Creighton Magers

DATE: 11/19/2015

PROGRAM NAME: CompTIA Certificate of Achievement

☒ New Program Proposal   ☐ Program Revision Proposal

TYPE OF DEGREE:
☒ Certificate
☐ Associate of Arts
☐ Associate of Science
☐ Associate of Arts for Transfer
☐ Associate of Science for Transfer
☐ Other

ATTACHMENTS REQUIRED:
Labor/Job Market Data and Analysis
Advisory Committee Meeting Minutes
Employer Survey

A. Appropriateness to Mission

1. Statement of Program Goals and Objectives

Identify the goals and objectives of the program. For CTE programs, the statement must include the main competencies students will have achieved that are required for a specific occupation. The statement must, at a minimum, clearly indicate the specific occupations or fields the program will prepare students to enter and the basic occupational competencies students will acquire.

The CompTIA certificate of achievement is designed to offer students training in the field of Information Technology (IT). CompTIA certifications are vendor neutral and cover a broad range of information technology concepts. The certifications require students to demonstrate skills and knowledge widely sought after by the IT industry. Upon completion of the program students will have demonstrated an understanding of various information technologies and software and hardware implementations. Becoming CompTIA certified will lead to IT career opportunities, professional respect, and credibility in the IT workplace. Furthermore, skills attained via CompTIA certifications will help increase student success rates in other certification programs maintained by leading vendors like Microsoft, IBM, and Cisco

2. Catalog Description

Enter exactly as it will appear in the catalog, including program outcomes. The description must also

- *Convey the certificate's goals(s) and objectives*
- *Provide an overview of the knowledge and skills that students who complete the requirements must demonstrate (student learning outcomes)*
- *List all prerequisite skills or enrollment limitations*
- *Mention any risks, such as occupations that are inherently competitive or low-salaried and/or occupational areas where inexperienced graduates are not generally hired.*
- *For CTE programs, the description must list the potential careers students may enter upon completion.*
- *Convey what the student may expect as an outcome*

The program curriculum prepares students interested in learning computer concepts and technologies; preparing them for employment in many areas of Information Technology. Each course in the program approaches topics in a vendor-neutral (more generalized) fashion so that they can easily be applied to specific industries. The curriculum is designed to support students seeking to pass CompTIA's certification exams. CompTIA is an internationally recognized certification program for the information technology industry. Acquiring such certifications will assist students in finding employment in Information Technology and Computer Infrastructure related fields. Some of these fields include:

- Network and Systems Administrators
- Computer Network Architects
- Computer Network Support Specialists
- Computer Support Specialists
- Information Security Analysts
- Network and Computer Systems Administrators
- Information Security Analysts
- Computer Hardware Support

3. Program Requirements

The program requirements must be consistent with the catalog description. The number of units, specific course requirements and the sequence of the courses must be coherent, complete and appropriate. Display the program requirements in a table format that includes all courses required for completion of the program (core requirements and required or restricted electives), subtotal of core units, and total program units. For each course, indicate the course department number, course title, and unit value.

Display of Program Requirements

Core Courses	Title	Units
COMP B31	CompTIA Network Security - Security+	3
COMP B32	CompTIA Linux+	3
COMP B33	CompTIA Networking Technologies - Network+	3
COMP B84	CompTIA A+	4
	Total Core Courses	**13**

In addition to the core courses, the student must take at least 6 units from the following courses:

Elective Courses	Title	Units
COMP B2	Introduction to Computer Information Systems	3
COMP B10	Introduction to Programming Methodologies using Python	3
COMP B11	Programming Concepts and Methodologies I (using Java)	3
COMP B21	Database Systems – Design & Structured Query Language (SQL)	3
	Total Elective Courses	**12**

Total Units Required for Certificate	**19**

4. Background and Rationale

Given the stated goals and objectives, address the role the proposed program will fulfill in the college's mission and curriculum offerings. This discussion may include some history of the program proposal origins, a description of the program purpose, and/or the program's relevancy for the region and college.

The proposal must demonstrate a need for the program that meets the stated goals and objectives in the region the college proposes to serve with the certificate. A proposed new certificate must not cause undue competition with an existing program at another college.

The CompTIA certificate of achievement directly supports the mission of Bakersfield College which is to provide opportunities for students from diverse economic, cultural, and educational backgrounds to attain degrees and certificates, workplace skills, and preparation for transfer. It accomplishes this by being open to all students and by teaching those technology skills that are in high demand. It also addresses Bakersfield College's third Institutional Learning Outcome – "Demonstrate competency in a field of knowledge or with job-related skills."

The faculty on the Computer Science side of BMIT reevaluated our mission and programs and determined that a dramatic redesign of our curriculum responding to community needs was required. Analysis of our student population, along with the low number of certificate completions, required drastic program changes emphasizing CTE skill sets leading to recognized COAs. Earlier programs did not reflect industry trends, and as such, did not benefit student's prospects for employment -- this program reflects such industry trends. This new program is also designed to more easily measure our student and program level outcomes which in turn should allow for more responsive instructional changes that can improve outcomes.

The following statistics are indicative of the potential demand for this program:

- "Labor estimates predict some technology fields will experience growth of over 20% by the year 2020" (CompTIA 9th Annual Information Security Trends study: 500 U.S. IT and Business Executives Responsible for Security).
- "91% of hiring managers indicate CompTIA certifications are valuable in validating IT expertise, making certification the best way to demonstrate your competency and knowledge to employers (CompTIA Employer Perceptions of IT Training and Certification).

"Approved by the U.S. Department of Defense (DoD) – as one of the required certification options in the DoD 8570.01-M directive, for Information Assurance Technical Level II and Management Level I job roles."

B. Need for Program

5. Enrollment and Completer Projections

This item should address and justify the number of projected students or "annual completers" to be awarded the certificate each year after the program is fully established.

TOP code 0708		2015 -2016		2016-2017	
Course #	Course Title	Annual # Sections	Annual total Enrollment	Annual # Sections	Annual Total Enrollment
COMP B31	CompTIA Network Security - Security+	1	30	1	30
COMP B32	CompTIA Linux+	2	30	2	30
COMP B33	CompTIA Networking Technologies - Network+	1	30	1	30
COMP B84	CompTIA A+	1	30	1	30
COMP B2	Introduction to Computer Information Systems	6	180	6	180
COMP B10	Introduction to Programming Methodologies using Python	3	90	3	90
COMP B11	Programming Concepts and Methodologies I (using Java)	5	150	5	150
COMP B21	Database Systems – Design & Structured Query Language (SQL)	1	30	1	30

6. Place of Program in Curriculum/Similar Programs

Review the college's existing program inventory, then address the following questions:

- *Do any active inventory records need to be made inactive or changed in connection with the approval or the proposed program? If yes, please specify.*
- *Does the program replace any existing program(s) on the college's inventory? Provide relevant details if this program is related to the termination or scaling down of another program(s).*
- *What related programs are offered by the college?*

No active inventory records need to be made inactive or changed in connection with the approval of the proposed Certificate of Achievement program.

This program does not replace any existing program(s) on the college inventory.

The college offers the options of achieving an AD-T in Computer Science with additional course work. The college is also developing a COA in Web Development and another in Software Development.

7. Similar Programs at Other Colleges in Service Area

Describe all similar programs offered by colleges within the college service area. If the proposed program has a different emphasis than similar programs at other colleges, targets a different market, demonstrates state-of-the-art offerings, or for a number of reasons will be a stronger program, documentation and/or explanation need to be provided.

There are no similar public institution programs that duplicate this program. There are a few scattered private programs covering a subset of our proposed program. Much of their content is only offered online and we consider that content delivery method, for these specific skills, to be less beneficial to students which in turn yield lower success rates.

8. Labor Market Information and Analysis

Current labor market information and analysis, or other comparable information, must show that jobs are available for program completers within the local service area of the individual college and/or that job enhancement or promotion justifies the proposed curriculum.

Enter table, chart or narrative as a separate attachment.

9. Employer Survey

Discuss in this area, or as a separate attachment, employer input in regard to necessity of program and number of jobs available.

No formal survey done with local employers. Demand projected based on national trend data, proposals with local high schools (pathways being established), and agreement by our advisory committee.

10. Explanation of Employer Relationship

Whenever a program is to be offered in close cooperation with one or more specific employers, a discussion of the relationship must be provided.

N/A

11. List of Members of Advisory Committee

This list must include advisory committee member names, job titles, and business affiliations.

Janine Kern, Chris Thornburg, Dr. Huaqing Wang, Barbara Griffith, Bob Trammel, Jeff Orton, Rick Rodriquez, Luke Hamlin, John Denison, Debbie Rodriquez (List varies by meeting)

12. Recommendation of Advisory Committee

In a separate attachment, provide minutes of the advisory committee meetings at which the program was discussed and approved, with relevant areas highlighted, as well as a summary of the advisory committee recommendations.

C. Curriculum Standards

13. Display of Proposed Sequence

First Semester	Units
COMP B84 CompTIA A+	4
COMP B33 CompTIA Networking Technologies - Network+	3
COMS B2 Introduction to Computer Information Systems **OR**	3
COMP B10 Introduction to Programming Methodologies using Python **OR**	
COMP B11 Programming Concepts and Methodologies I **OR**	
COMP B21 Database Systems – Design & Structured Query Language (SQL)	
Total	**10**

Second Semester	Units
COMP B31 CompTIA Network Security - Security+	3
COMP B32 CompTIA Linux+	3
COMS B2 Introduction to Computer Information Systems **OR**	3
COMP B10 Introduction to Programming Methodologies using Python **OR**	
COMP B11 Programming Concepts and Methodologies I **OR**	
COMP B21 Database Systems – Design & Structured Query Language (SQL)	
Total	**9**

Third Semester	Units
Total	

Fourth Semester	Units
Total	

14. Transfer Applicability (if applicable)

D. Adequate Resources and Compliance

15. Library and Learning Resources Plan

Discuss resources currently available for course support, as well as resources recommended for purchase to further support the course.

No additional resources are needed.

16. Facilities and Equipment Plan

Discuss facilities and equipment currently available for course support, as well as facilities and equipment recommended for purchase to further support the course.

No additional resources are needed, although the regular three to four year lab equipment replacement cycle should occur. This would be in conjunction with the normal replacement cycle already in existence for our computer labs.

17. Financial Support Plan

Discuss how the program, including faculty, will be funded.

No additional resources are needed.

18. Faculty Qualifications and Availability

Discuss the discipline, qualifications and availability of faculty as it relates to the proposed program.

No additional resources are needed. Courses can be taught using existing faculty who are either already teaching the curriculum and/or maintain currency with material.

19. Based on model curriculum (if applicable)

State the model curriculum on which the proposed program is based.

Core courses in the program conform to model curriculum and outcomes developed by CompTIA.

20. Licensing or Accreditation Standards

List any licensing, accreditation or certifications available to program completers.

N/A

21. Student Selection and Fees

If the program is selective, describe relevant entry criteria and the selection process for admission to the program. Specify all mandatory fees that students will incur for the program aside from the ordinary course enrollment fee.

Open to all students. No fees other than for text and enrollment.