Program Review Executive Summary Template

Based on the thorough program review addressing all criteria in policy, a comprehensive report should be possible within ten or fewer pages. This template is provided to assist institutions in providing a brief summary, which is to be presented to the institutional governing board prior to submission to the State Regents. Executive summaries should be possible within two pages using this template format.

Institution Name: Rose State College

Program Name and State Regents Code: Computer Information Technology #010

List Any Options: Database Option and Programming Option

Date of Review: 10-13-2017   **Recommended Date of Next Review:** Fall 2022

Centrality to Institutional Mission:

Centrality to Institutional Mission: As a public and open admission institution that grants associate degrees, Rose State College provides higher education programs and services intended to foster lifelong learning for a diverse population.

Centrality to Institutional Core Values: **Service:** The College builds lasting relationships with the communities it serves - recognizing the unique opportunity it has to positively impact the lives of both students and the greater citizenry.

Program Objectives and Goals:

The objective of the Associate in Applied Science in Computer Information Technology, Programming Option is to (1) To provide an educational avenue for students to upgrade their computer skills and knowledge as technical developments occur in the workplace; and, (2) to prepare students to assume employment in a position with responsibilities in computer information technology.

1. The necessary level of programming expertise to enable them to create business computer programs using procedural and object-oriented languages;
2. The necessary level of expertise to enable them to design, create and administer databases using Database Management Systems and programing languages;
3. Entry level network administration and information technology security skills;
4. The necessary level of analytical expertise to enable them to perform systems analysis at the entry level; and
5. A broadened educational background through successful completion of general education coursework.

The objective of the Associate in Applied Science in Computer Information Technology, Database Option is to (1) To provide an educational avenue for students to upgrade their computer skills and knowledge as technical developments occur in the workplace; and, (2) to prepare students to assume employment in a position with responsibilities in computer information technology.

1. The necessary level of database expertise to enable them to create business database programs using various Database Management Systems;
2. The necessary level of expertise to enable them to design, create and administer databases using Database Management Systems and programing languages;
3. Entry level network administration and information technology security skills;
4. The necessary level of analytical expertise to enable them to perform systems analysis at the entry level; and
A broadened educational background through successful completion of general education coursework.

| **Quality Indicators Such As:** | Upon satisfactory completion of the degree, the student will be able to: |

Student Learning Outcomes — **Effective Teaching** — **Effective Learning Environments** — **External Curricular Evaluation** — **Capacity to Meet Needs and Expectations of Constituencies**	1. Define the requirements of a useful business data processing/programming project that is designed to accomplish a specific purpose(s). 2. Identify the resources essential to the development of an information processing/programming project. 3. Define the parameters of a project that is to be completed within a specified time frame. 4. Plan and develop files and their maintenance to support an information processing/programming system. 5. Document and develop the input design of data for entry into the system for processing and for maintenance. 6. Document and develop the output design of information to be developed from an information processing/programming system. 7. Develop the processing programs required for data entry, file processing maintenance, and the required supporting documents. 8. Develop the recorded and written documentation essential to the successful maintenance and operation of a processing/programming project. 9. Demonstrate the operation of the processing/programming project to ensure the understanding of future users and program developers.

Productivity for Most Recent 5 Years

Number of Degrees: 5.4 Average and 2 Certificates Awarded

Number of Majors: 79.6 Average

Other Quantitative Measures Such As:
- Number of Courses for Major
- Student Credit Hour in Major
- Direct Instructional Costs
- Supporting Credit Hour Production
- Roster of faculty members including the number of FTE faculty in the specialized courses within the curriculum
- If available, information about employment or advanced studies of graduates of the program over the past five years
- If available, information about the success of students from this program

Course Name	Prefix	Number of Students
Microcomputer Application	CIT 1093	1818
Introduction to Computers	CIT 1103	1796
Fundamentals of Programming Logic	CIT 1113	1146
Visual Basic	CIT 1123	133
C++ Language	CIT 1173	225
Script Programming	CIT 1203	209
Networks	CIT 1503	818
Computer Hardware and Operating Systems	CIT 1523	738
Principles of Cybersecurity	CIT 1533	614
Intro to JAVA Programming	CIT 1613	522
C#(C Sharp)	CIT 1713	72
Database Theory Design	CIT 2013	125
Selected Technical Topics (Variable)	CIT 2091-4	113

who have transferred to another institution

Course Name	Prefix	
Access	CIT 2103	100
Windows Programming C++ NET	CIT 2173	44
Advanced Database Design	CIT 2183	43
Unix/Linux	CIT 2243	305
Systems Development and Implementation	CIT 2313	76
Structured Query Language (SQL)	CIT 2393	11
Advanced JAVA Programming	CIT 2613	74
Advanced UNIX	CIT 2623	28

Course Name	Prefix	Number of Student Credit Hours
Microcomputer Application	CIT 1093	5454
Introduction to Computers	CIT 1103	5388
Fundamentals of Programming Logic	CIT 1113	3438
Visual Basic	CIT 1123	399
C++ Language	CIT 1173	675
Script Programming	CIT 1203	627
Networks	CIT 1503	2454
Computer Hardware and Operating Systems	CIT 1523	2214
Principles of Cybersecurity	CIT 1533	1842
Intro to JAVA Programming	CIT 1613	1566
C#(C Sharp)	CIT 1713	216
Database Theory Design	CIT 2013	375
Selected Technical Topics (Variable)	CIT 2091-4	339
Access	CIT 2103	300
Windows Programming C++ NET	CIT 2173	132
Advanced Database Design	CIT 2183	129
Unix/Linux	CIT 2243	915
Systems Development and Implementation	CIT 2313	228

Structured Query Language (SQL)   CIT 2393   33
Advanced JAVA Programming   CIT 2613   222
Advanced UNIX   CIT 2623   84

Direct Instructional Costs
For FY 2012 4.5 X $45,000= $202,500
For FY 2013 5.5 X $45,000= $247,500
For FY 2014 6.0 X $45,000= $270,000
For FY 2015 5.0 X $45,000= $225,000
For FY 2016 4.0 X $45,000= $180,000

Faculty	Credential	Institution that granted degree
Ken Dewey	MS Information Systems MS Computer Science MA Computer Resource Management	Nova Southeastern University of Tulsa Webster University
Arlene Haynes	M.S. Education	University of Central Oklahoma
Jeff Thompson	MS Computer Information Technology	Oklahoma City University
Jimmy Scruggs	BT Information Assurance and Forensics	OSU IT
Donna Wilson	M.Ed. in Community College Education	University of Central Oklahoma
Terry Byers	MS Computer Resource Management	Webster University

Duplication and Demand   None

Effective Use of Resources   For FY 2015, $585,094
For FY 2016, $447,829
For FY 2017, $445, 361

The decrease in expenditures are reflected in part to the loss of full-time faculty positions.

| Strengths and Weaknesses | **Strengths:**
 1. Current full time and adjunct faculty expertise in subject matter.
 2. BIT and Academic VP support of faculty and program.
 3. The CIT Advisory Board provides vital information assuring our programs are meeting the needs of current industry.
 4. Positive working relationships with Business and Management Programs.

 Weaknesses:
 1. The marketing of the degree needs to more focus.
 2. Stabilization of academic budget.
    a. Difficulty in acquiring experienced faculty from the private sector.
    b. Equipment and software to meet or exceed current industry standards. |
| Recommendations | 1. Replace full-time faculty who have retired
 2. Continue to develop and maintain articulation agreements with other institutions
 3. Enhance marketing approach for Associate in Applied Science Degree Computer Information Technology |

Program Review Summary Template
3.7 Academic Program Review
(optional)

Based on the thorough internal or external program review addressing all criteria in policy, a comprehensive report should be possible within ten or fewer pages. This program review template is provided to assist institutions in compiling the program review information, which is to be presented to the institutional governing board prior to submission to the State Regents. Executive Summaries should be possible within two pages using the provided template (Program Review Executive Summary Template).

Description of the program's connection to the institutional mission and goals:

> The Associate in Applied Science Degree Computer Information Technology, at Rose State College provides an educational avenue for students to upgrade their knowledge as technology develops in the business arena. Or, continue their educational pursuits at a four-year institution. The Rose State College Computer Information Technology degree provides the students with an overview in the field on programming while developing the necessary skills to be a productive, trusted member of the digital business community.

3.7.5 Process (Internal/External Review):
Previous Reviews and Actions from those reviews:

Analysis and Assessment (including quantitative and qualitative measures) noting key findings from internal or external reviews and including developments since the last review:

> This is accomplished with a yearly comparison with our External Advisory Board. This board is comprised of local businesses, government agencies and educators. Based on recommendations from the Board we continually update our curriculum to reflect the current and future industry needs.
>
> Based on the data available, an overall continuing trend of increasing enrollment was seen in academic years 2012 through 2016. Current data indicates that this trend will continue throughout the 2017 academic year. Changes to our degree plans were implemented after consultation with our advisory board. A slight decrease in student enrollment (seven students) in our Programming Option occurred prior to changes to the degree option. These changes included an emphasis on Fundamentals of Programming and Python Script. Current data for the 2017 academic year indicates this decrease has stabilized an enrollment has started to increase. Data indicates that our Database Option remains consistent with industry demands and enrollment is on the rise by eight percent.

A. Centrality of the Program to the Institution's Mission:

As a public and open admission institution that grants associate degrees, Rose State College provides higher education programs and services intended to foster lifelong learning for a diverse population.

The Computer Information Technology – Database and Programming Options supports the campus mission of diversity in both our student and faculty populations. We actively recruit from all high schools, career technology centers and businesses. This results in a wide diversity in backgrounds, ages, initial abilities and ethnicity which fosters enhanced learning.

B. Vitality of the Program:
B.1.Program Objectives and Goals:

The objective of the Associate in Applied Science in Computer Information Technology, Programming Option is to (1) To provide an educational avenue for students to upgrade their computer skills and knowledge as technical developments occur in the workplace; and, (2) to prepare students to assume employment in a position with responsibilities in computer information technology.

1. The necessary level of programming expertise to enable them to create business computer programs using procedural and object-oriented languages;
2. The necessary level of expertise to enable them to design, create and administer databases using Database Management Systems and programing languages;
3. Entry level network administration and information technology security skills;
4. The necessary level of analytical expertise to enable them to perform systems analysis at the entry level; and
5. A broadened educational background through successful completion of general education coursework.

The objective of the Associate in Applied Science in Computer Information Technology, Database Option is to (1) To provide an educational avenue for students to upgrade their computer skills and knowledge as technical developments occur in the workplace; and, (2) to prepare students to assume employment in a position with responsibilities in computer information technology.
1. The necessary level of database expertise to enable them to create business database programs using various Database Management Systems;
2. The necessary level of expertise to enable them to design, create and administer databases using Database Management Systems and programing languages;
3. Entry level network administration and information technology security skills;
4. The necessary level of analytical expertise to enable them to perform systems analysis at the entry level; and
5. A broadened educational background through successful completion of general education coursework.

B.2 Quality Indicators (including Higher Learning Commission issues):

1. In Spring 2012, we made changes to our degree programs to enable our students to become "Completers". This was accomplished by the modifying both the Programming and Database options to better indicate their specialization in area of study. The current results this has been effective.
2. The CIT discipline has also had several visits with Southeastern University to explore a 2+2 program and build a pipeline for Rose state CIT graduates to complete a B.S. degree.
3. In our Advisory Board meetings held every Fall we continue to explore with our industry partners about internships for our students and gainful employment after degree completion. The CIT Advisory Board is essential in the continuing development of our programs to ensure that we meet the needs of our community.

B.3. Minimum Productivity Indicators:

Time Frame (e.g.: 5 year span)	Head Count	Graduates
2013	74	5
2014	69	6
2015	82	7
2016	90	6

B.4. Other Quantitative Measures:
   a. Number of courses taught exclusively for the major program for each of the last five years and the size of classes:

Course Name	Prefix	Years	Number of Students Enrolled
Microcomputer Application	CIT 1093	2012	476
		2013	408
		2014	318
		2015	300
		2016	316
Introduction to Computers	CIT 1103	2012	495
		2013	377
		2014	332
		2015	300
		2016	292
Fundamentals of Programming Logic	CIT 1113	2012	207
		2013	226
		2014	234
		2015	241
		2016	238

Course	Code	Year	Count
Visual Basic	CIT 1123	2012	36
		2013	37
		2014	40
		2015	15
		2016	5
C++ Language	CIT 1173	2012	36
		2013	44
		2014	57
		2015	40
		2016	48
Script Programming	CIT 1203	2012	20
		2013	0
		2014	25
		2015	64
		2016	100
Networks	CIT 1503	2012	177
		2013	182
		2014	163
		2015	158
		2016	138
Computer Hardware and Operating Systems	CIT 1523	2012	138
		2013	146
		2014	145
		2015	160
		2016	149
Principles of Cybersecurity	CIT 1533	2012	117
		2013	118
		2014	126
		2015	132
		2016	121
Intro to JAVA Programming	CIT 1613	2012	129
		2013	115
		2014	136
		2015	87
		2016	55
C#(C Sharp)	CIT 1713	2012	28
		2013	19
		2014	15
		2015	5
		2016	5

Database Theory Design	CIT 2013	2012	22
		2013	13
		2014	22
		2015	41
		2016	27
Selected Technical Topics (Variable)	CIT 2091-4	2012	41
		2013	13
		2014	15
		2015	40
		2016	4
Access	CIT 2103	2012	22
		2013	15
		2014	22
		2015	25
		2016	16
Windows Programming C++ NET	CIT 2173	2012	13
		2013	0
		2014	17
		2015	0
		2016	14
Advanced Database Design	CIT 2183	2012	17
		2013	8
		2014	12
		2015	6
		2016	0
Unix/Linux	CIT 2243	2012	56
		2013	53
		2014	49
		2015	65
		2016	82
Systems Development and Implementation	CIT 2313	2012	11
		2013	8
		2014	16
		2015	21
		2016	20
Structured Query Language (SQL)	CIT 2393	2012	9
		2013	0
		2014	2
		2015	0
		2016	0

Advanced JAVA Programming	CIT 2613	2012	8
		2013	7
		2014	21
		2015	17
		2016	21
Advanced UNIX	CIT 2623	2012	0
		2013	0
		2014	9
		2015	19
		2016	0

b. Student credit hours by level generated in all major courses that make up the degree program for five years:

Course Name	Prefix	Years	Number of Student Credit Hours
Microcomputer Application	CIT 1093	2012	1428
		2013	1224
		2014	954
		2015	900
		2016	948
Introduction to Computers	CIT 1103	2012	1485
		2013	1131
		2014	996
		2015	900
		2016	876
Fundamentals of Programming Logic	CIT 1113	2012	621
		2013	678
		2014	702
		2015	723
		2016	714
Visual Basic	CIT 1123	2012	108
		2013	111
		2014	120
		2015	45
		2016	15

C++ Language	CIT 1173	2012	108
		2013	132
		2014	171
		2015	120
		2016	144
Script Programming	CIT 1203	2012	60
		2013	0
		2014	75
		2015	192
		2016	300
Networks	CIT 1503	2012	531
		2013	546
		2014	489
		2015	474
		2016	414
Computer Hardware and Operating Systems	CIT 1523	2012	414
		2013	438
		2014	435
		2015	480
		2016	447
Principles of Cybersecurity	CIT 1533	2012	351
		2013	354
		2014	378
		2015	396
		2016	363
Intro to JAVA Programming	CIT 1613	2012	387
		2013	345
		2014	408
		2015	261
		2016	165
C#(C Sharp)	CIT 1713	2012	84
		2013	57
		2014	45
		2015	15
		2016	15
Database Theory Design	CIT 2013	2012	66
		2013	39
		2014	66
		2015	123
		2016	81

Selected Technical Topics (Variable)	CIT 2091-4	2012	123
		2013	39
		2014	45
		2015	120
		2016	12
Access	CIT 2103	2012	66
		2013	45
		2014	66
		2015	75
		2016	48
Windows Programming C++ NET	CIT 2173	2012	39
		2013	0
		2014	51
		2015	0
		2016	42
Advanced Database Design	CIT 2183	2012	51
		2013	24
		2014	36
		2015	18
		2016	0
Unix/Linux	CIT 2243	2012	168
		2013	159
		2014	147
		2015	195
		2016	246
Systems Development and Implementation	CIT 2313	2012	33
		2013	24
		2014	48
		2015	63
		2016	60
Structured Query Language (SQL)	CIT 2393	2012	27
		2013	0
		2014	6
		2015	0
		2016	0
Advanced JAVA Programming	CIT 2613	2012	24
		2013	21
		2014	63
		2015	51
		2016	63

Advanced UNIX	CIT 2623		
		2012	0
		2013	0
		2014	27
		2015	57
		2016	0

c. Direct instructional costs for the program for the review period:

For FY 2012   4.5 X $45,000= $202,500
For FY 2013   5.5 X $45,000= $247,500
For FY 2014   6.0 X $45,000= $270,000
For FY 2015   5.0 X $45,000= $225,000
For FY 2016   4.0 X $45,000= $180,000

d. The number of credits and credit hours generated in the program that support the general education component and other major programs including certificates:

N/A

e. A roster of faculty members, faculty credentials and faculty credential institution(s). Also include the number of full time equivalent faculty in the specialized courses within the curriculum:

Faculty	Credential	Institution that granted degree
Ken Dewey	MS Information Systems MS Computer Science MA Computer Resource Management	Nova Southeastern University of Tulsa Webster University
Arlene Haynes	M.S. Education	University of Central Oklahoma
Jeff Thompson	MS Computer Information Technology	Oklahoma City University
Jimmy Scruggs	BT Information Assurance and Forensics	OSU IT
Donna Wilson	M.Ed. in Community College Education	University of Central Oklahoma
Terry Byers	MS Computer Resource Management	Webster University

f. If available, information about employment or advanced studies of graduates of the program over the past five years:

N/A

g. If available, information about the success of students from this program who have transferred to another institution:

N/A

B.5. Duplication and Demand:

In cases where program titles imply duplication, programs should be carefully compared to determine the extent of the duplication and the extent to which that duplication is unnecessary. An assessment of the demand for a program takes into account the aspirations and expectations of students, faculty, administration, and the various publics served by the program. Demand reflects the desire of people for what the program has to offer and the needs of individuals and society to be served by the program.

B.5. Duplication and Demand Issues:

Address Duplication:

N/A

Address Demand:

The demand for Associate in Applied Science Degree Computer Information Technology, Programming continues to grow. Very shortly, additional faculty will be needed in order to meet student expectations. We continue to see a need for the Associate in Applied Science Degree in Computer Information Technology, Database Developers. However, we are currently evaluating this Option to see how it can be transformed to meet the rapidly changing business environment.

B.5.a. Detail demand from students, taking into account the profiles of applicants, enrollment, completion data, and occupational data:

N/A

B.5.b. Detail demand for students produced by the program, taking into account employer demands, demands for skills of graduates, and job placement data:

Based on suggestions from the CIT Advisory Board which meets every Fall we have examined our Programs to further meet the needs of our community. Recommended changes include the expanded need for Python Scripting, increased emphasis on Ethics and a thorough understanding of Fundamentals of Programming (to include the creation of pseudocode and flowcharting).

B.5.c. Detail demand for services or intellectual property of the program, including demands in the form of grants, contracts, or consulting:

The Division of Business and Information Technology at Rose State College is engaged in consulting in local area businesses and school systems to resolve issues in 3D modeling and additive manufacturing, project management, and cybersecurity, all of which indirectly relate the AAS Associate in Applied Science Degree Computer Information Technology, Programming and Database Degrees.

B.5.d. Detail indirect demands in the form of faculty and student contributions to the cultural life and well-being of the community:

N/A

B.5.e. The process of program review should address meeting demands for the program through alternative forms of delivery. Detail how the program has met these demands:

To meet the changing student needs we offer nine of our courses in a hybrid format, seventeen of our courses in an online format and all twenty one of courses in a traditional format. We also rotate the times and days of the weeks of our course offerings to further meet our students' needs.

B.6. Effective Use of Resources:

Resources include financial support, (state funds, grants and contracts, private funds, student financial aid); library collections; facilities including laboratory and computer equipment; support services, appropriate use of technology in the instructional design and delivery processes, and the human resources of faculty and staff.

For FY 2015, $585,094
For FY 2016, $447,829
For FY 2017, $445, 361

The decrease in expenditures are reflected in part to the loss of full-time faculty positions.

*Low Producing Program Reviews follow a different format and template.

Institutional Program Recommendations: (describe detailed recommendations for the program as a result of this thorough review and how these recommendations will be implemented, as well as the timeline for key elements)

Recommendations	Implementation Plan	Target Date

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| 1. Replace full-time faculty who have retired
2. Continue to develop and maintain articulation agreements with other institutions
3. Enhance marketing approach for Associate in Applied Science Degree Computer Information Technology | 1. Identify sources and an appropriate amount of monies needed to replace full-time faculty
2. Strengthen current relationships and meet with RSC's articulation partners
3. Meet with VP of Marketing to develop a strategy | 1. Have new faculty in place by Fall 2019 semester
2. Ongoing
3. Immediately |

Summary of Recommendations:

	Department	School/College	Institutional
Possible Recommendations:			
Expand program (# of students)	x		
Maintain program at current level			
Reduce program in size or scope			
Reorganize program			
Suspend program			
Delete program			

Department/
Program Head ___(Signature)___   Date __10/16/17__

Dean ___(Signature)___   Date __10/16/17__