

# APR Instructional Computer Information Systems 2022-23 Latest Version

Annual program review for computer information systems, reviewing the 2022-23 Academic Year

## APR Instructional

Annual Course Student Learning Outcome Data : Version by **Bangs, Michael** on **12/14/2023 23:14**

| CSLOs                                                                                                                                                         | Expected/Benchmark Performance | Actual Performance (Aggregate of All Terms) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------------------|
| CIS104 - Information and Communication Technologies Essentials - CompTIA A+                                                                                   |                                |                                             |
| 1. Research, analyze, and evaluate information to solve business problems using appropriate computer hardware technology. (Active from Summer 2018)           | 70.00%                         | 63.64%                                      |
| 2. Design and produce computer hardware technology solutions incorporating current trends, security, and best practices. (Active from Summer 2018)            | 70.00%                         | 63.64%                                      |
| 3. Effectively employ computer hardware technology concepts and terminology in professional communication. (Active from Summer 2018)                          | 70.00%                         | 63.64%                                      |
| 4. Demonstrate marketable computer hardware technology career skills. (Active from Summer 2018)                                                               | 70.00%                         | 63.64%                                      |
| CIS105 - Network Fundamentals - CompTIA Network+                                                                                                              |                                |                                             |
| 1. Research, analyze, and evaluate information to solve business problems using appropriate fundamental data networking technology. (Active from Summer 2018) | 70.00%                         | 93.75%                                      |
| 2. Design and produce fundamental data networking solutions incorporating current trends, security, and best practices. (Active from Summer 2018)             | 70.00%                         | 93.75%                                      |
| 3. Effectively employ fundamental data networking concepts and terminology in professional communication. (Active from Summer 2018)                           | 70.00%                         | 93.75%                                      |
| 4. Demonstrate marketable fundamental data networking career skills. (Active from Summer 2018)                                                                | 70.00%                         | 93.75%                                      |
| CIS106 - Microsoft Client OS Administration                                                                                                                   |                                |                                             |
| 1. Research, analyze, and evaluate information to solve business problems related to Client OS configuration concepts. (Active from Summer 2018)              | 70.00%                         | 100.00%                                     |
| 2. Design and produce Client Administration solutions incorporating current trends, security, and best practices. (Active from Summer 2018)                   | 70.00%                         | 100.00%                                     |
| 3. Effectively employ OS Administration concepts and terminology in professional communication. (Active from Summer 2018)                                     | 70.00%                         | 100.00%                                     |
| 4. Demonstrate marketable Client Configuration career skills. (Active from Summer 2018)                                                                       | 70.00%                         | 100.00%                                     |
| CIS107 - Microsoft Server OS Administration                                                                                                                   |                                |                                             |
| 1. Research, analyze, and evaluate information to solve business problems related to Client OS configuration concepts. (Active from Summer 2018)              | 70.00%                         | 100.00%                                     |
| 2. Design and produce Client Administration solutions incorporating current trends, security, and best practices. (Active from Summer 2018)                   | 70.00%                         | 100.00%                                     |
| 3. Effectively employ OS Administration concepts and terminology in professional communication. (Active from Summer 2018)                                     | 70.00%                         | 100.00%                                     |
| 4. Demonstrate marketable Client Configuration career skills. (Active from Summer 2018)                                                                       | 70.00%                         | 100.00%                                     |
| CIS108 - Introduction to Information Systems Security – CompTIA Security+                                                                                     |                                |                                             |

| CSLOs                                                                                                                                              | Expected/Benchmark Performance | Actual Performance (Aggregate of All Terms) |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------------------|
| 1. Research, analyze, and evaluate information to solve business problems using appropriate network security technology. (Active from Summer 2018) | 70.00%                         | 100.00%                                     |
| 2. Design and produce data computer network security incorporating current trends, security, and best practices. (Active from Summer 2018)         | 70.00%                         | 100.00%                                     |
| 3. Effectively employ network security concepts and terminology in professional communication. (Active from Summer 2018)                           | 70.00%                         | 100.00%                                     |
| 4. Demonstrate marketable network security career skills. (Active from Summer 2018)                                                                | 70.00%                         | 100.00%                                     |
| CIS550 - ArcGIS Online (NC)                                                                                                                        |                                |                                             |
| 1. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2021)  | 70.00%                         | 0.00%                                       |
| 2. Display data using appropriate tools in GIS. (Active from Summer 2021)                                                                          | 70.00%                         | 0.00%                                       |
| CIS550 - Introduction to Geographic Information Systems (NC)                                                                                       |                                |                                             |
| 1. Interpret vector data and demonstrate its use in GIS. (Active from Winter 2021)                                                                 | 70.00%                         | 0.00%                                       |
| 2. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Winter 2021)  | 70.00%                         | 0.00%                                       |
| CIS551 - ArcGIS Desktop (NC)                                                                                                                       |                                |                                             |
| 1. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2021)  | 70.00%                         | 0.00%                                       |
| 2. Display data using appropriate tools in GIS. (Active from Summer 2021)                                                                          | 70.00%                         | 0.00%                                       |
| CIS551 - Intermediate Geographic Information Systems (NC)                                                                                          |                                |                                             |
| 1. Interpret raster data and demonstrate its use in GIS. (Active from Spring 2021)                                                                 | 70.00%                         | 0.00%                                       |
| 2. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Spring 2021)  | 70.00%                         | 0.00%                                       |
| CIS552 - Advanced Geographic Information Systems: Web GIS (NC)                                                                                     |                                |                                             |
| 1. Manipulate and interpret data using appropriate tools in GIS. (Active from Fall 2020)                                                           | 70.00%                         | 0.00%                                       |
| 2. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Fall 2020)    | 70.00%                         | 0.00%                                       |
| CIS553 - Advanced Geographic Information Systems: Mobile GIS (NC)                                                                                  |                                |                                             |
| 1. Manipulate and interpret data using appropriate tools in GIS. (Active from Fall 2020)                                                           | 70.00%                         | 0.00%                                       |
| 2. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Fall 2020)    | 70.00%                         | 0.00%                                       |
| CIS120A - Computer Programming I                                                                                                                   |                                |                                             |
| 1. Design and write introductory-level computer programs in Java. (Active from Fall 2015)                                                          | 70.00%                         | 93.75%                                      |
| 2. Compile Java programs. (Active from Fall 2015)                                                                                                  | 70.00%                         | 93.75%                                      |
| 3. Repair Java compilation errors in written programs. (Active from Fall 2015)                                                                     | 70.00%                         | 93.75%                                      |
| 4. Evaluate and criticize program design and code. (Active from Fall 2015)                                                                         | 70.00%                         | 93.75%                                      |

| CSLOs                                                                                                                                             | Expected/Benchmark Performance | Actual Performance (Aggregate of All Terms) |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------------------|
| 5. Solve written problem statements by writing computer programs which address the problem. (Active from Fall 2015)                               | 70.00%                         | 93.75%                                      |
| CIS120B - Computer Programming II                                                                                                                 |                                |                                             |
| 1. Design a class inheritance hierarchy. (Active from Fall 2015)                                                                                  | 70.00%                         | 0.00%                                       |
| 2. Write a computer program which employs a class inheritance hierarchy. (Active from Fall 2015)                                                  | 70.00%                         | 0.00%                                       |
| 3. Write a program which performs file input and output. (Active from Fall 2015)                                                                  | 70.00%                         | 0.00%                                       |
| 4. Use data structures such as arrays in solving problems with a computer program. (Active from Fall 2015)                                        | 70.00%                         | 0.00%                                       |
| 5. Write a graphical user interface program employing event-driven programming. (Active from Fall 2015)                                           | 70.00%                         | 0.00%                                       |
| CIS120C - Computer Programming III                                                                                                                |                                |                                             |
| 1. Evaluate and compare the run-time of simple algorithms using Big-O notation. (Active from Fall 2015)                                           | 70.00%                         | 0.00%                                       |
| 2. Complete a large programming project. (Active from Fall 2015)                                                                                  | 70.00%                         | 0.00%                                       |
| 3. Use fundamental data structures such as linked lists, stacks, queues, and trees in computer programs. (Active from Fall 2015)                  | 70.00%                         | 0.00%                                       |
| 4. Demonstrate use of recursion. (Active from Fall 2015)                                                                                          | 70.00%                         | 0.00%                                       |
| 5. Write a computer program that uses generic classes. (Active from Fall 2015)                                                                    | 70.00%                         | 0.00%                                       |
| CIS135A - ArcGIS Online                                                                                                                           |                                |                                             |
| 1. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2021) | 70.00%                         | 66.67%                                      |
| 2. Display data using appropriate tools in GIS. (Active from Summer 2021)                                                                         | 70.00%                         | 66.67%                                      |
| CIS135A - Introduction to Geographic Information Systems                                                                                          |                                |                                             |
| 1. Interpret vector data and demonstrate its use in GIS. (Active from Summer 2019)                                                                | 70.00%                         | 0.00%                                       |
| 2. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019) | 70.00%                         | 0.00%                                       |
| CIS135B - ArcGIS Desktop                                                                                                                          |                                |                                             |
| 1. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2021) | 70.00%                         | 0.00%                                       |
| 2. Display data using appropriate tools in GIS. (Active from Summer 2021)                                                                         | 70.00%                         | 0.00%                                       |
| CIS135B - Intermediate Geographic Information Systems                                                                                             |                                |                                             |
| 1. Interpret raster data and demonstrate its use in GIS. (Active from Summer 2019)                                                                | 70.00%                         | 50.00%                                      |
| 2. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Summer 2019) | 70.00%                         | 50.00%                                      |
| CIS135C - Adv GIS Systems: Web                                                                                                                    |                                |                                             |
| 1. Manipulate and interpret data using appropriate tools in GIS. (Active from Spring 2021)                                                        | 70.00%                         | 100.00%                                     |
| 2. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems. (Active from Spring 2021) | 70.00%                         | 100.00%                                     |
| CIS135D - Advanced Geographic Information Systems: Mobile GIS                                                                                     |                                |                                             |
| 1. Manipulate and interpret data using appropriate tools in GIS. (Active from Fall 2020)                                                          | 70.00%                         | 100.00%                                     |

| CSLOs                                                                                                                                              | Expected/Benchmark Performance | Actual Performance (Aggregate of All Terms) |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------------------|
| 2. Apply course concepts and critical thinking skills to identify issues, understand relationships, and solve problems.<br>(Active from Fall 2020) | 70.00%                         | 100.00%                                     |

APR Questions Tableau : Version by Deeds, Brad on 01/30/2024 00:41

Using the Data Provided (<https://10az.online.tableau.com/#!/site/ltcc/views/ProgramReview/LTCCProgramReviewSummary?:iid=1>) please provide the number of students (headcount) that are served by the discipline.

48 in 2022/23 duplicated headcount

Using the Data Provided (<https://10az.online.tableau.com/#!/site/ltcc/views/ProgramReview/Demographics?:iid=1>), identify the populations served by the discipline. Are there any inconsistencies? Does the Population served reflect the population of the college? If not, why, and how can the discipline serve a population more reflective of our community?

While the N is small, the percentage of Hispanic/Latinx is lower than the general college population (between 7 - 18%) annually, which means there is significant work to do to reach out to potential student groups to help better diversity the IT/cybersecurity industry. These efforts can include connecting with Promise, Equity, and Dual Enrollment staff, along with TRIO and other student-facing groups at LTCC and LTUSD. The vast majority of students in this major are between 25-49 years old (bringing in ADVANCE), and are majority female.

Using student success data (<https://10az.online.tableau.com/#!/site/ltcc/views/ProgramReview/SuccessRatesOverall?:iid=1>), identify any trends in successful completion of courses.

Are there particular courses (<https://10az.online.tableau.com/#!/site/ltcc/views/ProgramReview/SuccessRatesbyCourse?:iid=1>) students are struggling in?

Are there any demographics that are less likely to complete certain courses in the discipline?

What steps need to be taken to support students and the department in meeting its equity obligations?

Course success rates are high for all student groups. See answer above for strategies to assist the department in meeting its equity obligations.

Are there any courses lacking Title V Updates?

If so, how many and why?

(Please check your courses in eLumen for the most recent list of courses that require updates.)

There are still a couple of CIS courses that need Title V updates and will be assigned to part-time faculty accordingly.

Describe the approach to scheduling in terms of offering a balance of Face to Face (F2F) and Online opportunities for students.

All CIS IT Technician/Cybersecurity courses are offered online.

Are there any insights specific to this discipline regarding scheduling modality in terms of success rates, student retention, or course cancellations?

There haven't been any requests from students (or faculty) to offer any F2F courses in CIS IT Technician/Cybersecurity over the last 4+ years. Although it has been reported from students and faculty that course standards and requirements are quite rigorous, and after condensed (6 week) summer sections were deemed to be too short and challenging for students to complete the course content, it was determined to hold courses at least 10 weeks in length.

Are the full-time faculty teaching the courses with the most face to face students? Why/why not?

There is one full-time faculty teaching CIS IT Technician/Cybersecurity courses (along with the CIS 120A-C Programming sequence), but all courses are offered via distance education.

Are staffing levels adequate to fulfill the purpose of the program?

Currently there are adequate number of instructors to teach the courses, but this discipline in particular has been very challenging to fill on the instructor side. There has been significant instructor turnover until the last couple of years when two faculty have taken on all the courses in the department.

What professional development opportunities have faculty in this discipline taken advantage of? Are there any unmet professional development needs?

Various instructors over the years have attended trainings, although not in the last couple of years. Ongoing professional development through the North/Far North regional consortium colleges will continue to be shared with current faculty.

Where applicable, outline and explain any budget shortfalls for this discipline.

The only current budget needs are software licenses, etc. to enable students to access various course content, which in the past has been covered by Strong Workforce (regional CTE) funding.

If additional financial resources are needed, please describe how they will increase student success, retention, or completion.

The only additional resources that might be identified would be to support students in passing the industry certification exams (through CompTIA). At present those are not included in the courses, and exam fees must be covered by students.

Using the SLO Data above, are there any SLOs for any particular courses that students are not successfully understanding? How do you plan to address this?

CompTIA A+ is the only course where student performance on SLOs is below the targeted standard. Discussions will be held with the appropriate faculty on potential student supports to enable higher achievement.

What are the major strengths of your department?

Alignment to jobs in the field, student enrollments, condensed offerings to enable students to earn their Certificate of Achievement and get going on their career paths in 9 months.

In what ways could your department improve to better meet the needs of the College and support student success?

Better connect online students to the various resources available to learners via various campus programs (such as Equity, HSI, ADVANCE, etc.)

What are the biggest challenges your department may face in making these improvements?

Connecting the far-flung students to campus resources (all students are online and many are from outside the area and outside the country, and are just taking these specific courses to obtain their workforce objectives, and can be difficult to connect to wrap-around supports through the college.

Identify any other questions, comments, suggestions, or concerns you may have.

No Value

Dean Review : Version by Deeds, Brad on 01/30/2024 00:41

Brad Deeds