

1. Assessment Plan - Four Column



PIE - Business: Computer Information Systems (CIS) Unit

Narrative Reporting Year

2018-19

Contact Person: Barry Andrews

Email/Extension: bandrews@mtsac.edu / Ext. 4943

Program Planning Dialog: 1. To encourage internships, decided to offer work experience courses for several of our disciplines

2. To prepare students for the cutting-edge field of big data analytics, decided to create three new Big Data Analytics classes and a Big Data Analytics Certificate

3. To increase the number of students earning database and programming degrees, decided to remove two courses from the database and programming degree requirements to bring the total units requirements more in line with the requirements of other degree programs

3. To make it easier for students to take completely online courses, decided to make several lab courses distance learning approved

4. Based upon consistently low enrollment, decided to remove the CISP 14 Advanced Visual Basic course from our program and also remove the Visual Basic Certificate and Degree

5. Due to a grant opportunity, decided to create four new Cloud Computing courses and a Cloud Computing certificate

6. Due to the State now linking funding to program completers, decided to submit documentation to the Chancellor's Office to make all the CIS certificates State recognized

7. Due to the growing enrollment in our programming courses, decided to start a Programming Club

8. Due to the growing use of the Python programming language in industry, decided to create a new Python Programming course

External Conditions, Trends, or Impacts: 1. The continued growth of the cybersecurity industry has led to more students pursuing networking and security programs

2. Advisory Committee recommendations have resulted in changes to our current courses

3. The diminishing use of the Visual Basic Programming language in industry has negatively affected the number of students enrolling in Visual Basic classes

4. Technology changes forces the department to continually update its knowledge, equipment and software

5. The costs of printed textbooks continue to rise--resulting in many instructors choosing to use online textbooks

6. The State's decision to link a portion of school funding to the number of program completers
7. A trend toward private and public cloud service has been taking place in both industry and education
8. According to a survey by DataVersity.net, there will 2.7 million job postings for data analytics and data science workers by 2020
9. Python is becoming an increasingly popular programming language

Internal Conditions, Trends, or Impacts : 1. The networking/security program continues to be the most popular program in the CIS Department

2. Higher CIS enrollment in the 2018-2019 academic year compared to the same semesters in 2017-2018
3. More students are attempting to pass classes without buying a textbook
4. The addition of three new full-time instructors in the last two years has enabled the department to schedule more courses and develop new courses and programs
5. Strong Workforce grant money has enabled the department to market its new Big Data Analytics program with Google ads

Critical Decisions Made by Unit: 1. Decided to offer work experience courses for several of our disciplines

2. Decided to create three new Big Data Analytics classes and a Big Data Analytics Certificate
3. Decided to remove two courses from the database and programming degree requirements to bring the total units requirements more in line with the requirements of other degree programs
3. Decided to make several lab courses distance learning approved
4. Decided to remove the CISP 14 Advanced Visual Basic course from our program and also remove the Visual Basic Certificate and Degree
5. Decided to create four new Cloud Computing courses and a Cloud Computing certificate
6. Decided to submit documentation to the Chancellor's Office to make all the CIS certificates State recognized
7. Decided to start a Programming Club
8. Decided to create a new Python Programming course..

Notable Achievements for Theme A: To Advance Academic Excellence and Student Achievement: 1. The department awarded 51 Associate Degrees and 89 certificates in the 2017-2018 academic year

2. The CIS cybersecurity team came in 13 out of 26 teams at the Western Regional Collegiate Cyber Defense Competition. Teams that finished behind Mt. SAC at this competition included Stanford, UC Irvine and UC Berkely
3. The CIS cybersecurity team came in 91 out of 627 teams at the Spring National Cybersecurity League competition--which equates to finishing in the top 15%. Many of the schools competing in this competition were four-year universities

- Notable Achievements for Theme B: To Support Student Access and Success:**
1. Every course SLO conducted during the 2018-2019 academic year obtained the criteria percentage goal for successful student learning outcomes
 2. Five new work experience courses were approved this year and have been scheduled in Fall 2019. The intent of these courses is to help students get work experience that can be put on their resume
 3. This year twenty students were provided free access codes that enabled them to access test preparation materials to study for national industry certification exams (such as Network+, Security+, CCNA, etc.)

Notable Achievements for Theme C: Secure Human, Technological, & Financial Resources: 1. Two new CIS full-time faculty joined the department this year

2. The department used its instructional supply budget to purchase test preparation software licenses that enabled students to prepare for industry recognized national certification exams
3. The department secured \$500 in funding from the Mt. SAC marketing dept to market our new Big Data Analytics program on Facebook
4. The department secured \$5,000 in funding from the Strong Workforce grant to market our new Big Data Analytics program on Google
5. The department used Perkins funds to provide tutoring for several courses across several CIS disciplines
6. The department was approved for a \$50,000 Cloud Computing grant for the 2019-2020 academic year

Notable Achievements for Theme D: To Foster an Atmosphere of Cooperation and Collaboration: 1. Continued our partnership with Kaiser Permanente--resulting in two students obtaining jobs at Kaiser this academic year

2) The CIS Club and the CIS Department hosted the 2018 Microsoft Global Azure Bootcamp on April 27, 2019. This free event exposed students to IT professionals and contacts and provided many presentations to help students learn more about cloud computing. Approximately 200 people attended this event

3) This year the department collaborated with Lisa Amos in Perkins, Uyen Mai in Marketing, Dejah Swingle in Strong Workforce, Marie Tyra in Articulation, Dawn Finley (Career Specialist) and Jacinta Jocson (Special Projects) to help accomplish our department goals and objectives

4) Every year the Mt. SAC IT department hires one or more CIS students for help desk positions

Contributors to the Report: Barry Andrews, Victor Zamora, Ana Degtyareva, Sohair Zaki, Jim Gau, Rich Patterson, Jaishri Mehta, John Blyzka, James Holbert, Paul Chiu

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>Where We Make an Impact: Closing the Loop on Goals and Plans</i>
<p>Student success - Increase the number of students earning CIS certificates and degrees</p> <p>Status: Active</p> <p>Goal Year(s): 2016-17, 2017-18, 2018-19</p> <p>Date Goal Entered (Optional):</p>	<p>Report directly on Goal</p>	<p>Reporting Year: 2018-19</p> <p>% Completed: 75</p> <p>Requested \$50,000 in marketing funds to market the new Data Analytics courses and certificate both on campus and to the surrounding community.. The department secured \$5,500 in funding this year to create flyers and advertise on</p>

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans	
09/01/2016	Report directly on Goal	Facebook and Google. The impact of the marketing effort will not be know until we see the enrollment numbers for the first Big Data Analytics course this Fall. If enrollment is strong, the department will seek an additional \$5,000 next year. Thus, we have determined this goal to be 75% complete. (04/25/2019)	
	<p>In Progress - Hire one student assistant to help with tutoring and preparing other students for the National Cyber Security League (NCL) and Cyber security competitions.</p> <p>Describe Plans & Activities Supported (Justification of Need): 1 student x 19 hours per week at \$12 per hour x 35 weeks = \$8,000</p> <p>Lead: Jim Gau</p> <p>Planning Unit Priority: Medium</p> <p>One-Time Funding Requested (if applicable): 8000</p>	<p>Reporting Year: 2018-19</p> <p>% Completed: 50</p> <p>All of the network and security courses met their SLO objectives and the cybersecurity team finished in the top 15% of the National Cybersecurity Competition . The progress is marked 25% complete because this is an ongoing goal each year (04/30/2019)</p>	<p>: Due to the positive impact on student success the department will continue to ask for tutoring resources next year. (06/22/2017)</p>
	<p>In Progress - 1 student tutor for other: VB, SQL, Web programming, Microcomputer applications 5 hours per week at @12 per hours</p> <p>Lead: CIS Staff</p> <p>Planning Unit Priority: Medium</p> <p>One-Time Funding Requested (if applicable): 2000</p>	<p>Reporting Year: 2018-19</p> <p>% Completed: 50</p> <p>Tutors help our students complete courses and obtain the skills they need to get employed. In addition, according to a College Core Indicator Report filtered specifically for Mt. SAC Computer Software Development courses:</p> <ul style="list-style-type: none"> • Employment indicator for programming students went up from -3% to 8.6% • Completion for non-traditional students went up by 2% • Persistence and transfer for economically disadvantaged students went up by 1% and displaced homemakers by 8%. (04/12/2018) 	<p>: Due to the positive impact on student success the department will continue to ask for tutoring resources next year. (06/22/2017)</p>
	<p>In Progress - 1 student tutor for C++ programming 19 hours per week ar \$12 per hour</p> <p>Describe Plans & Activities Supported (Justification of Need): 1 student tutor for C++ programming 19 hours per week ar \$12 per hour</p>	<p>Reporting Year: 2018-19</p> <p>% Completed: 50</p> <p>Tutors help our students complete courses and obtain the skills they need to get employed. In addition, according to a College Core Indicator Report filtered specifically for Computer Software Development courses:</p> <ul style="list-style-type: none"> • Employment indicator for programming students 	<p>: Due to the positive impact on student success the department will continue to ask for tutoring resources next year. (06/22/2017)</p>

Unit Goals	Resources Needed	Where We Make an Impact: Closing the Loop on Goals and Plans
<p>Lead: Anna Degtyareva Planning Unit Priority: Medium One-Time Funding Requested (if applicable): 9000</p> <p>In Progress - 1 student tutor for Java programming 19 hours per week at \$12 per hour Describe Plans & Activities Supported (Justification of Need): 1 student tutor for Java programming 19 hours per week at \$12 per hour Lead: Jaishri Mehta Planning Unit Priority: Medium One-Time Funding Requested (if applicable): 6000</p>	<p>went up from -3% to 8.6%</p> <ul style="list-style-type: none"> • Completion for non-traditional students went up by 2% • Persistence and transfer for economically disadvantaged students went up by 1% and displaced homemakers by 8%. (04/25/2019) <p>Reporting Year: 2018-19 % Completed: 50 Tutors help our students complete courses and obtain the skills they need to get employed. In addition, according to a College Core Indicator Report filtered specifically for Computer Software Development courses:</p> <ul style="list-style-type: none"> • Employment indicator for programming students went up from -3% to 8.6% • Completion for non-traditional students went up by 2% • Persistence and transfer for economically disadvantaged students went up by 1% and displaced homemakers by 8%. (04/25/2019) 	<p>: Due to the positive impact on student success the department will continue to ask for tutoring resources next year. (06/22/2017)</p>
<p>Hire new instructor - Hire a full-time instructor who can teach a variety of CIS courses Status: Active Goal Year(s): 2017-18, 2018-19 Date Goal Entered (Optional): 06/15/2017</p>	<p>In Progress - Hire a full-time instructor who can teach a large variety of courses Describe Plans & Activities Supported (Justification of Need): New full-time instructor Lead: Barry Andrews What would success look like and how would you measure it?: A new full time instructor is hired Planning Unit Priority: High One-Time Funding Requested (if applicable): 100000</p>	<p>Reporting Year: 2018-19 % Completed: 75 Two instructors were hired. The new hires have enabled the department to schedule more courses and begin developing new courses. The department is leaving this goal at 75% because the department will need to hire another instructor if any of our current instructors retire. (04/23/2019)</p>
<p>Cloud services - Begin moving toward using public and private cloud services to teach our lab classes Status: Active Goal Year(s): 2018-19 Date Goal Entered (Optional):</p>	<p>Report directly on Goal</p> <hr/> <p>Request - Full Funding Requested -</p>	<p>Reporting Year: 2018-19 % Completed: 25 Research is still being conducted to determine if using cloud services to teach our lab classes is a viable option. (04/24/2019)</p>

<i>Unit Goals</i>	<i>Resources Needed</i>	<i>Where We Make an Impact: Closing the Loop on Goals and Plans</i>
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04/25/2018	<p>Funds to pay for public cloud services</p> <p>Describe Plans & Activities Supported (Justification of Need): In order to save on future equipment costs necessary to stay current with industry technology the department is considering moving to software based cloud services.</p> <p>Lead: Jim Gau</p> <p>What would success look like and how would you measure it?: One or more lab classes would be taught and would perform their lab exercises on cloud-based software.</p> <p>Planning Unit Priority: Low</p> <p>One-Time Funding Requested (if applicable): 50000</p> <p>On-Going Funding Requested (if applicable): 10000</p>	
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<p>Training funds - Obtain training funds to enable CIS instructors to attend conferences, workshops and other training opportunities to keep our instructors up to date with current technology</p> <p>Status: Active</p> <p>Goal Year(s): 2017-18, 2018-19</p> <p>Date Goal Entered (Optional): 09/01/2016</p>	<p>In Progress - Send 2-3 instructors to programming, networking and/or computer security training workshops</p> <p>Describe Plans & Activities Supported (Justification of Need): Funds to attend training sessions</p> <p>Lead: CIS full-time staff</p> <p>What would success look like and how would you measure it?: Instructors will teach the information acquired at the training workshops to their students and update their course curriculum to include new technology.</p> <p>Planning Unit Priority: Medium</p> <p>One-Time Funding Requested (if applicable): 6000</p>	<p>Reporting Year: 2018-19</p> <p>% Completed: 50</p> <p>Training funds were received this year. The funds enabled instructors to attend the following workshops: LayerOne information security conference, DefCon Hacker convention, CISSP 8 Bodies of Common Knowledge, Strata Big Data Analytics. However, this goal is not complete because we will need more training funds next year to learn about Cloud Computing and to stay current with technology in our courses.. (04/23/2019)</p>
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<i>Unit Goals</i>	<i>Resources Needed</i>	<i>Where We Make an Impact: Closing the Loop on Goals and Plans</i>
<p>Marketing Funds - Market the CIS Dept in general and specifically market our Big Data Analytics Certificate, our Network Security program and our new Cloud Computing certificate (when it gets approved) Status: Active Goal Year(s): 2018-19 Date Goal Entered (Optional): 04/25/2018</p>	<p>Request - Full Funding Requested - Money to market our new Big Data Analytics program . Describe Plans & Activities Supported (Justification of Need): Work with the Mt. SAC marketing department to use multiple advertising strategies to generate awareness of our new Big Data Analytics program in the Mt. SAC region. Lead: Sohair Zaki and Barry Andrews What would success look like and how would you measure it?: Enrollment in CIS courses overall will increase and the new Big Data Analytics classes would be fully enrolled Planning Unit Priority: High One-Time Funding Requested (if applicable): 50000 On-Going Funding Requested (if applicable): 10000</p>	<p>Reporting Year: 2018-19 % Completed: 50 The department received \$500 from the Marketing Department and \$5,000 from Strong Workforce funds to market this new program on Facebook and Google. The department will seek \$5,000 additional funds next year to market both our Big Data and Cloud Computing certificates (04/23/2019)</p>
	<p>Request - Full Funding Requested - \$20,000 to market the network security program Describe Plans & Activities Supported (Justification of Need): The funds would be used to advertise the network security department using a variety of media (billboards, buses, newspaper, radio, etc.) Lead: Barry Andrews and Paul Chiu What would success look like and how would you measure it?: Enrollment in network security courses would increase by at least 15% Planning Unit Priority: Medium</p>	<p>Reporting Year: 2018-19 % Completed: 100 The department did not get approved for these funds. Due to strong demand for the network and security courses this year the department will not seek marketing funds for next year (04/23/2019)</p>

Unit Goals

Resources Needed

Where We Make an Impact: Closing the Loop on Goals and Plans

One-Time Funding Requested (if applicable): 20000

On-Going Funding Requested (if applicable): 5000