

**NORCO COLLEGE**  
**COMPREHENSIVE INSTRUCTIONAL PROGRAM/UNIT REVIEW**

**Discipline/Unit/Department: Computer Information Systems (CIS)**  
**Computer Science (CSC)**

*Program(s) or Certificate(s) Associated: Computer Programming, Graphic Design, Mobile Application Development, C++ Programming and Java Programming*

**Contact Person: Cathy Brotherton**

**Due: April 20, 2016**

Please send an electronic copy as a Word document (avoid PDF)

[programreview@norccollege.edu](mailto:programreview@norccollege.edu)



*Form Last Revised: December 2015*

**Norco College**

Web Resources: <http://www.rccd.edu/administration/educationalservices/ieffectiveness/Pages/ProgramReview.aspx>

# Comprehensive Instructional Program/Unit Review Update Instructions

**\*Please retain this information for your discipline's/department's use (or forward to your chair).**

The Comprehensive Program Review is conducted by each unit at Norco College and consists of an analysis of changes within the unit as well as significant new resource needs for staff, resources, facilities, and equipment for the next four years, while reflecting on the changes within the last four years. This document serves as a long-term strategic planning document. This planning document should reflect the period since the last Comprehensives submitted by your unit and should also cover the planning for the next four years. In the year submitted, an annual program review will not be submitted.

**For Program Review data, please go to the following link:**

<http://www.norcollege.edu/about/president/strategic-planning/programreview/Pages/Comprehensive-Instructional-Program-Review.aspx>

The questions on the subsequent pages are intended to assist you in planning for your unit.

The forms that follow are separated into pages for ease of distribution to relevant subcommittees. **Please keep the pages separated** if possible (though part of the same electronic file), **with the headers as they appear**, and be sure to include your unit, contact person (this may change from topic to topic) and date on each page submitted. Don't let formatting concerns slow you down. If you have difficulty with formatting, Nicole C. Ramirez can adjust the document for you. Simply add responses to those questions that apply and forward the document to [nicole.ramirez@norcollege.edu](mailto:nicole.ramirez@norcollege.edu) with a request to format it appropriately.

If you cannot identify in which category your requests belong or if you have complex-funding requests please schedule an appointment with your college's Vice President for Business Services right away. They will assist you with estimating the cost of your requests. For simple requests such as the cost of a staff member, please e-mail your Vice President. It is vital to include cost estimates in your request forms. Each college uses its own prioritization system. Inquiries regarding that process should be directed to your Vice President.

**Norco:            VP Business Services            951-372-7157**

## **Mission**

Norco College serves our students, our community, and its workforce by providing educational opportunities, celebrating diversity, and promoting collaboration. We encourage an inclusive, innovative approach to learning and the creative application of emerging technologies. We provide foundational skills and pathways to transfer, career and technical education, certificates and degrees.

## **Vision**

Norco – creating opportunities to transform our students and community for the dynamic challenges of tomorrow.

# **Educational Master Plan and Strategic Plan Goals and Objectives 2013-2018**

## **Goal 1: Increase Student Achievement and Success**

Objectives:

1. Improve transfer preparedness (completes 60 transferable units with a 2.0 GPA or higher).
2. Improve transfer rate by 10% over 5 years.
3. Increase the percentage of basic skills students who complete the basic skills pipeline by supporting the development of alternatives to traditional basic skills curriculum.
4. Improve persistence rates by 5% over 5 years (fall-spring; fall-fall).
5. Increase completion rate of degrees and certificates over 6 years.
6. Increase success and retention rates.
7. Increase percentage of students who complete 15 units, 30 units, 60 units.
8. Increase the percentage of students who begin addressing basic skills needs in their first year.
9. Decrease the success gap of students in online courses as compared to face-to-face instruction.
10. Increase course completion, certificate and degree completion, and transfer rates of underrepresented students.

## **Goal 2: Improve the Quality of Student Life**

Objectives:

1. Increase student engagement (faculty and student interaction, active learning, student effort, support for learners).
2. Increase frequency of student participation in co-curricular activities.
3. Increase student satisfaction and importance ratings for student support services.
4. Increase the percentage of students who consider the college environment to be inclusive.
5. Decrease the percentage of students who experience unfair treatment based on diversity-related characteristics.
6. Increase current students' awareness about college resources dedicated to student success.

## **Goal 3: Increase Student Access**

Objectives:

1. Increase percentage of students who declare an educational goal.
2. Increase percentage of new students who develop an educational plan.
3. Increase percentage of continuing students who develop an educational plan.
4. Ensure the distribution of our student population is reflective of the communities we serve.
5. Reduce scheduling conflicts that negatively impact student completion of degrees and programs.

## **Goal 4: Create Effective Community Partnerships**

Objectives:

1. Increase the number of students who participate in summer bridge programs or boot camps.
2. Increase the number of industry partners who participate in industry advisory council activities.
3. Increase the number of dollars available through scholarships for Norco College students.
4. Increase institutional awareness of partnerships, internships, and job opportunities established with business and industry.
5. Continue the success of Kennedy Partnership (percent of students 2.5 GPA+, number of students in co-curricular activities, number of students who are able to access courses; number of college units taken).
6. Increase community partnerships.

7. Increase institutional awareness of community partnerships.
8. Increase external funding sources which support college programs and initiatives.

### **Goal 5: Strengthen Student Learning**

Objectives:

1. 100% of units (disciplines, Student Support Service areas, administrative units) will conduct systematic program reviews.
2. Increase the percentage of student learning and service area outcomes assessments that utilize authentic methods.
3. Increase the percentage of programs that conduct program level outcomes assessment that closes the loop.
4. Increase assessment of student learning in online courses to ensure that it is consistent with student learning in face-to-face courses.
5. Increase the number of faculty development workshops focusing on pedagogy each academic year.

### **Goal 6: Demonstrate Effective Planning Processes**

Objectives:

1. Increase the use of data to enhance effective enrollment management strategies.
2. Systematically assess the effectiveness of strategic planning committees and councils.
3. Ensure that resource allocation is tied to planning.
4. Institutionalize the current Technology Plan.
5. Revise the Facilities Master Plan.

### **Goal 7: Strengthen Our Commitment To Our Employees**

Objectives:

1. Provide professional development activities for all employees.
2. Increase the percentage of employees who consider the college environment to be inclusive.
3. Decrease the percentage of employees who experience unfair treatment based on diversity-related characteristics.
4. Increase participation in events and celebrations related to inclusiveness.
5. Implement programs that support the safety, health, and wellness of our college community.

# I. Norco College Comprehensive Instructional Program Review Update

Unit: CIS/CSC/CAT \_\_\_\_\_  
 Contact Person: \_Cathy Brotherton \_\_\_\_\_  
 Date: \_4/4/16 \_\_\_\_\_

## Trends and Relevant Data

### 1. Have there been any changes in the status of your unit in the last four years? What are the anticipated changes for the next four years?

Question:	Prior Four Years	Next Four Years
Has your unit shifted departments?	CIS/CSC has been part of the Business, Engineering and Information Technology (BEIT) department during this time.	CIS/CSC will continue to be a part of BEIT.
Have any new certificates programs been created by your unit? For example, did your unit develop an <a href="#">ADT</a> ? If not, discuss if you are in process or have future plans to do so.	We have a new ADT in Information Technology and Computer Science. An ADT in Graphic Design is in the final stages of being reviewed. Mobile Applications Development program was created to fill the growing demand for web-apps on mobile devices. We discontinued two programs, Computer Applications and Web Master.	We do not anticipate developing any new programs in the next four years, We are open to new and/or modified programs as needs are identified.
Have you made any substantial modifications to certificates/degrees (e.g. unit requirement changes, inclusion of an industry certificate, etc.). If not, discuss if you are in process or have future plans to do so.	Graphic Design certificate is a major modification from Desktop Publishing which is the old title. This program is also new since our last comprehensive program review.	We will continue to work with Industry partners to make sure our course and program offerings are in line with industry needs.
Have activities in other units impacted your unit? For example, a new Multimedia grant could cause greater demand for Art courses or a	The Graphic Design ADT may require us to make some adjustments to the program with the same title.	As enrollment grows college-wide, it is anticipated that classroom and lab space for course offerings will be impacted.

new [ADT](#) may require resources such as supplemental courses for another unit's [ADT](#).

During the past two years Norco College has offered Lynda.com to our students and faculty and staff. The Technology committee worked hard to provide this tool. It is used in classrooms and as a lab activity. Students have access to online tutorials that enhance their college experience. The site is exceptional at teaching technical skills and technique, such as software for video editing, photography, programming, and even animation.

The LRC lab has undergone multiple changes in delivery and hours of operation during the past 4 years. In spring 2015 all of the CIS/CSC and GAM courses with TBA labs transitioned from weekly lab hours flexibly scheduled at a time chosen by the student on a week-to-week basis, to scheduled hours with the faculty for their course.

The new structure has the assurance of quality instruction and consistent delivery. But students have expressed a preference for a more flexible schedule. All of the courses in our 3 disciplines have a strong need for outside-of-class activities to facilitate their learning, and the GAM discipline in particular should have some form of faculty mentorship to help prepare students to work in the industry.

Students also expressed a strong preference for having faculty support in the tutorial area

	<p>of the LRC, to provide opportunities to meet with specialized part time faculty who not have office hours on campus. In response to student requests we increased the number of computers available in the tutorial section of the LRC, which were available on a drop-in basis. We now have a new CIS/GAM “express” tutor available for students to walk in and get on-the-spot assistance for the computer and gaming course needs.</p> <p>As the LRC lab completes its transition in fall 2015, CIS sections with a lab component will have the 18 hours of lab built into the scheduled hours of instruction, with the lecture instructor, either in the classroom or the LRC.</p>	
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**2. List your retention and success rates as well as your efficiency for the previous four years. Please include Distance Education, retention, success and efficiency separately. Discuss any changes or significant trends in the data.**

During the past four years our college has seen a rise and fall in enrollment. Some of the changes were due to budget cuts and limits to course offerings. Recent changes appear to be a post-recession drop in enrollment because of the improved job market. Students continue to take courses for skill improvement, not necessarily desiring a certificate or degree. Some of them stay for more courses and others leave after they finish the one course. We need to do a better job of promoting our programs and associate for transfer degrees, which there will soon be 2 for our students to choose from. We strive to offer programs that lead to high demand careers with better-than-average pay along with transfer opportunities for students.

Retention, success and efficiency are all important to us. We continue to offer quality courses and programs for our students. Both retention and success are steady around 80%. We do see a decrease in retention from the 2011-2012 school years, where it was 84%. Yet we see the success rate stay pretty steady around 68%. Many of our CIS/CSC/CAT courses are articulated to the local 4-year colleges. We strive to offer sound pedagogy and have high standards in our course materials. We are concerned, though and hope to improve both the retention and success rates.

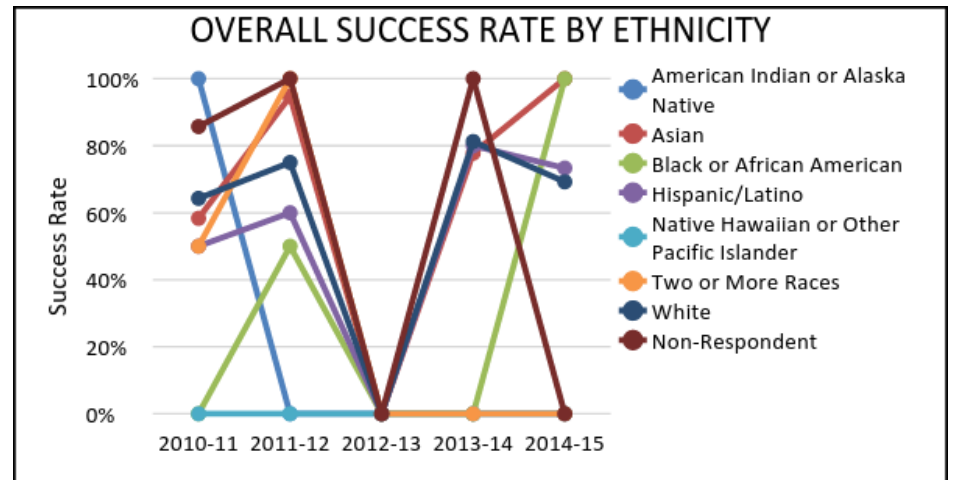
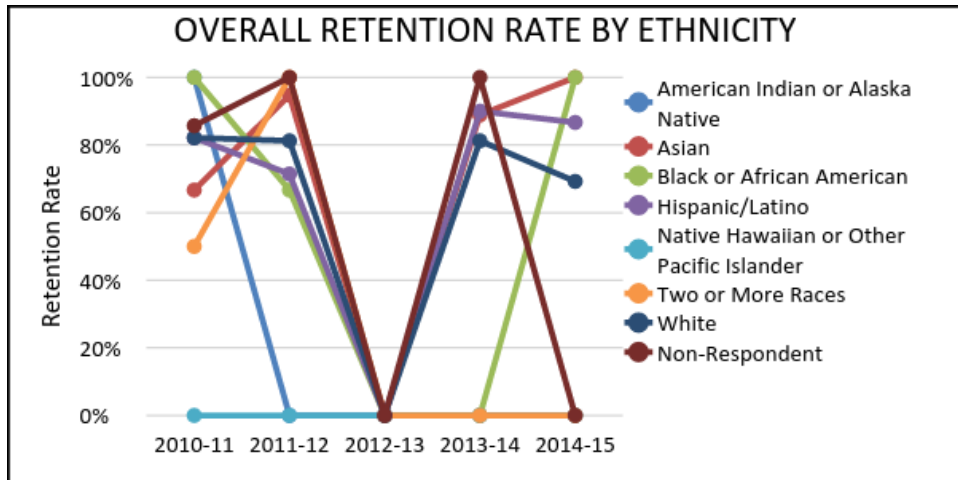


When we look closely at the statistics provided that show ethnicity, age and gender, we find some patterns emerging. Age doesn't seem to be a strong determinant of success and neither is gender but the student's race has strong implications. We need to begin a dialog and formulate a course of action to improve the scores, especially for those that fall into lower percentages. We did notice, though, that the gap in both success and retention is less in recent years than it was in the 2010-11 years, even though our overall ratings have declined.

CIS	OVERALL	2010-11	2010-11	2011-12	2011-12	2012-13	2012-13	2013-14	2013-14	2014-15	2014-15
		Success	Retention	Success	Retention	Success	Retention	Success	Retention	Success	Retention
	<b>Total</b>	68.1%	84.6%	69.1%	84.0%	67.2%	80.9%	66.7%	81.1%	67.7%	79.2%
<b>ETHNICITY</b>	American Indian or Alaska Native	64.3%	71.4%	85.7%	85.7%	85.7%	85.7%	37.5%	62.5%	22.2%	77.8%
	Asian	68.7%	83.1%	69.8%	87.5%	71.3%	81.3%	80.8%	88.0%	74.7%	82.4%
	Black or African American	47.2%	73.2%	54.9%	74.3%	55.0%	66.0%	54.0%	68.1%	63.2%	74.5%
	Hispanic/Latino	65.1%	82.9%	66.2%	83.4%	60.6%	77.4%	63.6%	80.0%	64.3%	75.5%
	Native Hawaiian or Other Pacific Islander	20.0%	100.0%	100.0%	100.0%	40.0%	40.0%	33.3%	66.7%	50.0%	50.0%
	Two or More Races	69.1%	83.6%	63.2%	81.6%	67.2%	82.1%	64.8%	81.5%	73.8%	86.9%
	White	75.3%	88.6%	74.1%	85.1%	74.8%	87.3%	71.7%	84.9%	72.0%	84.1%
	Non-Respondent	64.8%	86.1%	76.9%	87.7%	78.6%	88.1%	36.8%	57.9%	61.1%	72.2%
<b>AGE</b>	19 or less	66.6%	85.6%	64.0%	84.0%	67.4%	82.6%	64.2%	82.9%	71.4%	85.4%
	20 to 24	69.6%	85.9%	71.6%	85.7%	66.9%	79.8%	65.5%	81.2%	67.9%	80.1%

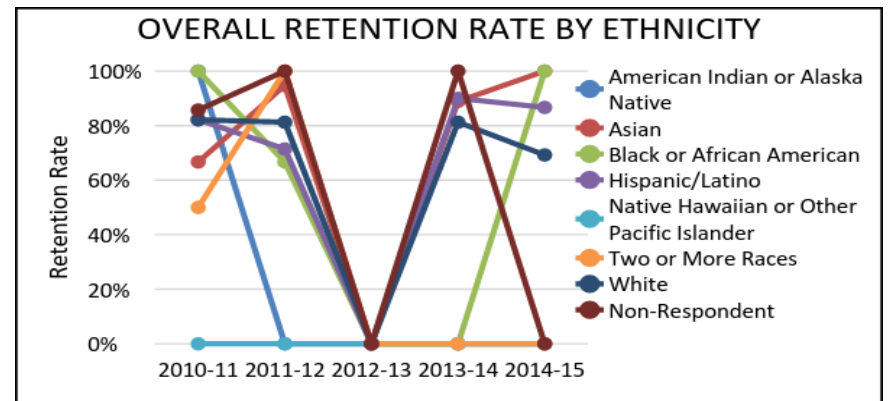
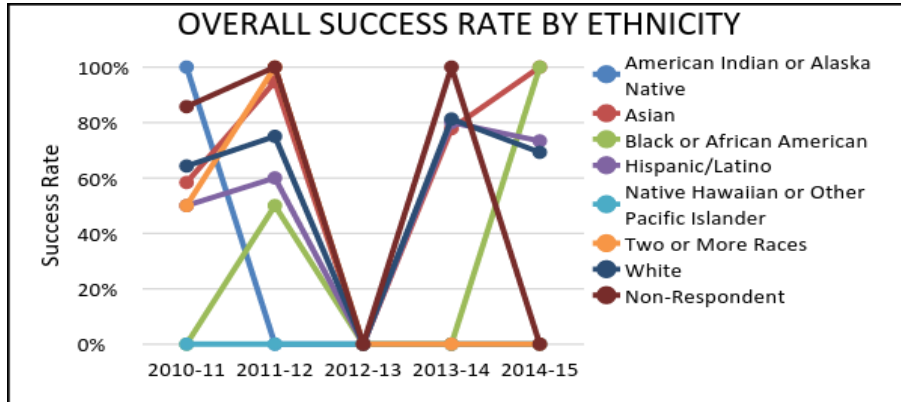
	25 to 29	74.2%	87.8%	71.7%	82.0%	67.1%	81.4%	67.3%	78.0%	64.1%	73.0%
	30 to 34	65.3%	77.7%	63.6%	85.0%	65.4%	84.1%	68.8%	80.4%	66.9%	74.4%
	35 to 39	64.0%	83.7%	68.6%	84.3%	69.1%	88.9%	75.5%	85.7%	66.7%	75.4%
	40 to 49	69.1%	75.7%	71.6%	78.4%	70.3%	79.3%	76.5%	82.4%	67.1%	74.7%
	50+	52.5%	80.3%	75.0%	80.4%	65.2%	71.2%	64.9%	73.0%	59.5%	76.2%
<b>GENDER</b>	Female	70.0%	84.6%	70.9%	82.1%	71.4%	83.1%	68.4%	79.2%	67.8%	76.7%
	Male	67.0%	84.7%	68.2%	85.1%	64.4%	79.5%	65.5%	81.9%	67.7%	80.4%
	Non-Respondent	70.0%	80.0%	63.6%	81.8%	80.0%	80.0%	100.0%	100.0%	71.4%	85.7%

## CIS



CSC	OVERALL	2010-11	2010-11	2011-12	2011-12	2012-13	2012-13	2013-14	2013-14	2014-15	2014-15
		Success	Retention	Success	Retention	Success	Retention	Success	Retention	Success	Retention
	<b>Total</b>	59.5%	79.7%	72.9%	80.2%	0.0%	0.0%	79.5%	84.6%	76.5%	82.4%
ETHNICITY	American Indian or Alaska Native	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Asian	58.3%	66.7%	94.7%	94.7%	0.0%	0.0%	77.8%	88.9%	100.0%	100.0%
	Black or African American	0.0%	100.0%	50.0%	66.7%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Hispanic/Latino	50.0%	82.1%	60.0%	71.4%	0.0%	0.0%	80.0%	90.0%	73.3%	86.7%
	Native Hawaiian or Other Pacific Islander	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Two or More Races	50.0%	50.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	White	64.3%	82.1%	75.0%	81.3%	0.0%	0.0%	81.3%	81.3%	69.2%	69.2%
	Non-Respondent	85.7%	85.7%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%

CSC



Most of our courses are offered face-to-face. We have made a conscious decision to offer only a few CIS courses in an online format. Some task-based subjects lend well to the online and hybrid format. We feel that our success and retention are related to good instruction, pedagogical-based assignments and faculty interaction with our students. Now all of our courses with labs attached are taught right after the class with the same instructor. We feel this is important for building and mastering skills, completed with the guidance of the lecture instructor. We believe this will improve both success and retention rates in the programming and detailed skill development courses.

When we compare success and retention in the course offering type, face-to-face students do better than those in online courses. We offer only a couple of hybrid courses and there is not enough data to accurately measure this. The spreadsheet below shows that when we split the face-to-face offered courses from the online courses, both retention and success improve. We are not offering CSC courses in either hybrid or online format so this data shown below is for CIS courses only.

Our face-to-face courses show a retention rate of 81.5% compared to 79.2% overall. This is not a huge difference although for success, the overall percentage is 67.7% compared to those taking face-to-face showing a success rate of 70%. Students like to think that they can take anything online. Many take courses in high school relating to computers and many have self-taught themselves things related to computers. These factors all tie into a high number of students enrolling in online courses both in CIS and in other disciplines. But scores for all online courses show –

1. Success for face-to-face 69%.6 versus 63.7 for online
2. Retention for face-to-face 86.0 versus 83.7 for online

Classes that are taught in a hybrid format overall had a similar drop in success, but good retention similar to face-to-face classes. All of the scores indicate that we need to work on improving retention and success. The data we now are collecting both in course and program assessment will be of great value as we tackle this important endeavor.

	Face-to-face	2010-11	2010-11	2011-12	2011-12	2012-13	2012-13	2013-14	2013-14	2014-15	2014-15
		Success	Retention	Success	Retention	Success	Retention	Success	Retention	Success	Retention
	<b>Total</b>	69.0%	86.0%	69.1%	84.8%	68.7%	83.9%	68.6%	83.9%	70.0%	81.5%
<b>ETHNICITY</b>	American Indian or Alaska Native	60.0%	70.0%	100.0%	100.0%	80.0%	80.0%	40.0%	80.0%	25.0%	100.0%
	Asian	65.1%	80.9%	69.0%	87.1%	71.6%	81.6%	80.4%	87.4%	76.1%	85.8%

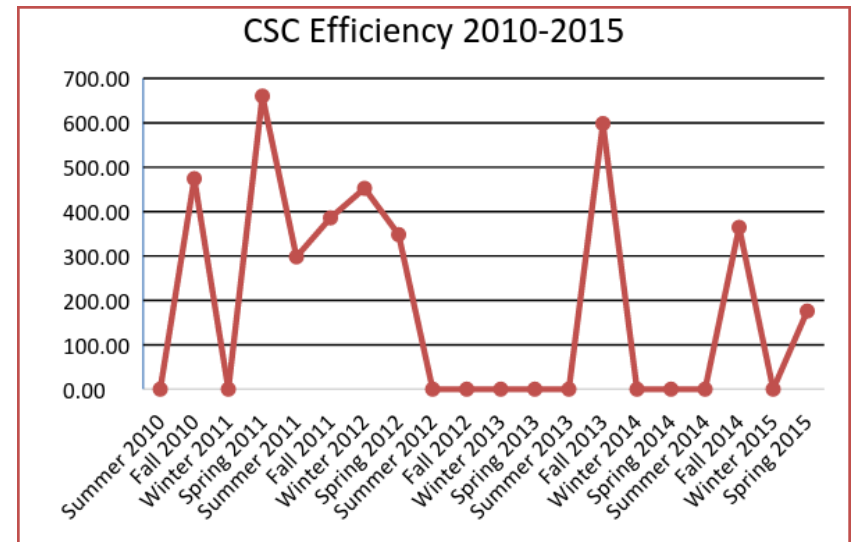
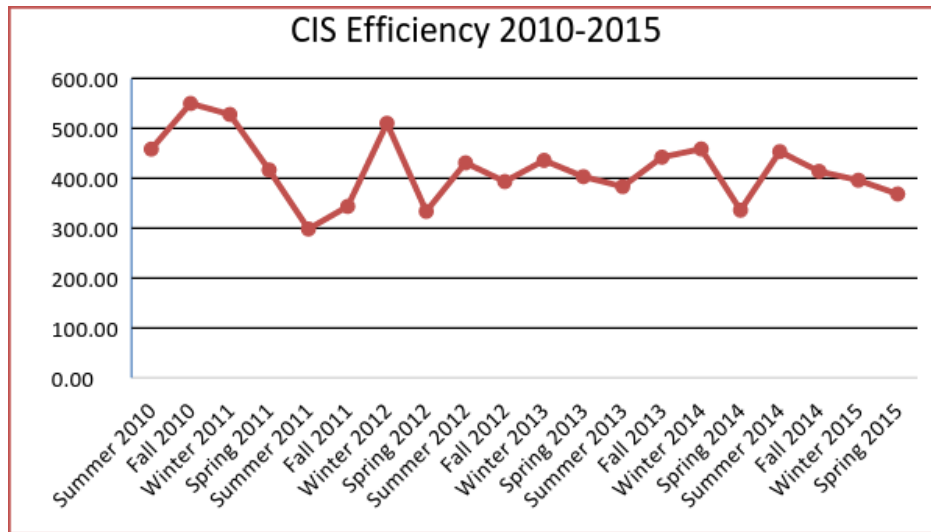
	Black or African American	53.8%	80.2%	59.0%	80.8%	57.4%	65.6%	65.6%	82.8%	67.2%	76.6%
	Hispanic/Latino	64.8%	83.4%	65.6%	83.0%	63.1%	79.0%	64.9%	82.2%	67.3%	79.3%
	Native Hawaiian or Other Pacific Islander	25.0%	100.0%	100.0%	100.0%	50.0%	50.0%	33.3%	66.7%	50.0%	50.0%
	Two or More Races	73.7%	84.2%	62.9%	80.0%	71.7%	88.7%	73.7%	86.8%	75.0%	88.6%
	White	76.9%	90.5%	73.6%	85.8%	74.9%	87.0%	71.2%	86.1%	72.8%	83.6%
	Non-Respondent	65.6%	87.1%	81.6%	93.9%	74.2%	83.9%	37.5%	62.5%	53.8%	69.2%
<b>AGE</b>	19 or less	67.9%	86.4%	63.5%	84.4%	67.4%	84.5%	64.2%	84.3%	73.0%	86.7%
	20 to 24	69.1%	86.6%	71.9%	86.5%	67.8%	80.4%	68.2%	83.9%	69.7%	81.1%
	25 to 29	73.8%	88.4%	69.8%	79.9%	72.2%	81.3%	68.7%	80.6%	68.0%	77.6%
	30 to 34	68.4%	77.6%	62.3%	87.0%	70.3%	90.6%	72.1%	83.8%	68.9%	78.4%
	35 to 39	67.2%	86.2%	70.8%	83.3%	75.0%	90.9%	90.0%	90.0%	65.6%	75.0%
	40 to 49	77.4%	82.8%	75.4%	83.1%	71.0%	79.0%	88.9%	91.7%	71.1%	76.3%
	50+	52.2%	82.6%	80.0%	84.4%	61.4%	68.2%	66.7%	79.2%	55.0%	75.0%
<b>GENDER</b>	Female	71.6%	87.4%	71.0%	82.3%	75.9%	84.4%	75.1%	83.7%	70.4%	77.4%
	Male	67.7%	85.3%	68.3%	85.7%	65.7%	80.8%	66.3%	83.8%	69.9%	82.9%
	Non-Respondent	77.8%	88.9%	75.0%	100.0%	75.0%	75.0%	100.0%	100.0%	66.7%	83.3%

	<b>ONLINE</b>	<b>2010-11</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2014-15</b>
		<b>Success</b>	<b>Retention</b>	<b>Success</b>	<b>Retention</b>	<b>Success</b>	<b>Retention</b>	<b>Success</b>	<b>Retention</b>	<b>Success</b>	<b>Retention</b>
	<b>Total</b>	65.8%	78.8%	69.8%	81.4%	63.3%	73.4%	60.5%	73.4%	63.5%	75.1%
<b>ETHNICITY</b>	American Indian or Alaska Native	75.0%	75.0%	0.0%	0.0%	100.0%	100.0%	33.3%	33.3%	20.0%	60.0%
	Asian	83.3%	91.7%	75.0%	90.0%	69.0%	79.3%	80.0%	90.0%	69.4%	69.4%
	Black or African American	28.1%	53.1%	50.0%	64.3%	51.3%	66.7%	39.6%	50.0%	57.1%	71.4%
	Hispanic/Latino	67.4%	80.0%	68.6%	85.7%	54.9%	73.9%	58.4%	73.9%	59.0%	69.3%
	Native Hawaiian or Other Pacific Islander	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Two or More Races	64.3%	85.7%	66.7%	100.0%	50.0%	57.1%	43.8%	68.8%	70.6%	82.4%
	White	68.4%	78.9%	74.8%	81.3%	75.3%	89.0%	71.9%	81.8%	70.6%	86.0%
	Non-Respondent	69.2%	84.6%	69.2%	69.2%	90.0%	100.0%	33.3%	33.3%	80.0%	80.0%
<b>AGE</b>	19 or less	60.0%	78.2%	67.7%	80.6%	67.4%	74.4%	62.5%	75.0%	65.1%	81.0%
	20 to 24	73.0%	83.9%	70.0%	80.9%	64.7%	78.8%	53.4%	70.7%	65.1%	80.3%
	25 to 29	75.9%	86.2%	78.0%	88.1%	56.1%	81.8%	63.0%	72.6%	57.5%	65.5%
	30 to 34	61.5%	74.4%	67.9%	82.1%	57.1%	73.8%	62.5%	75.0%	64.9%	70.2%
	35 to 39	54.2%	75.0%	63.6%	86.4%	62.2%	86.5%	65.5%	82.8%	68.0%	76.0%

	40 to 49	48.8%	58.5%	65.7%	71.4%	68.1%	78.7%	66.0%	74.5%	63.4%	73.2%
	50+	57.1%	78.6%	60.0%	70.0%	70.0%	75.0%	63.6%	63.6%	61.9%	76.2%
<b>GENDER</b>	Female	67.1%	77.9%	70.3%	81.9%	65.9%	81.4%	60.2%	74.0%	65.3%	76.6%
	Male	64.1%	80.7%	69.4%	81.1%	58.5%	74.2%	60.4%	71.9%	61.2%	73.3%
	Non-Respondent	0.0%	0.0%	50.0%	50.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Our efficiency rates for both CIS and CSC vary a great deal from term to term. In our discipline, there are a good many sections that we cross-list. We may cross-list a course one term and not do so another. This introduces an anomaly in the statistics related to efficiency because the cross-listing of a section causes the data to appear as if both cross-listed sections are low-enrolled, when in fact the one section we are offering has an adequate number of students enrolled. Until the district develops a system to account for this cross-listing effect, we expect that we will continue to see this up and down pattern in our efficiency data. Another factor unique to our discipline is that some years ago, the way in which efficiency was calculated changed and this impacted our data dramatically. Originally the efficiency ratio was calculated using the lecture portion of a course only; later on, the lab portion was also incorporated into the formula and this impacted our efficiency data.

As a department we discuss and implement mechanisms to improve efficiency. We do our best to offer courses for our programs in a 2 year rotation pattern so that students can move through expeditiously and transition into their careers. Careful evaluation of each program may provide some ways to increase efficiency in the near future. We will look at other factors that play a part in efficiency to see what can be done to improve it.



**3. Include program-specific data and discuss any changes or significant trends in the data. Include the number of graduates in the discipline/program/certificate, as well as the number of students who have declared the program(s) of study, that your unit supports. Discuss any changes or significant trends in the data.**

Our department first offered the AS-T in Computer Science in 2013 and we are pleasantly surprised that in less than two academic years (2014-15), we have one student who has completed the degree offering. For our AS offerings, over a three year period, we have 31 completers: 12 for Computer Programming, 1 for Desktop Publishing, 11 for Multimedia and 7 for Software Applications. For those certificates approved by the Chancellor’s Office, we have 23 completers over the three-year period and for locally approved certificates, we have 26. Although we would certainly have as a goal that of increasing these numbers, we recognize that many students take individual courses to improve their skills for the job that they already have and others complete certificates and/or degrees, but do not request the awards due to the fact that their primary objective is to transfer to a four-year university.



NORCO COLLEGE CIS and CSC AWARDS		2012-13	2013-14	2014-15	Total
Associate in Science for Transfer (A.S.-T) Degree Total				<b>1</b>	<b>1</b>
	Computer Science (Transfer)-070600			1	1
Associate of Science (A.S.) degree Total		<b>13</b>	<b>3</b>	<b>15</b>	<b>31</b>
	Computer Programming-070710	4	1	7	12
	Desktop Publishing-061450		1		1
	Multimedia-061410	6		5	11
	Software Applications-070210	3	1	3	7
Certificate requiring 30 to < 60 semester units Total		<b>6</b>	<b>4</b>	<b>4</b>	<b>14</b>
	Computer Programming-070710			2	2
	Multimedia-061410	4	3	1	8
	Software Applications-070210	2	1	1	4
Certificate requiring 18 to < 30 semester units Total		<b>1</b>	<b>4</b>	<b>4</b>	<b>9</b>
	Computer Programming-070710	1	1	3	5
	Desktop Publishing-061450		3	1	4
Certificate requiring 6 to < 18 semester units Total		<b>15</b>	<b>5</b>	<b>6</b>	<b>26</b>
	Computer Programming-070710	11	2	4	17
	Information Technology, General- 070100	1			1
	Other Information Technology- 079900	3	3		6
	World Wide Web Administration- 070900			2	2

We feel there has been students who have transferred who are not represented here. Students selecting their program of study is fairly new. This recording doesn't always show students who take some courses here and then transfer. They then transfer to a 4 year college but they never declared their program of study at Norco College.

	Frequency	Percent
Computer Information Systems: C++ Programming	35	0.3%
Computer Information Systems: Computer Applications	99	0.8%
Computer Information Systems: Computer Programming	254	2.1%
Computer Information Systems: Desktop Publishing	12	0.1%
Computer Information Systems: Java Programming	5	0%
Computer Information Systems: Mobile Application Development	5	0%
Computer Information Systems: Simulation and Gaming	16	0.1%
Computer Science IGETC	96	0.8%
Total	522	4.20%

**4. In the table below, state your goals from your previous comprehensive unit reviews. List the most important first.**

State your goals from your previous comprehensive unit reviews	List activity(s) linked to the goal	Indicate progress made towards the goal	Discuss relationship of goal to College mission and Strategic Planning Goals/Ed Master Plan
AS-T degrees	We continue to modify our curriculum to match the courses approved at the 4 year colleges that accept our AS-T.	For several of the past years we had a goal to work the approval of AS-T degrees to help our students with clear pathways to local 4 year institutions. Much progress has happened through the work of faculty across the state. We now have 2 AS-T in place for Computer Science and Information Technology. A third is close to being	This is directly related to the mission of “provide foundational skills and pathways to transfer, career and technical education, certificates and degrees.”  It also is tied to goal 1 and 5.

		<p>finalized in Graphic Design.</p> <p>We now have to continue with the C-ID approval in this transfer certificate we will work to align our courses with those in the transfer degree.</p>	
CA Career Pathway Trust	<p>We will work with Kevin Fleming to further the development of the career pathway programs that connect schools, community colleges and businesses. The goal of the CCPT grant is to build robust partnerships between employers, schools, and community colleges in order to better prepare students for the 21st century workplace and improve student transition into postsecondary education, training and employment.</p>		<p>This is tied to the Norco College mission statement where we strive to have “an innovative approach to learning.” It also helps provide a pathway into Norco from a local high school district.</p> <p>It also is tied to goal 1, 4 and 5.</p>
Advertise and attract students for Graphic Design and Mobile Application Development Certificates	<p>Advertising and sharing the program benefits and potential job opportunities are key to attracting students in these programs.</p> <p>Establish CAP cohorts which guarantees students’</p>	<p>We are still struggling to bring in dedicated students to the Mobile Apps program. We have plans to again work with a local high school to develop a cohort group who will attend 2 years of high</p>	<p>Goal 1: Increase Student Achievement and Success</p> <ul style="list-style-type: none"> <li>● Improve transfer preparedness (completes 60 transferable units with a 2.0 GPA or higher).</li> </ul>

	<p>enrollment in classes to complete their 2 year sequence.</p>	<p>school and then transition to Norco College and continue their course work in this program. It is set to begin in fall 2016.</p> <p>Graphic Design is an updated title for our Desktop Publishing program. We have held one on-campus workshop to get the word out to our students about the changes and opportunities of this program.</p>	<ul style="list-style-type: none"> <li>● Improve transfer rate by 10% over 5 years.</li> </ul>
<p>Develop articulation opportunities for additional high schools</p>	<p>Currently five articulation agreements is in place for CIS. We want to increase agreements with other feeder high schools and possibly more courses.</p>	<p>We have established strong contacts between 2 different high school districts and will continue to work with faculty at all these and other schools to find courses that can be articulated with Norco College. Faculty at one, in particular visited our college this spring. They have courses already articulated with us and several more in the process of being reviewed and revised to meet the SLO's of our courses in several disciplines. It is great to see things like this develop that have the end goal of student</p>	<p>Goal 1: Increase Student Achievement and Success</p> <p>Students who can begin their college experience with us already completing our core course CIS1A will be more persistence rates in their achievement of their overall goal.</p>

		success.	
Increase campus and program awareness	<p>Assist in articulation with local campuses.</p> <p>Increase campus and program awareness.</p> <p>Developments of a 2+2+ pathway from high school to Norco College will provide students with a clear path from high school, community college to a 4 year college</p> <p>Marketing materials have been created for all CIS and CSC certificates and programs. These handouts show the certificates patterns and two-year rotation plans for our students.</p> <p>Faculty routinely encourages students to declare a program of study. This along with workshops, guest speakers and industry information will show students the job opportunities and success of those who enter these professions.</p>	<p>As stated in the last goal we continue to work with local high schools in articulation opportunities. Our new Maureen Sinclair is currently working with JFK High School to develop a cohort of students to enroll in our Mobile Apps program. Her role also includes serving as a liaison between our college and high schools where we can build a pathway from the high school to Norco College.</p> <p>Cathy Brotherton is actively working with faculty from Chaffey Unified school district and recently gave two faculty members a tour of Norco College.</p> <p>With the help of Ashley Etchison and Jefferson Tiangco our program flyers are updated as our programs are modified and our CTE website is also updated to promote our programs and course offerings. The flyers show career opportunities,</p>	<p>Goal 3: Increase Student Access</p> <ul style="list-style-type: none"> <li>● Increase percentage of students who declare an educational goal.</li> </ul>

	Participate in college career fair by staffing with knowledgeable faculty and provide pamphlets with details on certificate patterns.	salary information and our 2 year course patterns.  Twice a year Norco College CTE offers a career fair and once a year industry businessmen are invited to see, advise and learn about our programs.	
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**5. Please list the resources that you have received in the last four academic years as a result of program review. How did the resources impact student learning? If you requested resources but did not receive them, how did that impact student learning? If no resource requests were made, please indicate by typing N/A**

- We requested new computers in Atec 118. We were given 33 computers from an over-order for the STEM center. Although the new computers were an improvement over the ones we had, which were 4 years old, they are not powerful enough to run many of the gaming programs and Adobe products used for our discipline.
- We received new chairs and which have been a great benefit to the aged ones we previously had.
- Adobe CC software purchase is now district funded. This software suite is continually updated as needed. With the districts purchase of the site license we are able to teach multiple courses in both the CIS and GAM discipline which require this creative suite of programs.
- Lynda.com subscription, which gives us vast number of training and teaching videos, is now available to all faculty, staff and students at Norco College. We use this training library both as a resource for our faculty and for our students. The yearly subscription is an essential tool and we hope it will continue to be available to us.

We feel we are at a disadvantage each year because our industry demands state-of-the-art equipment and software. We do not have a budget that allows us to stay in tune with the constant changes. We have had to rely on grant funding to help us acquire and maintain technology. We would like to be able to rely on district funding and be able to plan for replacement of software yearly and hardware every 3 years as this industry dictates.

**6. In the table below, please list your long term goals for your unit. How do your goals support the College mission and the goals of the [Educational Master Plan/Strategic Plan](#)? *\*Your unit may need assistance to reach its goals. Financial resources should be listed on the subsequent forms. In addition you may need help from other units or Administrators. Please list that on the appropriate form below, or on the form for “other needs.”***

List the long term goals of your unit for the next four years.	List activity(s) linked to the goal	Anticipated timeline for completion	Discuss relationship of goal to College mission and Strategic Planning Goals/ Ed Master Plan
AS-T degrees	We will look for new ways to promote the 3 AS-T degrees. It is the desire of our college to increase completion rate of degrees and certificates over 6 years and to increase success and retention rates. We will work to align our course offering to help meet this goal.	One year but improvement and new methods will be a continual process.	This is directly related to the mission of “provide foundational skills and pathways to transfer, career and technical education, certificates and degrees.”  It also is tied to goal 1 and 5.
Increase campus and program awareness of our CIS/CS offerings	Marketing efforts to promote and inform high school and the local community of the programs and job opportunities found through training in our programs will be focused on. Ongoing will be outreach and articulation with local high schools.		Our mission statement begins with the statement of “providing educational opportunities”. The opportunities provided through the Career and Technical degrees, specifically in CIS, are avenues that provide career pathways and transfer to 4 year colleges that ultimately lead to in-demand and high paying jobs.

			<p>It is also tied to Goal 3:  Increase Student Access</p> <ul style="list-style-type: none"> <li>● Increase percentage of students who declare an educational goal.</li> </ul>
Develop articulation opportunities for additional high schools	We have already established partnerships with 2 local high school districts. We will work to increase to more of the local high school districts.	Ongoing	<p>Goal 1: Increase Student Achievement and Success</p> <p>Students who can begin their college experience with us already completing our core course CIS1A will be more persistence rates in their achievement of their overall goal.</p>
Increase enrollment in all CIS programs through outreach, marketing and advertising.	Marketing efforts to promote and inform high school and the local community of the programs and job opportunities found through training in our programs will be focused on.		Goal 1: Increase Student Achievement and Success
Technology needs for our courses needs to be operationally funded.	We have had to resort to grant funding for many years to be able to provide our students with the needed computers and software to educate them. We hope to be able to have district funds budgeted for this in the future.		Norco’s mission statement includes the need to “encourage an inclusive, innovative approach to learning and the creative application of emerging technologies.” Current, industry-standard equipment is essential to provide our students with work ready skills



## Course Outlines of Record (COR)

An important part of comprehensive program review is a review of the course outlines of record that are associated with a unit. Please list all of the courses in your unit as listed in the [Norco College Catalog](#) and the date that they were last updated. If they have not been updated in the last four years, you must update them before submitting your program review, e.g., making sure the edition of the textbook is current. Please do not submit the actual COR. Add to the table as needed

DISCIPLINE	COURSE NUMBER	DATE LAST UPDATED	Last Editor (Name)	Was the last update a major or minor modification?
CIS	11	1/22/2013	Mark Lehr	Course Major Modification
CIS	12	1/24/2012	Mark Lehr	Course Major Modification
CIS	14A	1/24/2012	Scott McLeod	Course Major Modification
CIS	14B	1/24/2012	Scott McLeod	Course Major Modification
CIS	16A	1/19/2016	John Coverdale	Course Deletion
CIS	17A	1/22/2013	Mark Lehr	Course Major Modification
CIS	17B	1/24/2012	Mark Lehr	Course Major Modification
CIS	17C	1/24/2012	Mark Lehr	Course Major Modification
CIS	18A	1/24/2012	Mark Lehr	Course Major Modification
CIS	18B	1/24/2012	Mark Lehr	Course Major Modification
CIS	18C	1/24/2012	Mark Lehr	Course Major Modification
CIS	18D	4/19/2011	Paul Herzig	New Course
CIS	1A	1/19/2016	Catherine Brotherton	Course Major Modification
CIS	1B	1/24/2012	Lewis Hall	Course Major Modification
CIS	2	1/24/2012	Shailesh Bhatia	Course Major Modification
CIS	2	1/19/2016	Shailesh Bhatia	Course Major Modification
CIS	24	1/19/2016	James Finley	Course Deletion
CIS	3	6/19/2012	Paul Herzig	Course Major Modification
CIS	37	Pending	Judy Perry	Course Major Modification
CIS	37	4/19/2011	Paul Herzig	Course Major Modification
CIS	38A	4/19/2011	Paul Herzig	Course Major Modification

CIS	38B	4/19/2011	Paul Herzig	Course Major Modification
CIS	38C	6/13/2011	Paul Herzig	Course Major Modification
CIS	39	4/19/2011	Paul Herzig	Course Minor Modification
CIS	43	4/19/2016	Judy Perry	Course Deletion
CIS	44	1/20/2015	Catherine Brotherton	New Course
CIS	5	1/19/2016	Mark Lehr	Course Minor Modification
CIS	50	1/19/2016	James Finley	Course Deletion
CIS	54A	4/17/2012	Scott McLeod	Course Major Modification
CIS	54B	1/24/2012	Scott McLeod	Course Major Modification
CIS	56A	1/22/2013	Scott McLeod	Course Major Modification
CIS	59	1/20/2015	Catherine Brotherton	New Course
CIS	61	1/19/2016	Shailesh Bhatia	Course Major Modification
CIS	63	1/24/2012	Shailesh Bhatia	Course Major Modification
CIS	65	2/17/2011	Paul Herzig	Course Minor Modification
CIS	66	1/22/2013	Judy Perry	New Course
CIS	67	1/22/2013	Judy Perry	New Course
CIS	68	1/22/2013	Judy Perry	New Course
CIS	69	1/22/2013	Judy Perry	New Course
CIS	7	1/22/2013	Mark Lehr	New Course
CIS	72A	4/16/2013	James Cregg	Course Major Modification
CIS	72B	1/24/2012	Scott McLeod	Course Major Modification
CIS	72C	1/24/2012	Scott McLeod	Course Major Modification
CIS	74	1/22/2013	Judy Perry	New Course
CIS	75	4/15/2014	Catherine Brotherton	Course Major Modification
CIS	76A	1/22/2013	Paul Herzig	Course Major Modification
CIS	76B	1/22/2013	Scott McLeod	Course Major Modification
CIS	78A	1/19/2016	Judy Perry	Course Major Modification
CIS	78B	1/24/2012	Catherine Brotherton	Course Major Modification

CIS	79	1/24/2012	Catherine Brotherton	Course Major Modification
CIS	80	4/17/2012	Paul Herzig	Course Major Modification
CIS	81	1/24/2012	Catherine Brotherton	Course Major Modification
CIS	93	4/17/2012	Paul Herzig	Course Major Modification
CIS	95A	4/17/2012	Paul Herzig	Course Major Modification
CIS	98A	4/17/2012	Paul Herzig	Course Major Modification
CIS	98B	4/17/2012	Paul Herzig	Course Major Modification
CSC	11	1/22/2013	Mark Lehr	Course Major Modification
CSC	12	1/24/2012	Mark Lehr	Course Major Modification
CSC	14A	1/24/2012	Paul Herzig	Course Major Modification
CSC	16A	1/19/2016	James Finley	Course Deletion
CSC	17A	1/22/2013	Mark Lehr	Course Major Modification
CSC	17B	1/24/2012	Paul Herzig	Course Major Modification
CSC	17C	1/24/2012	Paul Herzig	Course Major Modification
CSC	18A	1/24/2012	Paul Herzig	Course Major Modification
CSC	18B	1/24/2012	Paul Herzig	Course Major Modification
CSC	18C	1/24/2012	Paul Herzig	Course Major Modification
CSC	18D	4/19/2011	Paul Herzig	New Course
CSC	2	1/19/2016	Shailesh Bhatia	Course Major Modification
CSC	21	1/24/2012	Paul Herzig	Course Major Modification
CSC	5	1/19/2016	Mark Lehr	Course Minor Modification
CSC	52	1/19/2016	James Finley	Course Deletion
CSC	53	1/19/2016	James Finley	Course Deletion
CSC	6	6/15/2010	Paul Herzig	New Course
CSC	61	1/24/2012	Shailesh Bhatia	Course Major Modification
CSC	63	1/24/2012	Paul Herzig	Course Major Modification
CSC	7	1/22/2013	Mark Lehr	New Course

# Norco College Comprehensive Instructional Program Review Update

Unit: \_\_\_\_\_  
 Contact Person: \_\_\_\_\_  
 Date: \_\_\_\_\_

## Current Human Resource Status

7. Complete the Faculty and Staff Employment Grid below. Please list full and part time faculty numbers in separate columns. Please list classified staff who are full and part time separately:

Faculty Employed in the Unit		
Teaching Assignment (e.g. Math, English)	Full-time faculty (give number)	Part-time faculty (give number)
Computer Information System	2	6

Classified Staff Employed in the Unit		
Staff Title	Full-time staff (give number)	Part-time staff (give number)
IDS	Shared position	

Unit Name: \_\_\_\_\_

## Long Term Resource Planning

This section should be completed with your long term goals in mind. However, as you will not be filing an annual program review this academic year, you may need to include some of your short-term resource requests as well.

### 8. Staff Needs

List Staff Positions Needed Please justify and explain each faculty request as they pertain to the goals listed in item #6. Place titles on list in order (rank) or importance. Please state if the request impacts Distance Education.	Indicate (N) = New or (R) = Replacement	Number of years request has been made	Annual TCP*	EMP Goals	Short Term Goal (S) Long Term Goal (L)
<p><b>1. Employment Placement Coordinator</b>  <b>Justification:</b> Our current Employment Placement Coordinator has been categorically funded by a variety of grants for 4 years. New guidance from the CCCCO will not permit the college to fund this position any longer from Federal Carl D. Perkins funds. All existing funding is going away. The college must provide resources to make progress on our Strategic Goal 4.2 (Increase the number of industry partners who participate in industry advisory council activities) and Strategic Goal 4.4 (Increase institutional awareness of partnerships, internships, and job opportunities established with business and industry). All students can benefit from relevant work experience and connections to their future industry/career. Without fiscal support, the college will have no one dedicated to these strategic goals after July 1, 2016.</p>	R	1	\$84,547	1, 4, 5	S
<p><b>2.</b>  <u>Justification</u></p>					

\* TCP = "Total Cost of Position" for one year is the cost of an average salary plus benefits for an individual. New positions (not replacement positions) also require space and equipment. Please speak with your college Business Officer to obtain accurate cost estimates. Please be sure to add related office space, equipment and other needs for new positions to the appropriate form and mention the link to the position. Please complete this form for "New" Classified Staff only. All replacement staff must be filled per Article I, Section C of the California School Employees Association (CSEA) contract. Requests for staff and administrators will be sent to the [Business and Facilities Planning Council](#). Requests for faculty will be sent to the [Academic Planning Council](#).

*Unit Name:* \_\_\_\_\_

## 9. Equipment (including technology) Not Covered by Current Budget<sup>1</sup>

<b>List Equipment or Equipment Repair Needed.</b> Please list/summarize the needs of your unit on your college below. Please be as specific and as brief as possible. Place items on list in order (rank) or importance. Please state if the request impacts Distance Education.	*Indicate whether Equipment is for (I) = Instructional or (N) = Non-Instructional purposes	Annual TCO*			
		Cost per item	Number Requested	Total Cost of Request	EMP Goals
<p><b>1. LRC lab computer replacement</b></p> <p><b>Justification</b> Our CIS classrooms and labs require up-to-date equipment and programs to provide students with industry standard hardware and software. Computer Information Systems is a dynamic industry with ever changing skills and abilities. Continual software changes to meet the industry-standards are fundamental to providing our students with employable skills.</p> <p>Built into each CIS course is a lab component. This requirement is essential for the life-long learners we are preparing and for the important skill development in their field of study. We continue to employ industry-standards as fundamental to providing our students with employable skills.</p>	I	\$3,000	33	\$99,000	Goal 1
<p><b>2. Atec 118 33 computer replacement</b></p> <p><b>Justification</b> Our CIS classrooms and labs require up-to-date equipment and programs to provide students with industry standard hardware and software. Computer Information Systems is a dynamic industry with ever changing skills and abilities. Continual software changes to meet the industry-standards are fundamental to providing our students with employable skills.</p>	I	\$3,000	33	\$99,000	Goal 1

\* Instructional Equipment is defined as equipment purchased for instructional activities involving presentation and/or hands-on experience to enhance student learning and skills development (i.e. desk for student or faculty use).

Non-Instructional Equipment is defined as tangible district property of a more or less permanent nature that cannot be easily lost, stolen or destroyed; but which replaces, modernizes, or expands an existing instructional program. Furniture and computer software, which is an integral and necessary component for the use of other specific instructional equipment, may be included (i.e. desk for office staff).

\*\* These requests are sent to the [Business and Facilities Planning Council](#).

Unit Name: \_\_\_\_\_

<sup>1</sup> If your SLO assessment results make clear that particular resources are needed to more effectively serve students please be sure to note that in the “reason” section of this form.

## 9. Professional or Organizational Development Needs Not Covered by Current Budget\*<sup>2</sup>

<p style="text-align: center;"><b>List Professional Development Needs.</b></p> <p>Reasons might include in response to assessment findings or the need to update skills to comply with state, federal, professional organization requirements or the need to update skills/competencies. Please be as specific and as brief as possible. Some items may not have a cost per se, but reflect the need to spend current staff time differently. Place items on list in order (rank) or importance. Examples include local college workshops, state/national conferences. Please state if the request impacts Distance Education.</p>	<b>Annual TCO*</b>			
	<b>Cost per item</b>	<b>Number Requested</b>	<b>Total Cost of Request</b>	<b>EMP Goals</b>
<p><b>1. Attendance at Adobe Max conference</b></p> <p><u>Justification</u> Professional development is essential in this fast-changing field of information processing. Attendance by faculty at industry-specific conferences allow us to stay current in this discipline.</p> <p>Adobe MAX conference exposes us to industry professionals where we are able to spend four days learning about the latest inspirations, technologies, techniques, and strategies for delivering your best creative work. This venue also provides that ability to connect with over 5,000 of the most creative minds in the world.</p>	\$3,000	1	\$3,000	Goal 1
<p><b>2. Attendance at Game Developers Conference</b></p> <p><u>Justification</u> Professional development is essential in this fast-changing field of information processing. Attendance by faculty at industry-specific conferences allow us to stay current in this discipline. GDC is the premier conference for programmers involved in the game industry. Workshops and seminars that the faculty attend are important in the CIS/CSC field. We are able to make new contacts, renew contacts, and update our own skills to ensure that our teaching is relevant and current. CIS/CSC and Gaming all have a common core of programming language classes that are addressed at this conference.</p>	\$3,000	1	\$3,000	Goal 1

\*It is recommended that you speak with the Faculty Development Coordinator to see if your request can be met with current budget.

\*\* These requests are sent to the [Professional Development Committee](#) for review.

<sup>2</sup> If your SLO assessment results make clear that particular resources are needed to more effectively serve students please be sure to note that in the “reason” section of this form.

**10. Student Support Services, Library, and Learning Resource Center** (see definition below\*) Services needed by your unit over and above what is currently provided by student services at your college. Requests for Books, Periodicals, DVDs, and Databases must include specific titles/authors/ISBNs when applicable. Do not include textbook requests. These needs will be communicated to Student Services at your college<sup>3</sup>

<p align="center"><b>List Student Support Services Needs</b></p> <p align="center">Please list/summarize the needs of your unit on your college below. Please be as specific and as brief as possible. Not all needs will have a cost, but may require a reallocation of current staff time.</p>	<p align="center"><b>EMP GOALS</b></p>	<p align="center"><b>Distance Education</b></p>
<p>1. CAT Tutors for lecture classrooms  <u>Justification</u> In spring 2016 individual tutoring was replaced with “express tutoring” which allows students to drop in without an appointment and received help with homework and course material for CIS and CSC courses. This is a wonderful idea that will make it easy for students to get one-on-one help quickly.</p> <p>Although many students expressed a desire to have individualized scheduled tutoring. Feedback from students that individual tutoring sessions in the past have been very valuable and have contributed to their success. We feel that money for students who work with the faculty and students in their classroom and scheduled tutoring appointments is critical to improve student success in our discipline.</p>	<p align="center">Goal 1</p>	
<p>2.  <u>Justification</u></p>		
<p>3.  <u>Justification</u></p>		
<p>4.  <u>Justification</u></p>		

\*Student Support Services include for example: tutoring, counseling, international students, EOPS, job placement, admissions and records, student assessment (placement), health services, student activities, college safety and police, food services, student financial aid, and matriculation.

\*\* These requests are sent to the [Student Services Planning Council](#) and the [Library Advisory Committee](#).

*Unit Name:* \_\_\_\_\_

<sup>3</sup> If your SLO assessment results make clear that particular resources are needed to more effectively serve students please be sure to note that in the “reason” section of this form.



**11. OTHER NEEDS AND LONG TERM SAFETY CONCERNS not covered by current budget<sup>4</sup>**

**\*\* For immediate hazards, contact your supervisor \*\***

<p align="center"><b>List Other Needs that do not fit elsewhere.</b></p> <p>Please be as specific and as brief as possible. Not all needs will have a cost, but may require a reallocation of current staff time. Place items on list in order (rank) or importance. Please state if the request impacts Distance Education.</p>	Annual TCO*			
	Cost per item	Number Requested	Total Cost of Request	EMP Goals
<p><b>1. IT 208 – replace or move electrical outlets</b> placed next to student feet, kicked out which causes loss of data but also students climb under to plug in again which causes a safety hazard.  <b>Justification</b> Classrooms with computers continue to be a safety hazard due to cables that protrude next to computers where there is a space that looks like a walkway.</p>	unknown			
<p><b>3. IT 125 - replace or move metal plate</b> for electrical on floor in middle of aisle, causing tripping hazard.  <b>Justification</b> Classrooms with computers continue to be a safety hazard due to cables that protrude next to computers where there is a space that looks like a walkway.</p>	unknown			
<p><b>4.</b>  <u>Justification</u></p>				
<p><b>5.</b>  <u>Justification</u></p>				

These requests are sent to the [Business and Facilities Planning Council](#), but are not ranked. They are further reviewed as funding becomes available.

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<sup>4</sup> If your SLO assessment results make clear that particular resources are needed to more effectively serve students please be sure to note that in the “reason” section of this form.

# Norco College – Program Review Committee

Spring 2015

## Rubric for Comprehensive Instructional Program Review - Part I only

Discipline:

Contact Person:

Reviewer:

Average Score:

Area of Assessment	0 No attempt	1 some attempt	2 good attempt	3 outstanding attempt
<b>1. Trends and status change, prior and next four years identified</b>	Trends and status change section is blank	Only prior or next four years completed, not both		Prior and next four years section completed with clear information in both, or identified as N/A
<b>2. Retention, success, and efficiency rates have been identified and reflected upon</b>	No identification or discussion of retention, success, or efficiency data	Limited identification or discussion of retention, success, and efficiency data	Clear identification and discussion of retention, success, and efficiency data	Substantial identification and discussion/interpretation of success, retention and efficiency data
<b>3. (If Applicable) Specific program/certificate data are included and discussed</b>	Not addressed	Missing data but attempt was made	Data were present but not discussed	Data were present and commented upon OR No program or certificate
<b>4. Goals from prior comprehensive identified, activities linked to the goal, progress stated</b>	No goals from prior comprehensive identified	Limited/generic statement made regarding goal(s), lacks clarity or details and/or activities, and/or progress stated	Clear statement made regarding goal(s), activities, and progress	Well-defined statement made regarding goal(s), and activities, includes details & reasoning, progress stated in depth

<b>5. Long term goals identified, activities and timeline stated</b>	No attempt made to identify long term goals, activities, and timeline	Limited/generic statement made regarding goal(s), lacks clarity or details and/or activities, and/or timeline	Clear statement made regarding goal(s), activities, and timeline	Well-defined statement and justification made regarding goal(s), and activities, includes details & reasoning, suggested timeline
<b>6. Long term goals aligned to mission and EMP</b>	No link between the long term goals and the Mission or EMP	Limited attempt to link goals to Mission and EMP	Clear attempt to link goals to Mission and EMP	Well defined connection made between goals and Mission and EMP
<b>7. Course Outline of Record section is completed</b>	COR section is blank	COR section is partially completed, missing some courses from catalog		COR section is completed in its entirety – all courses in catalog identified
<b>8. Linkages made between reasons for resource request and EMP/Strategic Plan Goals (SPG)</b>	No linkage made between resource requests and EMP/SPG	Limited/generic/basic connection made between resource requests and EMP/SPG	Clear connection made between resource requests and EMP/SPG	Substantial connection made between resource requests and EMP/SPG
<b>Column scores</b>				
(If no programs of study are applicable, do not average in points from item #3)				

Additional comments:

## II. Comprehensive Program Review Assessment Update

**Purpose** –This comprehensive review should provide your unit with an opportunity to reflect and analyze any trends from the assessments you conducted **over the past four years**. Consider it a meta-analysis of your own work. This update is intended to facilitate discussion within your discipline regarding the types of assessments, the range of outcomes you have experienced with regard to increasing student success, and any changes, modifications, or improvements you have made to courses that seem to have supported student learning. It should also provide you with an opportunity to determine a plan of action for assessment for the next four years. Use data stored in TracDat, your Annual Program Reviews, and the Norco Assessment Rotation Plan to help you to complete this review. If you have any questions, please contact either Sarah Burnett at sarah.burnett@norcocollege.edu, or Greg Aycock at greg.aycock@norcocollege.edu or talk to your NAC representative.

Please take some time to review assessment from the past four years and answer the following questions.

### Section 1: Discipline Evaluation of Assessment Process

- a. In the first column please identify each of the courses you assessed **in the past four years**. Then state if the assessments were implemented by an individual faculty (I), or as collaborative group (C). Identify the primary **modes of assessment** (embedded tests, assignments with rubrics, class projects etc.). In the final column, please explain why your discipline uses the modes identified (pedagogical reasoning). Add rows as needed.

Course	Individual (I) Collaborative (C)	Primary Modes of Assessment (Embedded tests, rubrics, projects, etc.)	Pedagogical Reasoning – why does your discipline use these methods for assessment
CIS-1A	Collaborative group	Embedded tests. We have a final exam that tests the SLO's being measured.	We feel this method of using a final exam is a good measure of both the skill and knowledge the course shares.
CIS-1B	Individual	Embedded tests and self-evaluation	The assessment methods are great for determining student achievement of SLO's being measured. The exam showed student's level of achievement of the various components outlined in the SLO's. The self-evaluation pointed to areas where the course needs to be changed to match the SLO's for this advanced course.

CIS-5	Collaborative	Exam	The results did not provide quality data. We feel a project based assessment would be better.
CIS-17A	Individual	End of the semester project and final exam were both used to measure two different SLO's.	<p>Projects are useful to determine skill attainment for the topics of the SLO such as use of data structures: arrays, records, strings, linked lists, stacks, queues, and hash tables. The final exam was a great way to assess overall development of "Implement, test, and debug simple recursive functions and procedures."</p> <p>We feel that the two methods used are as good way to test student's skill attainment and knowledge for this course.</p>
CIS-17B	Individual	Sample student work was collected and a final exam.	The method of assessment has its merits in a course like this, although the use of a project along with the final exam instead of sample work would be better.
CIS-17C	Individual	Sample homework and exams	We found that the students easily achieved the student learning outcomes set for this class. It was recommended that the SLO's be more specific to the actual course content for future assessment.
CIS-18C	Individual	Final exam	The final exam did a fine job measuring the student success with the current SLO's. Although the current SLO's are very broad. It is recommended that they be revised to allow a better measurement of student's success.
CIS-21	Individual	Instructor evaluation and student evaluation	The method of assessment has its merits in a course like this. Although we do not feel it provided enough detail of the student learning outcome being achieved. Future assessment will begin with a survey as administered this time, followed by another survey and student evaluation

			at the end of the semester to see if we can get more details for this assessment. The results this time didn't allow us to make changes to the course or close the loop.
CIS-54A	Individual	Students were given a final project which utilized the fundamental tools and production methods presented.	
CIS-56A	Individual	Pre-test, Post-test method - students were given a test on the SLO being measured at the beginning of the semester. At the end, after the concepts were taught they were again given this same test.	Results show good knowledge of the concepts of the SLO's for this course. But we will use direct assessment method next time in the form of a final project. Use of projects may better illustrate demonstrated skill in this subject. This may also better highlight areas that should be addressed to help achieve the desired SLO.  Pretest and posttest may still be used along with the project.
CIS-66	Individual	Embedded assignments and tests	Student will complete homework assignments going over the various web technologies components: history of the internet, web browser, securities, file transferring, web servers, and hardware technology.  This assessment successfully pointed to several strengths and weaknesses in course delivery. We will continue to use assignments and projects to assess this course. Tests were also used to measure one SLO results. It was found that the instructor needs to spend more time preparing students for exams or more time in teaching the topics tested.
CIS-72A	Individual	SLO Benchmark assignment	The measurement tools used did provide data that proved that most of my students will be able to identify the main requirements for creating a "well formed" web page document, and thus will also be able to create XHTML source code that passes W3C validation. The type of

			assessment used is a good method of SLO analysis for this course.
CIS-72B	Individual	Pre-test and post-test on cascading-style sheets and formatting requirements.	This assessment method for this course and 72A prove to be a good indicator of the starting level of students and where they end the semester. By beginning with their level at the start of the course, the instructor can gear some of the review of material and make modifications to the course delivery to improve student success.
CIS-78A	Individual	Final project used to measure several SLO's.	The use of projects which measure multiple student learning outcomes The projects modeled actual design problems students would encounter in their careers and demonstrated their mastery of the learning outcomes for the course.
CIS-79	Individual	Project used to measure SLO	A project based assessment is by far the best way to determine skill attainment in this course. As with other design courses the project was to design something the students will encounter in their careers. It was a great tool to show skill achievement.
CIS-80	Individual	Pre and Post Exam	Use of several exams help measure the students' knowledge and improvement throughout the semester. We feel this method was the proper way to observe SLO success where a multiple skill development tasks are being measured. The exams showed that we are adequately teaching the designed student learning outcomes.
CIS-81	Individual	Multiple projects	The use of projects which measure multiple student learning outcomes The projects modeled actual design problems students would encounter in their careers and

			demonstrated their mastery of the learning outcomes for the course.
CIS-98A	Individual	Pre and Post Exam	Results show good knowledge of the concepts of the SLO's for this course.

- b. Please provide an overview of the types of **changes made** (updated test questions, revised PowerPoints, redesigned assignments, new assignments) in a course or a program in response to your assessments. Explain which changes led to either greater student success, or didn't make any impact on student learning (provide reasoned argument as to why you think this occurred). In the final column identify which assessments led to permanent modifications.

<b>Program and/or Course Name</b>	<b>Changes made</b> (Updated test questions, new rubrics, revised assignments, etc.)	<b>Identify if any changes had an impact (positive, negative, or neutral) on student success</b> (provide reasoning)	<b>Permanent modifications made to course in response to assessment</b>  <b>Yes or No</b>
Computer Programming	Two courses, 18B and 17C were used to determine program level outcome for the Computer Programming certificate. Both administered a learning gains survey to measure the PLO.  No changes were made. The survey used to draw data was not able to provide us with sufficient data to know where, if anywhere, changes were needed. Next time we will use a capstone project in these courses to provide a clearer picture.	Neutral Impact:	No
Desktop Publishing	No gaps exist with the PLO's. Each of the CIS courses easily align to the PLO's. Included in the program are two ART courses. They also	Positive Impact: The results of the final project and the learning gains survey indicated that the majority of the students who completed the assignment understood the	Yes



	align with two of the PLO's. In evaluating the SLOs to PLOs we found that one of the courses in CIS was not correctly aligned. This will be corrected for next time.	assignment. They demonstrated their knowledge of workflow process in the creation of real-world projects.	
CIS-1A	We have updated all the lab assignments in this course.	Positive impact. Students now have more of a chance to practice the many skills presented in this course.	Yes
CIS-1B	Assignments are evaluated and updated each semester. Version changes of the software and new case studies keep the material fresh and the interest of students high.	Positive impact. The exam showed student's level of achievement of the various components outlined in the SLO's. The self-evaluation pointed to areas where the course needs to be changed to match the SLO's for this advanced course.	Yes
CIS-5	We are going to change the assessment method next time for this course.	Neutral impact. The results did not provide quality data. We feel a project based assessment would be better.	No
CIS-17A	There is a strong support for what is being taught. No changes recommended at this time.	Positive impact. We feel that we are correctly teaching the core elements of this course. Projects are useful to determine skill attainment for the topics of the SLO such as use of data structures: arrays, records, strings, linked lists, stacks, queues, and hash tables. The final exam was a great way to assess overall development of "Implement, test, and debug simple recursive functions and procedures."	No
CIS-18C	It is recommended that new SLO's be made for this course.	Neutral impact. The final exam did a fine job measuring the student success with the current SLO's. Although the current SLO's are very broad. It is recommended that they be revised to allow a better measurement of student's success.	No
CIS-66	It is recommended that the instructor use class time to prepare students for exams.	This assessment successfully pointed to several strengths and weaknesses in course delivery. We will continue to use assignments and projects to assess this course. Tests were also used to measure one SLO results. It was found that the	Yes

		instructor needs to spend more time preparing students for exams or more time in teaching the topics tested.	
CIS-98A	There is a strong support for what is being taught. No changes recommended at this time.	Positive impact. We were able to use assignment and lab exercise scores from my students to measure skill attainment. We will continue providing hands-on assignments for students along with real world projects where Excel spreadsheets are commonly used by businesses to solve problems.	Yes

- c. Please discuss any external variables that you think might have provided support or deterred from your ability to increase student success in your discipline. Indicate N/A if you determine that no external variables impacted student success. (add rows as needed)

**External Variables**

Course/Program	External Variables that supported or deterred from increasing student success
All CIS programs	The use of tutors is now done with Express tutoring and not scheduled. This changes was not discussed with faculty and for the first half of the spring 2016 semester we were not aware that students could schedule longer time than the short one-on-one express tutoring.  If needed, students are allowed to schedule a longer tutoring session. This is something we feel is important for the skill level many of our classes required.

- d. Please identify any **teaching approaches** (pedagogy) that you perceive to have had a positive impact on your student’s ability to engage in the learning process. This might not specifically include elements that have been formally assessed, but rather may reflect on good teaching practices that you deem effective. It might relate to elements such as the way you might have restructured the class (e.g., small group vs. direct lecture), the way in which you disseminate information (e.g., lecture vs. flipped classroom or action based learning). It might include the manner in which you gain feedback from students (journals, or clickers).

Many of our full time and adjunct instructors utilize small group class methods where students have an opportunity to work with case studies to implement skills learned in each course. Most of our course have attached labs where the instructor teaching the course materials also is with the students during lab. Real-world projects, case studies and group work are methods of reinforcing important student learning outcomes.

Some classes have use clickers and poll everywhere to gain feedback from students. Discussions and wikis are also methods used to break up traditional lecture and to encourage student interaction. Traditional lecture is still utilized but other internet-based methods are introduced throughout the semester.

- e. On reflection, can you identify any specific **resources**, support, or training that your discipline, department, or the institution might need to provide on-going support for student learning? If so, please explain. Please also identify any trainings or support from NAC that has been helpful or useful in planning or conducting assessment in your unit.

**Lynda.com training libraries** provide a wealth of information for both faculty and students. Continued access to this is integral to student's success in so many of our skill-based courses.

**Section 2: Overview of Completed Assessment from the past four years**

Using TracDat, or your Annual Program Reviews from the past four years please fill in the following data **for each courses and program your discipline lists in the Norco College catalog**. Please identify any courses that are in the process of being removed from the catalog. Please list programs first then courses.

<b>Program Name/ Course Number</b>	<b>Total number of initial assessments conducted</b>	<b>Total Number of changes made to courses as a result of assessment</b>	<b>Total number of loop- closing assessments conducted</b>	<b>Total of all assessment activity for each course/program (all columns combined)</b>
Computer Programming,	1	1		2
Graphic Design	This program was assessed in fall 2014 under the title of Desktop Publishing.	3		4

Mobile Application Development	This program will be discontinued.			
C++ Programming				
Java Programming				
CIS-1A	1	4		5
CIS-1B	1	5		6
CIS-2	1	1		2
CIS-3				
CIS-5	1			
CIS-7				
CIS-11				
CIS-12				
CIS-14A				
CIS-14B				
CIS-16A				
CIS-17A	1			
CIS-17B	1			
CIS-17C	1			
CIS-18A				
CIS-18B				
CIS-18C	1	3		4
CIS-18D				
CIS-21	1	3		4
CIS-24				
CIS-37				
CIS-38A				
CIS-38B				
CIS-39				
CIS-43				
CIS-44	1	8		9
CIS-50				
CIS-54A	1			
CIS-54B				
CIS-56A	1			

CIS-59			
CIS-61			
CIS-63			
CIS-65			
CIS-66	1	3	4
CIS-67			
CIS-68			
CIS-69			
CIS-72A	1		
CIS-72B	1		
CIS-72C			
CIS-74			
CIS-75			
CIS-76A			
CIS-76B			
CIS-78A	1		
CIS-78B	1		
CIS-79	1		
CIS-80	1		
CIS-81	1		
CIS-93			
CIS-95A			
CIS-98A	1	2	3
CIS-98B			
CIS-200			
CSC-6			
CSC-52			
CSC-53			

### **Section 3: Plan for Assessment**

Please provide a comprehensive plan for assessment in your unit for the upcoming four years. Please identify any loop closing assessments that are carrying over from the prior four years of assessment (e.g., type *loop-closing* after them) – you should not plan to include a loop closing before you conduct an initial assessment.

Include plans for:

- **all programs** in your sole control (certificates or ADTs)
- **all courses** in your discipline
- **all SLOs** in each course

Suggestions for possible formats:

- If you have an existing rotation plan for course offerings it might be simple to identify which SLOs and PLOs will be assessed in each of the semesters on the rotation plan. Please imbed that plan directly into this document below.
- You could use a curriculum mapping tool to track completed SLO assessment, and subsequently evidence for completed PLO assessment.

In either cases, it is critical to know when each program assessment is due so that you can plan when to do the SLO assessment. It might be helpful to create separate plans for each Program, especially in CTE. The Norco Assessment Rotation Schedule is posted on the Assessment website for you to use in planning for Program Level assessment.

**The district has a plan for course assessments. We will follow their plan.**

## Scoring Rubric for Comprehensive Program Review of Assessment – Part II only

Assessment Unit Name: \_\_\_\_\_

Average score \_\_\_\_\_

	0	1	2	3	Comments
<b>Section 1</b> <ul style="list-style-type: none"> <li>● Modes of assessment &amp; reasoning _____</li> <li>● Changes Made to courses _____</li> <li>● Success indicators _____</li> <li>● Teaching approaches _____</li> <li>● Resources _____</li> </ul>	No attempt made to provide responses to any of the questions (1-4)	Answers are extremely limited, e.g., yes, no, none; inconsistent depth in some responses; barely any reflection or insight provided, limited attempt to use assessment to increase <i>understanding</i> of student success and learning in the classroom	Clear and consistent responses to each question, some indication the discipline has attempted to use discipline based assessment results to increase <i>understanding</i> of student success and learning in the classroom	Clear and in depth responses to each question, strong indication the discipline has utilized assessment as a tool to increase <i>understanding</i> of student success and learning in the classroom, and teacher development	
	0	1	2	3	
<b>Section 2</b> <ul style="list-style-type: none"> <li>● # of initial, changes made, loop-closing activities for course and program</li> </ul>	Chart is blank	Does not include all courses or programs		All courses and programs in the discipline are listed on the chart, each box has a number (or a zero to indicate “nothing” or no assessment conducted)	
	0	1		3	
<b>Section 3</b> <b>Plan for assessment in the coming 4 years</b> <ul style="list-style-type: none"> <li>● Programs</li> <li>● Courses</li> <li>● SLOs</li> </ul>	No Plan provided	Does not include all Programs _____ Courses _____ SLOs _____		All programs, courses and SLOs are included in assessment plan for the next four years – rotation cycle considered in plan	
	0	1		3	
<b>Column Totals</b>					