NORCO COLLEGE
COMPREHENSIVE INSTRUCTIONAL PROGRAM/UNIT REVIEW

Discipline/Unit/Department: <u>Physics (PHY) and Physical Science (PHS)</u>

Program(s) or Certificate(s) Associated: <u> *Physics ADT*</u>

Contact Person: <u>Phu Tran</u>
Due: April 20, 2016

Please send an electronic copy as a Word document (avoid PDF)
programreview@norcocollege.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.norcocollege.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@norcocollege.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: ___PHY & PHS_____

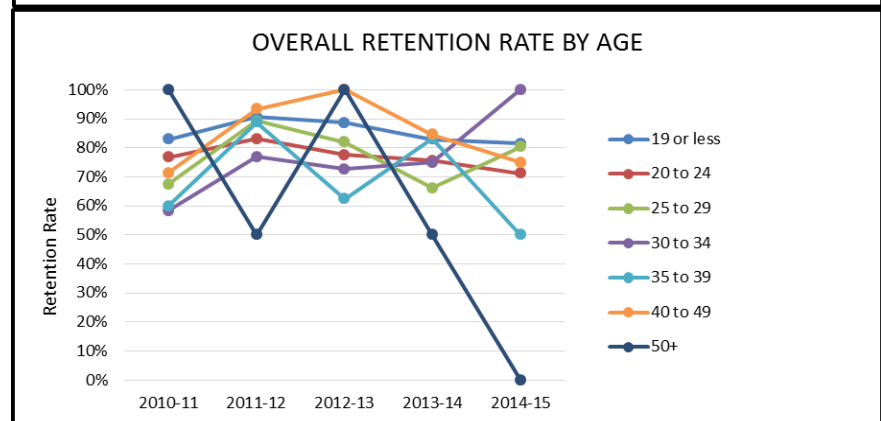Contact Person: ___Phu Tran_____
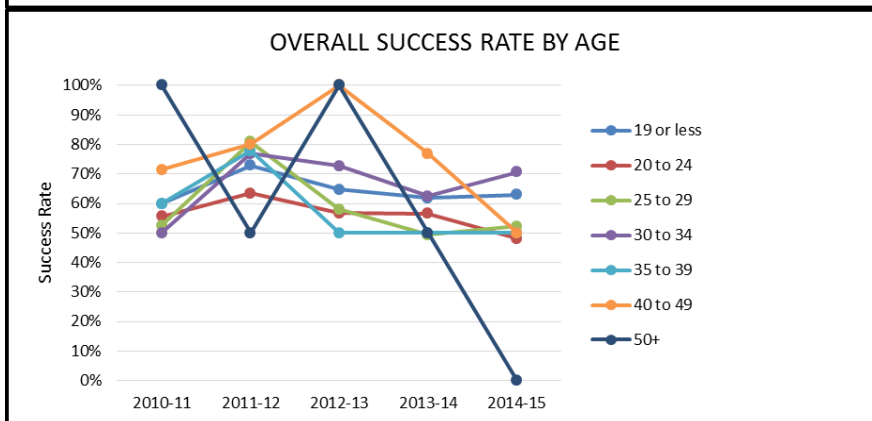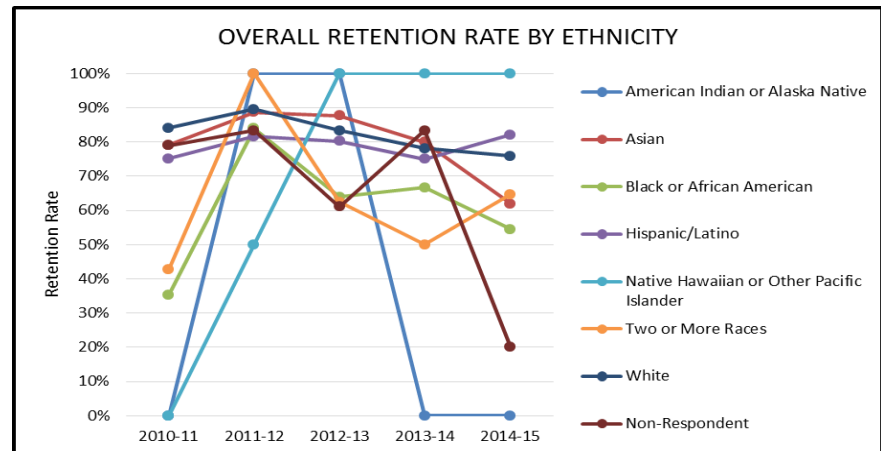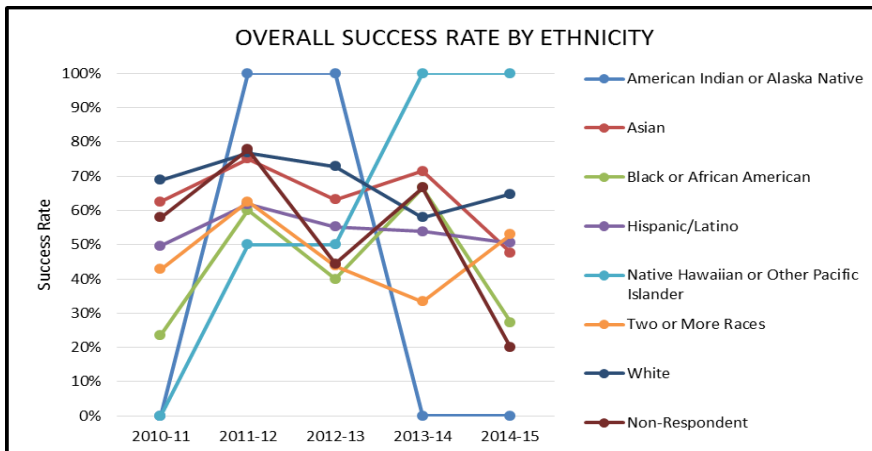
Date: ___4/20/16_____

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?	No, Physics and Physical Science have been a part of the Math and Science Department at Norco College.	Math and Science Department want to split into two separate departments, a Math department and a Science and Kinesiology department. Physics and Physical Science will be with the new Science and Kinesiology department
Have any new certificates programs been created by your unit? For example, did your unit develop an ADT? If not, discuss if you are in process or have future plans to do so.	Physics have developed the Physics ADT.	There is no plan to create a new certificate program.
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.	No substantial modifications.	There is no plan for any changes.
Have activities in other units impacted your unit? For example, a new Multimedia grant could cause greater demand for Art courses or a new ADT may require resources such as supplemental courses for another unit's ADT.	The Biology ADT was approved and we have just started to offer the physics 2A and will offer the physics 2B that is require for the Biology ADT.	We will continue to offer the physics 2 series to satisfy the Biology ADT along with our offering of physics 4 series, physics 10, physics 11 and physical science 1.

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.

Physics and Physical Science Overall Data are the same as Face to Fall since our unit does not offer Distance Education or Hybrid.

	OVERALL	2010-11 Success	2010-11 Retention	2011-12 Success	2011-12 Retention	2012-13 Success	2012-13 Retention	2013-14 Success	2013-14 Retention	2014-15 Success	2014-15 Retention
	Total	57.2%	76.5%	69.4%	85.8%	59.5%	79.8%	56.9%	75.6%	53.4%	75.8%
ETHNICITY	American Indian or Alaska Native	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%
	Asian	62.5%	79.2%	75.0%	88.6%	63.2%	87.7%	71.4%	80.0%	47.6%	61.9%
	Black or African American	23.5%	35.3%	60.0%	84.0%	40.0%	64.0%	66.7%	66.7%	27.3%	54.5%
	Hispanic/Latino	49.6%	75.2%	61.8%	81.6%	55.2%	80.2%	53.9%	75.0%	50.5%	82.1%
	Native Hawaiian or Other Pacific Islander	0.0%	0.0%	50.0%	50.0%	50.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Two or More Races	42.9%	42.9%	62.5%	100.0%	43.8%	62.5%	33.3%	50.0%	52.9%	64.7%
	White	68.9%	84.0%	76.8%	89.6%	72.8%	83.3%	57.9%	78.1%	64.8%	75.9%
	Non-Respondent	57.9%	78.9%	77.8%	83.3%	44.4%	61.1%	66.7%	83.3%	20.0%	20.0%
AGE	19 or less	60.0%	83.0%	72.9%	90.6%	64.8%	88.7%	61.8%	82.9%	62.9%	81.4%
	20 to 24	55.6%	76.7%	63.5%	83.1%	56.8%	77.6%	56.5%	75.6%	48.1%	71.2%
	25 to 29	52.5%	67.5%	80.9%	89.4%	58.0%	82.0%	49.3%	66.2%	52.2%	80.4%
	30 to 34	50.0%	58.3%	76.9%	76.9%	72.7%	72.7%	62.5%	75.0%	70.6%	100.0%
	35 to 39	60.0%	60.0%	77.8%	88.9%	50.0%	62.5%	50.0%	83.3%	50.0%	50.0%
	40 to 49	71.4%	71.4%	80.0%	93.3%	100.0%	100.0%	76.9%	84.6%	50.0%	75.0%
	50+	100.0%	100.0%	50.0%	50.0%	100.0%	100.0%	50.0%	50.0%	0.0%	0.0%
GENDER	Female	55.6%	75.2%	73.4%	85.1%	57.8%	77.5%	50.0%	73.5%	57.4%	81.4%
	Male	57.6%	76.8%	67.0%	86.7%	60.3%	81.2%	61.0%	76.8%	50.8%	72.6%
	Non-Respondent	83.3%	100.0%	33.3%	66.7%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%

OVERALL SUCCESS RATE BY ETHNICITY

OVERALL RETENTION RATE BY ETHNICITY

OVERALL SUCCESS RATE BY AGE

OVERALL RETENTION RATE BY AGE

OVERALL SUCCESS RATE BY GENDER

OVERALL RETENTION RATE BY GENDER
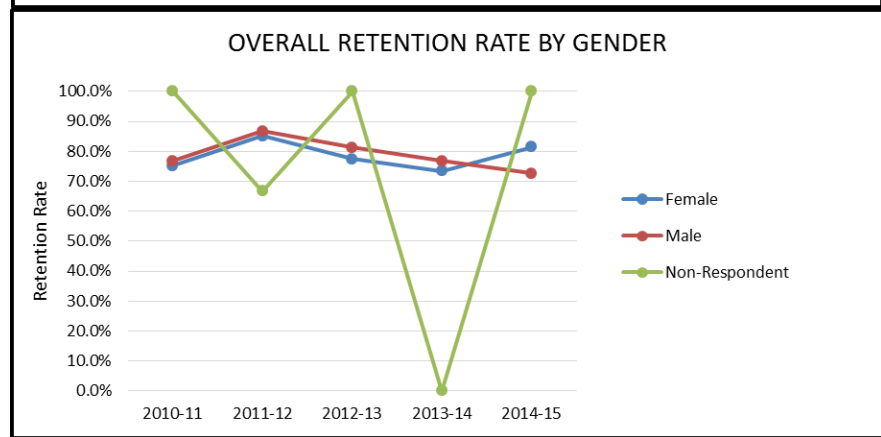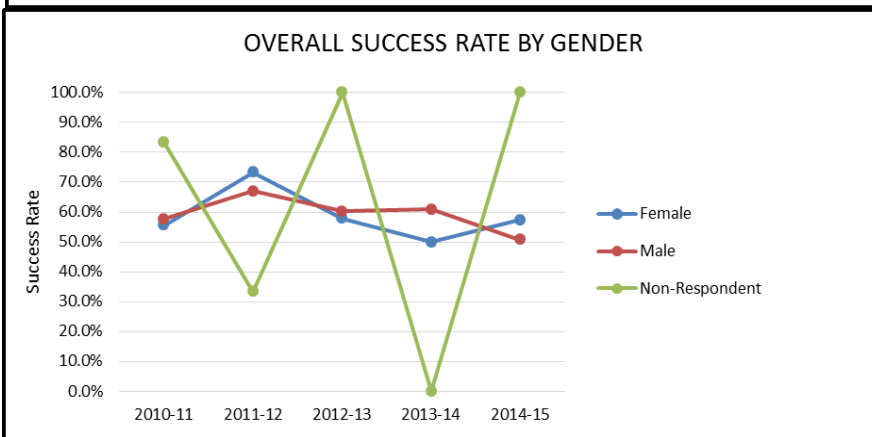
Term	Efficiency
Summer 2010	0.000
Fall 2010	435.000
Winter 2011	0.000
Spring 2011	509.494
Summer 2011	0.000
Fall 2011	422.875
Winter 2012	0.000
Spring 2012	535.631
Summer 2012	0.000
Fall 2012	503.625
Winter 2013	452.200
Spring 2013	493.000
Summer 2013	0.000
Fall 2013	386.750
Winter 2014	521.700
Spring 2014	489.163
Summer 2014	0.000
Fall 2014	448.375
Winter 2015	387.050
Spring 2015	458.961
Total	**467.786**

Efficiency 2010-2015
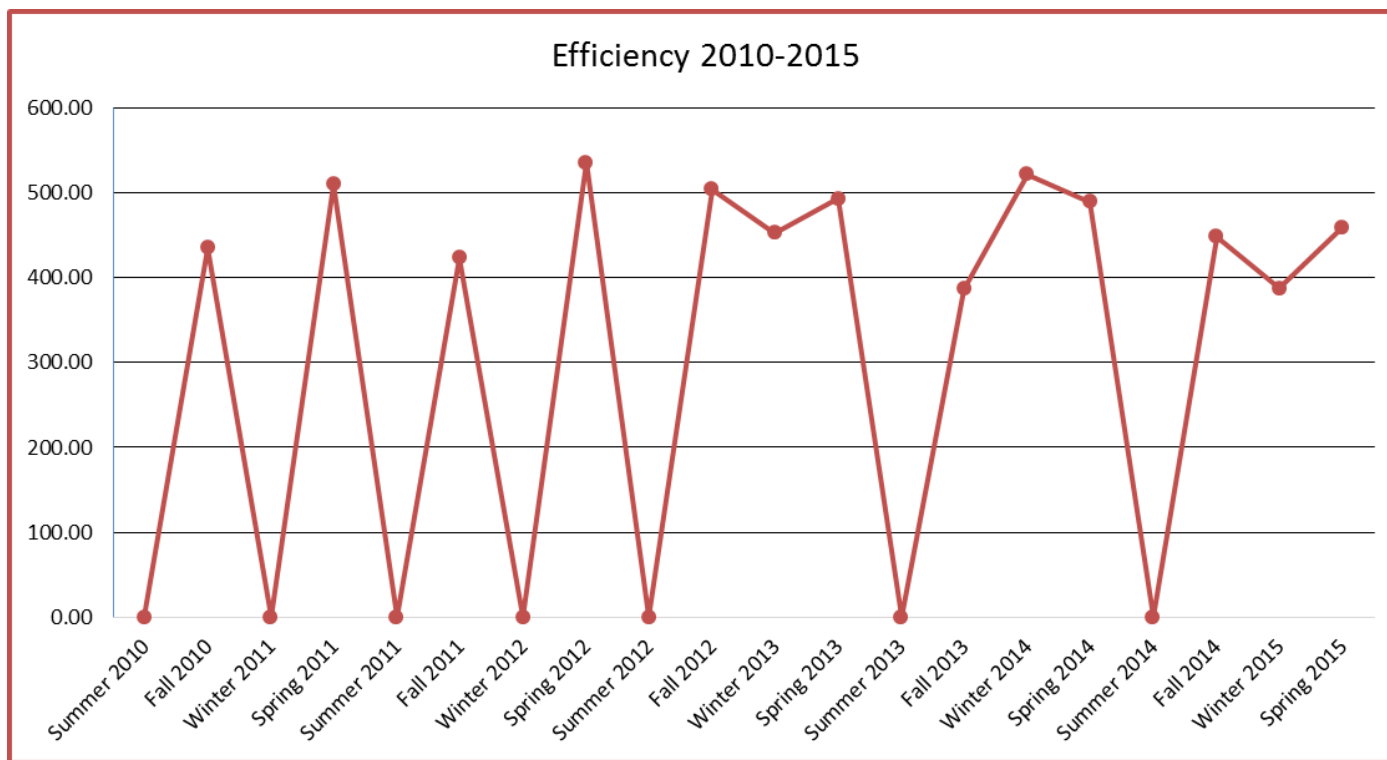
There does not seem to be any significant changes and the trend in the data for Success, Retention and Efficiency seem to be very consistent from year to year with small fluctuations but the overall graphs show horizontal lines.

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.**

As of Fall 2015, there are 19 students who declared the Physics CSUGE as their program of study and 24 students who declared the Physics IGETC as their program of study. There were 2 students in the 2014-2015 year that received the Physics ADT. The program is quite new and only have one year of data so there is not enough data to determine any trends or changes to the data.

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
Increase our offering of physics 4A	Schedule two sections of Physics 4A per semester instead of one, hire a new instructors.	There has been no progress as we still continue to only offer one section of physics 4A.	Enhanced our program to give more access to students trying to add the class. Increase our efficiency in Physics 4B and Physics 4C class. Due to the difficulty of the physics 4A subject matter, the success rate of Physics 4A is low. So by only having one class of physics 4A students, where half the class pass, the Physics 4B and Physics 4C will only be half fill.
Increase our course offering to include Physics 2A	Mainly budget requirement and to interview and hire a new instructor for the class.	Currently offering Physics 2A for this Spring 2016 semester.	Enhance Academic Program to have a more complete program. So far our physics course offered here at Norco only serve the general education physics or the engineering students, but does not serve students who are biology major or pre-med. These students have to go to riverside to take physics. Also part of the goals of HSI-STEM grant to develop this course. This course will also be needed as part of the Biology ADT degree when it is approved.
Increase our course offering to include Physics 2B	Mainly budget requirement and to interview and hire a new instructor for the class.	Physics 2B is schedule for this coming Fall 2016 semester.	Enhance Academic Program to have a more complete program to serve students that are biology major or pre-med that we currently do not serve. Also part of the HIS-STEM grant goal to develop this class. This course will also be part of the Biology ADT requirement.

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**

From the STEM grant, we received all the equipment that we requested in the 2011 annual program review for physics during the following years which has greatly enhanced our physics labs. We no long need to borrow the scales (balance) from chemistry lab for our physics labs. We have added two more setups to our e/m (electron charge to mass ratio) lab so that each student within the lab is able to make measurement of the radius of the circular path that the electron beam takes. All other labs have 8 or 10 setups so that the groups in the physics labs are now down to two or three people per group instead of the 4-5 students that we have in the past. We were also able to add new experiments to our labs like the thermal expansion lab, Coulomb Law Lab, the Michelson Interferometer Lab, Heat Engine Lab, and Nuclear lab. Students learning have definitely increase during the lab with all the new experimental equipment as they were able to test more physical concepts and laws as well as have more hand on experience in the lab with less lab partners.

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 <u>Educational Master Plan/Strategic Plan</u>?** *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
Our long term goal is to expand our offering of Physics 4 series, Physics 2 series, Physics 10 and Physics 11.	We would like to offer double sections of Physics 4A to increase enrollments in Physics 4B and 4C.	Hopefully we can start offering double section in the Spring 2017 semester.	This will affect goal 3 to increase student access. This will also increase the efficiency for the physics 4B and 4C class.

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

Course Number	Date Last Updated	Last Editor (name)	If not current, where is the COR in the review process	Was the last update a major or minor modification?
Physics 2A	11/19/13	James Cheney	Current	Major Modification
Physics 2B	11/19/13	James Cheney	Current	Major Modification
Physics 4A	6/18/13	Terrence O'Neill	Current	Major Modification
Physics 4B	6/18/13	Terrence O'Neill	Current	Major Modification
Physics 4C	12/10/13	James Cheney	Current	Major Modification
Physics 10	1/21/14	Scott Blair	Current	Major Modification
Physics 11	6/17/14	James Cheney	Current	Major Modification
Physical Science 1	12/01/03	???	Beginning of Edit	???

Norco College Comprehensive Instructional Program Review Update

Unit: __PHY& PHS_____

Contact Person: __Phu Tran_____

Date: __4/20/16_____

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)
Physics 4A	1	1
Physics 4B	1	0
Physics 4C	1	0
Physics 10	1	3
Physics 11	0	2
Physical Science 1	1	1

Classified Staff Employed in the Unit		
Staff Title	Full-time staff (give number)	Part-time staff (give number)
Lab Tech	1	1

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

NEW OR REPLACEMENT STAFF (Administrator, Faculty or Classified)[1]

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)
1. New Physics Instructor <u>Justification:</u> As our unit increase in sized by offering the physics 2A and 2B as well as increase in offering of the Physics 4A section, we will need another full time instructor.	N	1		Goal 1, 3, 5	L
2. <u>Justification</u>					
3. <u>Justification</u>					
4. <u>Justification</u>					
5. <u>Justification</u>					

* 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 <u>must</u> 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

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[1] 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.

Unit Name: *PHY & PHS*

9. Equipment (including technology) <u>Not</u> Covered by Current Budget[2]

List Equipment or Equipment Repair Needed. 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**
1. None <u>Justification</u>					
2. <u>Justification</u>					
3. <u>Justification</u>					
4. <u>Justification</u>					
5. <u>Justification</u>					
6. <u>Justification</u>					

* 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.

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[2] 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.Professional or Organizational Development Needs Not Covered by Current Budget*³

List Professional Development Needs. 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.	Annual TCO*			
	Cost per item	Number Requested	Total Cost of Request	EMP Goals
1. None <u>Justification</u>				
2. <u>Justification</u>				
3. <u>Justification</u>				
4. <u>Justification</u>				
5. <u>Justification</u>				
6. <u>Justification</u>				

*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 <u>Professional Development Committee</u> for review.

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³ 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. 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[4]

List Student Support Services Needs 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.	**EMP GOALS**	**Distance Education**
1. None Justification		
2. Justification		
3. Justification		
4. Justification		
5. Justification		
6. Justification		

*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: _____

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[4] 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.

12. OTHER NEEDS AND LONG TERM SAFETY CONCERNS not covered by current budget[5]
** For immediate hazards, contact your supervisor **

List Other Needs that do not fit elsewhere. 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.	Annual TCO*			
	Cost per item	Number Requested	Total Cost of Request	EMP Goals
1. None Justification				
2. Justification				
3. Justification				
4. Justification				
5. Justification				
6. Justification				

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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[5] 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
1. **Trends and status change, prior and next four years identified**	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
2. **Retention, success, and efficiency rates have been identified and reflected upon**	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
3. **(If Applicable) Specific program/certificate data are included and discussed**	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
4. **Goals from prior comprehensive identified, activities linked to the goal, progress stated**	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

5. **Long term goals identified, activities and timeline stated**	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
6. **Long term goals aligned to mission and EMP**	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
7. **Course Outline of Record section is completed**	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
8. **Linkages made between reasons for resource request and EMP/Strategic Plan Goals (SPG)**	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
Column scores **(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
Physics 10	I	Embedded Test – questions placed in final exam	The final exam is an assessment of students learning the material taught in the class during the semester, so it naturally make sense that the test questions on final also test the student learn outcomes of the class.
Physics 11	I	Embedded Test – questions placed in final exam	The final exam is an assessment of students learning the material taught in the class during the semester, so it naturally make sense that the test questions on final also test the student learn outcomes of the class.
Physics 4A	I	Embedded Test – Use questions in exams to assess student learning outcomes.	Question on exams also test students learning outcomes, so it ties in students' grade in a class with the student understanding of the student learning outcome.

Physics 4B	I	Embedded Test – Use questions in exams to assess student learning outcomes.	Question on exams also test students learning outcomes, so it ties in students' grade in a class with the student understanding of the student learning outcome.
Physics 4C	I	Embedded Test – Use questions in exams to assess student learning outcomes.	Question on exams also test students learning outcomes, so it ties in students' grade in a class with the student understanding of the student learning outcome.
Physical Science 1	I	Embedded Test – questions placed in final exam	Embedded Test – questions placed in final exam The final exam is an assessment of students learning the material taught in the class during the semester, so it naturally make sense that the test questions on final also test the student learn outcomes of the class.

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.

Program and/or Course Name	Changes made (Updated test questions, new rubrics, revised assignments, etc.)	Identify if any changes had an impact (positive, negative, or neutral) on student success (provide reasoning)	Permanent modifications made to course in response to assessment Yes or No
Physics 4A	Additional homework assignment focus only on Vector Algebra	There seem to be a positive effect on student exams grade on the vector problem as student scored a little higher on the vector problem in the first exam of Physics 4A class.	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
Physics 4A	Math 1A class is a co-requisite, but should be a pre-requisite as the math need for physics 4A is taught near the end of the Math 1A class, but they student need this knowledge near the beginning in physics 4A class.
Physics	Even though students meet the math requirement to enroll in physics, most of them do not have the math skills and math knowledge that they need to be successful in physics.

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).

For showing example problems in class, I do not just solve the problem, but first allow the students to try and solve the problem. I make it into a competition with students giving me their answers so I can write them on the board. To motivate the student to solve the problem, I give the first student to get the right answer a bonus point on the next exam if they were on time to the class. Once I have several answers, I would then go over the specific steps and reason for each step in setting up and solving the problem. I will also go over the reason for certain wrong answers or common mistake that a student will make on the problem. This competition in solving the example problem for bonus points motivate students to come to class on time and be prepare for class by doing the reading ahead of time if they want to win that bonus point.

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.

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.

Program Name/ Course Number	Total number of initial assessments conducted	Total Number of changes made to courses as a result of assessment	Total number of loop-closing assessments conducted	Total of all assessment activity for each course/program (all columns combined)
Physics 10	3	0	0	3
Physics 11	3	0	0	3
Physics 4A	3	1	0	4
Physics 4B	2	0	0	2
Phsyics 4C	3	0	0	3
Physicals Science 1	2	0	0	2

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.

Our unit plan to use TracDat data to help us do the assessment for the Physics ADT as the ADT also involve math courses that are not within our unit. We plan to input all of our assessment into TracDat to use with the assessment data stored there for Math 1A, Math 1B and Math 1C since they are also a part of the Physics ADT. For the courses in our discipline we will continue to do the assessment as what we have been doing with embedded questions in exams as well as rotate the assessment to make sure all courses are assess. We will rotate the assessment of SLOs for each course to make sure we assess all the SLOs for each course.

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

Assessment Unit Name: _____   **Average score** _____

	0	1	2	3	Comments
Section 1 • **Modes of assessment & reasoning____** • **Changes Made to courses ____** • **Success indicators ____** • **Teaching approaches ____** • **Resources ____**	No attempt made to provide responses to any of the questions (1-4) 0	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 *understanding* of student success and learning in the classroom 1	Clear and consistent responses to each question, some indication the discipline has attempted to use discipline based assessment results to increase *understanding* of student success and learning in the classroom 2	Clear and in depth responses to each question, strong indication the discipline has utilized assessment as a tool to increase *understanding* of student success and learning in the classroom, and teacher development 3	
Section 2 • **# of initial, changes made, loop-closing activities for course and program**	Chart is blank 0	Does not include all courses or programs 1		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) 3	
Section 3 **Plan for assessment in the coming 4 years** • **Programs** • **Courses** • **SLOs**	No Plan provided 0	Does not include all Programs ____ Courses ____ SLOs ____ 1		All programs, courses and SLOs are included in assessment plan for the next four years – rotation cycle considered in plan 3	
Column Totals					