

ANNUAL INSTRUCTIONAL PROGRAM REVIEW

Unit: Architectural Drafting

Please give the full title of the discipline or department. You may submit as a discipline or department as is easiest for your unit

College: Norco College

Contact Person: Paul Van Hulle, Carlos Garcia and Judy Jorgensen

Due: May 16, 2011

Please send an electronic copy to your Vice President:

Moreno Valley: Lisa.conyers@rcc.edu

Norco: Diane.dieckmeyer@rcc.edu

Riverside: Patrick.schwerdtfeger@rcc.edu and to
Ron.vito@rcc.edu if you are CTE

and send a copy to Mark.knight@rcc.edu for posting to the web*



Form Last Revised: December 2010

Riverside Community College District
Office of Institutional Effectiveness

Web Resources: <http://www.rcc.edu/administration/academicaffairs/effectiveness/review.cfm>

Annual Instructional Program Review Update

Instructions

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

The Annual Self-Study is conducted by each unit on each college and consists of an analysis of changes within the unit as well as significant new resource needs for staff, resources, facilities, and equipment. It should be **submitted or renewed every year by May 15th** (or the first working day following the 15th) in anticipation of budget planning for the fiscal year, which begins July 1 of the *following* calendar year.

Extensive data sets have been distributed to all Department Chairs and are linked to the Program Review website (password 11111). Chairs have received training on the use of these data sets. Please consult with your Department Chair or Raj Bajaj for assistance interpreting the data relevant to your discipline. Note that you are only required to mention data relevant to your analysis or requests. Should you wish assistance with research *analysis* please fill out the form at <http://academic.rcc.edu/ir/requestform.html> and you will be contacted to schedule a time to discuss analysis of your data. You may also request a labor market analysis using this form.

The questions on the subsequent pages are intended to assist you in planning for your unit. **If there is no change from your prior report, you may simply resubmit the information in that report (or any portion that remains constant) from the prior year.**

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, college, 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, the Administrative Support Center can adjust the document for you. Simply add responses to those questions that apply and forward the document to the Administrative Support Center with a request to format it appropriately.

If you cannot identify in which category your request 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.

Moreno Valley:	Claude Martinez,	951-571-6341
Norco:	Curt Mitchell,	951-372-7157
Riverside:	Norm Godin,	951-222-8307

I. Annual Program Review Update

Unit: Architectural Drafting

College: Norco College

Contact Person: Paul Van Hulle, Carlos Garcia and Gerald Cordier

Date: 5-27-11

Trends and Relevant Data

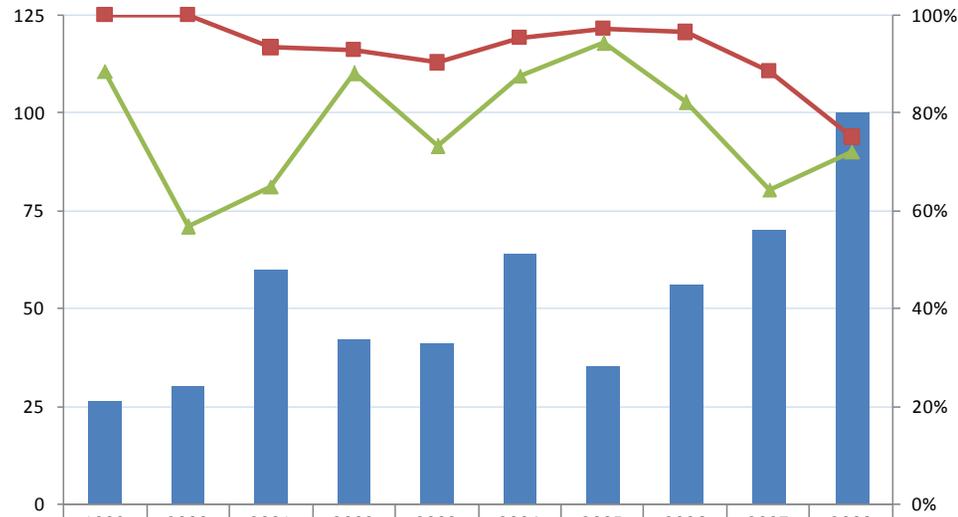
1. Has there been any change in the status of your unit? (if not, skip to #2)
 - a. Has your unit shifted departments?
No
 - b. Have any new certificates or complete programs been created by your unit?
No
 - c. Have activities in other units impacted your unit? For example, a new nursing program could cause greater demand for life science courses.
No
2. Have there been any significant changes in enrollment, retention, success rates, or environmental demographics that impact your discipline (See Dataset provided to all chairs)? If there are no *significant** changes in your unit's opinion, say "None" and skip to question #2.a. *Your unit may define "significant change" in this context for itself. If your unit thinks it's a "significant change" then for purposes of this review please note it.

We are experiencing significant growth in enrollment, which has had a positive impact on FTEF and WSCH. Please see the supporting documentation on the following page. These factors further prove to justify our request for a full-time faculty member in Architecture (this position has been requested for the past several years). Retention and success rates are closely aligned, and efficiency is stable.

The "quality" of Norco College's Architecture program is becoming well known in the region, as we have placed eight students at Cal Poly Pomona over the past few years (Cal Poly only accepts 20 students/year – that's out of approximately 4,000 applicants/year). Three Norco students were accepted last year alone. Our students are also beginning to populate the New School of Architecture (NSA) in San Diego as well. Along with both Cal Polys, NSA is one of only nine National Architectural Accrediting Board (NAAB) accredited architecture universities in California.

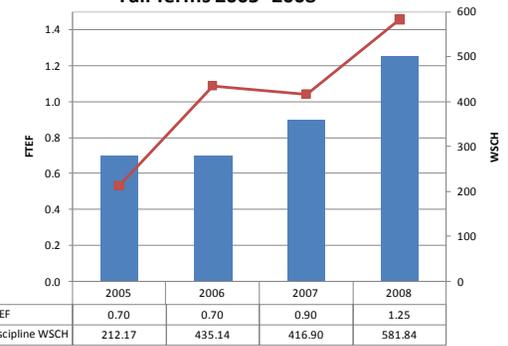
COMPREHENSIVE PROGRAM REVIEW DATA SUPPORT- ARCHITECTURE

Architecture Enrollments, Retention and Success Rates, Fall 1999 - 2008

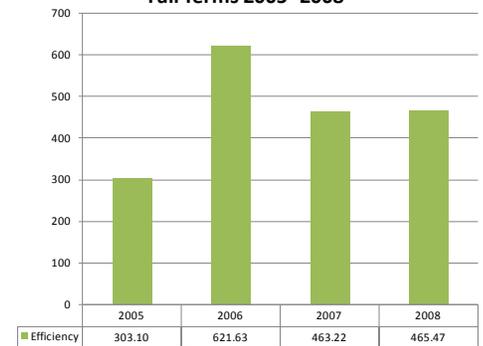


Enrollments	26	30	60	42	41	64	35	56	70	100
Retention	100.0%	100.0%	93.3%	92.9%	90.2%	95.3%	97.1%	96.4%	88.6%	75.0%
Success	88.5%	56.7%	65.0%	88.1%	73.2%	87.5%	94.3%	82.1%	64.3%	72.0%

Architecture FTEF and WSCH, Fall Terms 2005 -2008



Architecture Efficiencies, Fall Terms 2005 -2008



Please contact RCCD Institutional Research for more detailed research needs.
Please send requests via email to david.torres@rcc.edu or call (951) 222-8075.

2. a. What are your enrollment management goals? (examples: growth, stability, limits on enrollment, etc. – either for particular courses or for the unit)

If your goals necessitate resource changes make sure those needs are reflected in the applicable resource request sections.

Our intent is to maintain the current trend in enrollment growth. The department faculty believes the Architecture Program will actually grow much more significantly with the addition of a full-time faculty member driving the program. Please note we are at or near capacity in most of the architecture courses offered.

3. What other annual goals, if any, does your unit have for 2010-2011 that are not covered in #2a above (please list the most important first). Please indicate if a goal is directly linked to goals in your comprehensive?

List the goals of your unit for 2010-2011	List activity(s) linked to the goal
Maintain enrollment stability and growth.	Continue curriculum refinement.
Continue recruitment efforts at local high schools.	Continue outreach activities with Alvord, CNUSD, RUSD & MVUSD.
Continue articulation with local transfer institutions.	Meet with faculty at Cal Poly Pomona, UCR, Cal Baptist University, Cal Poly San Luis Obispo, and Berkley
Continued articulation with New School of Architecture, San Diego.	Visitations/guest speakers/student tours of NSA.

**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.”*

Annual Program Review Update

Unit: Architectural Drafting
College: Norco College
Contact Person: Paul Van Hulle, Carlos Garcia and Gerald Cordier
Date: 5-27-11

Human Resource Status

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

Faculty and Staff Employed in the Unit		
Teaching Assignment (e.g. Math, English)	Full-time faculty or staff (give number)	Part-time faculty or staff (give number)
Architecture	0	2 (one course is taught by a FT Engineering faculty member)

5. Staff Needs

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

<p align="center">List Staff Positions Needed for Academic Year 2011-2012</p> <p align="center">Please justify and explain each faculty request based on rubric criteria for your college. Place titles on list in order (rank) or importance.</p>	<p align="center">Indicate (N) = New or (R) = Replacement</p>	<p align="center">Annual TCP*</p>
<p>1. Full-time Architecture Instructor position. <u>Reason:</u> This position has been requested for the past several years due to student interest/growth (and potential student growth) in the Architectural Program. The recent statistics, posted above, strongly support this request. For the past several years, this position has been in the top of the hiring queue (it was ranked 7th last academic year).</p>	<p align="center">N</p>	<p align="center">\$110K</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.

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.

6. Equipment (excluding technology) Needs Not Covered by Current Budget²

<p>List Equipment or Equipment Repair Needed for Academic Year 2011-2012 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.</p>	<p>*Indicate whether Equipment is for (I) = Instructional or (N) = Non-Instructional purposes</p>	<p>Annual TCO**</p>		
		<p>Cost per item</p>	<p>Number Requested</p>	<p>Total Cost of Request</p>
<p>1. A new copy machine for the Atech 105 office area. <u>Reason:</u> The copy machine in ATEC 105 is often not working, and it is essential to the support of some student projects.</p>	<p>I</p>	<p>\$21,000</p>	<p>1</p>	<p>\$21,000</p>
<p>2. Five new drafting machines are needed for ATEC 109 for a total cost of \$5,000 <u>Reason:</u> To replace broken drafting machines in the classroom</p>	<p>I</p>	<p>\$1,000</p>	<p>5</p>	<p>\$5,000</p>

* 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).

** TCO = "Total Cost of Ownership" for one year is the cost of an average cost for one year. Please speak with your college Business Officer to obtain accurate cost estimates. Please be sure to check with your department chair to clarify what your current budget allotment are. If equipment needs are linked to a position please be sure to mention that linkage.

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.

7. Technology (Computers and equipment attached to them)++ Needs Not Covered by Current Budget: ³

NOTE: Technology: excludes software, network infrastructure, furniture, and consumables (toner, cartridges, etc)

Submitted by: Paul Van Hulle, Carlos Garcia and Gerald Cordier	Title: Manufacturing Instructor	Phone: 951-372-7108
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Annual TCO*

Priority	EQUIPMENT REQUESTED	New (N) or Replacement (R)?	Program: New (N) or Continuing (C)?	Location (i.e Office, Classroom, etc.)	Is there existing Infrastructure?	How many users served?	Has it been repaired frequently?	Cost per item	Number Requested	Total Cost of Request
1. Usage / Justification	New computers for ATEC 109	N	C	ATEC 109	Yes	36	No	\$2,499	36	\$89,964
2. Usage / Justification	Additional Memory	R	C	ATEC 109	Yes	36	No	\$30.52	69	\$2,200
3. Usage / Justification	Hard drives for the computers in ATEC 109	R	C	ATEC 109	Yes	36	No	\$41.59	69	\$2,900

* TCO = "Total Cost of Ownership" for one year is the cost of an average cost for one year. Please speak with your college Business Officer to obtain accurate cost estimates. Please be sure to check with your department chair to clarify what you current budget allotment are. If equipment needs are linked to a position please be sure to mention that linkage. Please speak with your Microsupport Computer Supervisor to obtain accurate cost estimates.

++Technology is a computer, equipment that attaches to a computer, or equipment that is driven by a computer.

Remember to keep in mind your college's prioritization rubrics when justifying your request.

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 "justification" section of this form.

8. Facilities Needs Not Covered by Current Building or Remodeling Projects*⁴

<p>List Facility Needs for Academic Year 2012 (Remodels, Renovations or added new facilities) Place items on list in order (rank) or importance.</p>	Annual TCO*
	Total Cost of Request
<p>1. None <u>Reason:</u></p>	

*Please contact your college VP of Business or your Director of Facilities, Operations and Maintenance to obtain an accurate cost estimate and to learn if the facilities you need are already in the planning stages.

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.

9. Professional or Organizational Development Needs Not Covered by Current Budget*⁵

List Professional Development Needs for Academic Year 2011-2012. 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.	Annual TCO*		
	Cost per item	Number Requested	Total Cost of Request
1. None (possibly consider AIA or Annual Planning Conference) <u>Reason:</u>			

*It is recommended that you speak with Human Resources or the Management Association to see if your request can be met with current budget.

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.

10. Student Support Services (see definition below**) Services needed by your unit over and above what is currently provided by student services at your college. These needs will be communicated to Student Services at your college⁶

List Student Support Services Needs for Academic Year 2011-2012

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.

1. Architecture is requesting two lab aides for assisting with organization of the lab and assisting students during classes.

Reason: During class the lab aide will be used to assist the instructor watch for unsafe action by neophyte students and to help students practice machine setup procedures. Outside of class the lab aide will be used to organize tool placement within the tool boxes and cabinets. The cost of these lab aides will be \$10/hour and he/she will be used for all classes during the entire class period. I recommend \$5,500 be allocated for lab aides.

**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.

⁶ 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. Library Needs Not Covered by Current Library Holdings⁷ Needed by the Unit over and above what is currently provided. These needs will be communicated to the Library

List Library Needs for Academic Year 2011-2012

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.

1. Technical Drawing (13th Edition) Frederick E. Giesecke
Reason: So the students can learn

2. Judy J. would recommend Thachen published Architectural books sold in small sets and individually. With enough resources these could be integrated into parts of the rendering or design program in the future. These are very economical books by industry standards --- some are as little as \$ 12.00

⁷ 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. Learning Support Center Services Not Covered by Current budget*.

<p align="center">List Learning Support Center Services Needs</p> <p>If your unit is responsible for running a learning support center such as the Writing and Reading Center, the Math Learning Center, Computer lab or similar learning support center please address those needs here. These do not include laboratory components that are <u>required</u> of a course. Place items on list in order (rank) or importance.</p>	<p align="center">Total Cost of Requests</p> <p align="center">If the cost is the responsibility of an administrative unit you do not need to list it here.</p>			
	Cost per item	Number Requested	Total Cost	Ongoing (O) or one-time (OT) cost
<p>1. None</p> <p><u>Reason:</u></p>				

*It is recommended that you speak with your college IMC and/or Lab Coordinators to see if your request can be met within the current budget and to get an estimated cost if new funding is needed.

13. OTHER NEEDS not covered by current budget⁸

<p>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.</p>	Annual TCO*		
	Cost per item	Number Requested	Total Cost of Request
<p>1. None <u>Reason:</u></p>			

⁸ 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.

14. **Long Term Planning Needs (2 – 5 years from now)**⁹ Be sure to reference your comprehensive review if it helps explain your needs.

<p>If your unit anticipates a significant* additional needs for personnel, equipment or facilities will occur two to five years from now please list those here*</p>			
	Fiscal Year Needed	Number Requested	Total Cost of Request
<p>1. None Field trip funding for transportation of students and entry to significant locations. These are essential for student learning and experience. It is expected by transfer institutions that students will have experienced the best and be able to evaluate and analyze aspects of the built environment.</p> <p><u>Reason:</u></p>			

**Significant needs are generally those with annual costs over \$20,000. They may be the result, for example, of institutionalizing a grant, anticipated growth, or major equipment coming to the end of its life.*

⁹ If your 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.

II. Annual Assessment Update

Annual Instructional Program Review Update

Outcomes Assessment

Directions: ACCJC standards require that RCCD faculty participate in ongoing and systematic efforts to assess courses, programs, and general education. Reports on specific assessment projects undertaken by individual faculty or groups of faculty in your discipline may be referenced here, but the primary purpose of this update is to provide an overview of your discipline's assessment activities (plans, data, responses to data, etc.) for the past year (spring 2010 – spring 2011) as well as your plans for assessing student learning in the coming year (spring 2011 – spring 2012). Your update will assist us in writing the comprehensive annual college-based assessment reports also required by ACCJC.

1. Looking specifically at spring 2010 and fall 2010, please indicate:

a. Which of your courses were assessed?

ARE 26 course, Architectural Rendering

b. What method(s) did you use to assess these courses?

Please see the Appendix A; ARE 26 course, Architectural Rendering

c. Were assessments undertaken by individual faculty members for their own sections or did instructors of particular courses collaborate to assess the course as a whole?

Individual faculty

- d. What did you learn from these assessments? (To what extent, in other words, did students meet your benchmarks in achieving learning outcomes; where did you locate problem areas in need of improvement?)

Please see the instructor's reflections under Assessment in Appendix A

- e. To what extent, and how, do your assessment results support your resource requests?

The assessments do not connect to the needs listed other than the equipment is getting old and needs to be replaced to be able to run the advanced industry software.

2. Please describe your discipline's dialogue on assessment, specifically assessment results. Where would one find evidence of this discussion?

Please see Appendix A – There is no full time faculty in this area and the part timers are conducting the assessment on an individual basis.

3. In the coming year, how do you plan to use assessment results to improve courses and/or programs?

Assessment indicates satisfactory results for all students learning outcomes.

4. If your assessment results have implications beyond your discipline (e.g., for other disciplines, for Student Services, college-wide), please indicate what those implications are.

No

5. If you have been involved in program-level assessment this past year (CTE faculty in particular), please indicate:

Please see appendix C for SLO/PLO assessment grid by subject

a. What modifications (if any) you've made in your Program Learning Outcomes

None

b. What you learned from the process of mapping and aligning your PLOs with your course SLOs?

Please see description in appendix "B"

c. What method(s) you used to assess your PLOs?

Faculty examined and analyzed final exams and portfolios from the students.

d. What you learned from your program-level assessment work?

Faculty discovered that majority of students are successfully meeting course SLOs and PLOs

e. How you shared and discussed results (e.g., through Community Advisory Committee discussions, discussions with employers, interviews of graduates, program faculty meetings)?

Faculty discussed results as a group.

f. Whether your assessment results have implications beyond your program (e.g., for other programs/disciplines, for Student Services, college-wide)?

No, they do not.

g. To what extent, and how, assessment results support your resource requests.

The assessments do not connect to the needs listed other than the equipment is getting old and needs to be replaced to be able to run the advanced industry software.

6. Provide an overview of your discipline's assessment plans for spring 2011 – spring 2012. Which courses do you plan to assess; how do you expect to be involved in program or general education assessment?

ARE 35 – History of Architecture

ARE 24 – Architectural Drafting

ARE 25 – Advanced Architectural Drafting

ARE 26 - Architectural Rendering

ARE 36 - History of Architecture , Part 2

ARE 37 – Architectural Design I

Faculty will perform assessment much like this past year by reviewing student portfolios and also by review of randomly selected final exams.

Appendix A; ARE 26 course, architectural rendering SLOs

ARE 26 – Architectural Rendering		
SPECIFIC SLO's	Method	Assessment
To formulate drawings by applying a variety of fundamental drawing and sketching techniques and methods.	<ul style="list-style-type: none"> • Students are assigned weekly sketch book activities, graphic thinking activities, and drawing projects to achieve this outcome. • A variety of project development techniques are also utilized throughout the course. 	<p>All active participants in the course have completed freehand sketches, contour and gesture techniques.</p> <p>No proposed changes. Could consider some addition of charcoal media to sketch book assignments</p>
To produce graphic presentation drawings applying the visual cues that support perceptions and representation of three dimensional space and form.	<ul style="list-style-type: none"> • Students are presented depth cue information in a power point presentation and expected to actively take notes. They are then asked to select multiple photos of exterior and interior settings and analyze the photos to define the depth cues that are present. • This knowledge is then applied to a rendering project where the subject is the exterior of a significant structure. 	<p>A project evaluation rubric is used to evaluate the student graphic presentation.</p> <p>All students submitting the project successfully applied a variety of visual cues contributing to the strong expression of three dimensional forms.</p>
To compose architectural and environmental design presentations in a variety of rendering media.	<ul style="list-style-type: none"> • At this point in the course the students have used only black and white media using graphite pencil and white pencils, and photography. The students will be using ink, color pencil, markers and mixed media. 	<p>Students have successfully completed presentations in digital photography and black and white pencil media.</p> <p>Digital media sketching will be considered in the future based on resource availability.</p>
To demonstrate the use of graphic design principles and apply graphic presentation principles to new situations.	<ul style="list-style-type: none"> • Students explore the value of tonal value in the presentation of a three dimensional item in a two dimensional format. This activity was a new experience to all students that involved the transformation of a mono tone white two dimensional object to a three dimensional composition. • The students apply specialized lighting and take multiple photographs the object. The students apply design presentation principles to select, modify and crop the images. They further apply the principles in the preparation of a final graphic 	<p>Students who have completed the Architectural Design course demonstrated slightly greater success in the use of space and balance. This may be attributed to the students' familiarity and experience with the expectations of the instructor in addition to the knowledge gained in the design course.</p> <p>No substantial changes are proposed. Greater detail in the directions and considerations in students self evaluation</p>

	presentation.	prior to submittal of the assignment will be drafted and implemented.
Construct and present compositions explaining the elements and visual cues using the correct graphic terms and vocabulary.	<ul style="list-style-type: none"> • Students have prepared verbal and graphic presentations expressing the good use of tonal values and the poor use of tonal values in black and white photography. • Students have prepared graphic and written analysis of depth cues in a variety of settings. 	<p>Students have demonstrated success within the present program where students present their own selections and own works.</p> <p>A future consideration is to specifically design a quiz presenting students with a variety of given examples and asking them to evaluate the images using correct terms and vocabulary.</p>
To synthesize and solve graphic presentation needs in an individual and group setting	<ul style="list-style-type: none"> • All students have demonstrated the ability to solve presentation needs on an individual basis. • Two groups of 6 students have voluntarily accepted the opportunity to participate in special community presentation projects. • All students will be participating in a timed graphic presentation in a simulated 'Deadline day at the Office'. • Students participate in non graded group creative problem solving activities. 	<p>Students are successful in synthesizing and solving graphic presentation needs in both individual and group settings.</p> <p>No change proposed, but would continue to seek out real life opportunities for students to become involved in as group problem solving opportunities.</p>

Appendix B: Course-Program outcomes matrix

Course-Program Outcomes Matrix

This matrix allows department or committee chairs to check for course-program SLO alignment in circumstances where SLOs have been identified at both levels and (ideally) have been assessed at the course level. Program leaders can simply place an X in cells where course SLOs and program SLOs clearly align, or they may indicate degrees of alignment more precisely by placing a **B** (indicating the program SLO is introduced or achieved at a *beginning* level), **I** (indicating that the program SLO is developed to an *intermediate* level), or **M** (indicating that the program SLO is achieved at a high level of *mastery*).

Name of program: Architecture - 2010-2011

Number of required units: 27

List program SLOs:

1. Students will demonstrate proficiency sufficient to apply for and obtain entry-level employment in the field of architecture by completing a set of residential working drawings, which may include first floor drawings, second floor drawings, foundation drawings, elevations, cross-sections, framing, electrical drawings, and structural details.
2. Apply the problem solving process to specific design situations.
3. Relate the impact of various cultural influences to the development of architectural styles.
4. Recognize principles of design and function in various architectural styles.

Course	Program SLO 1	Program SLO 2	Program SLO 3	Program SLO 4	Program SLO 5
ENE-21	B	B	B	B	
ENE-30	X	B	B	B	
ARE-24	X	X		X	
ARE-25	X-M	X		X	
ARE-26		X			
ARE-35			X	X	
ARE-36			X	X	
ARE-37		X		X	
ENE-60	X				

Which co-curricular activities, if any, might map to one or more of the program's SLOs?

Field trip activities would map to SLO1, 3, & 4.

What gaps, if any, exist between course SLOs and program SLOs? Are new courses required by the program to ensure its outcomes are being met or can existing courses be modified?

There are distinct differences (not gaps) between the courses listed above. The primary difference is that four of the courses have a technical focus, while two emphasize design - which nurtures artistic talent, and two courses cover the History of Architecture - which focuses on the nature of architecture throughout time. Motivated students in this program find a challenging curriculum, which will prepare them for transfer or entry into the working world of architecture.

What else have you learned from this process that can be used to improve learning in the program?

This process supports what the faculty have always felt is an outstanding, well-balanced program. This process highlighted the strengths Norco College's Architectural Program. This is reflected in the number of students who transfer on to National Architecture Accredited Board (NAAB) universities. The success of this program is also reflected in our Annual Program Review, which shows high rates of success and retention.

Prepared by Todd Wales, February 22, 2011.

Appendix C; SLO/PLO assessment grid by subject

RIVERSIDE COMMUNITY COLLEGE DISTRICT SLO BY SUBJECT 2011-2012		PLOs	PLO 1: An ability to apply and integrate computer technology in the design process, exhibiting skills necessary for entry-level employment in the architecture profession.	PLO Knowledge of architecture theory and practice in the solution of Architectural design problems related to industry.	PLO An ability to work effectively in small and large groups situations similar to those found in industry.	PLO The ability to apply the problem solving process to create and present design solutions.	PLO 5:	PLO 6:	PLO 7:
CERTIFICATE/PROGRAM: ARCHITECTURE									
COURSE: ARE-24, ARCHITECTURAL DRAWING									
SLO 1	Read a set of architectural plans.		X	X		X			
SLO 2	Complete set of residential working drawings.		X	X		X			
SLO 3	Identify all commonly used symbols on architectural plans.			X		X			
SLO 4	Analyze various design considerations when developing a planning checklist.		X	X	X	X			
SLO 5									
SLO 6									
COURSE: ARE-25, ADVANCED ARCHITECTURAL DRAWING									
SLO 1	Demonstrate the techniques of advanced construction concepts as it serves the process of communication between the architect/designer and the builder/contractor.		X	X	X	X			
SLO 2	Demonstrate the entry level job skills necessary to enter the field of architectural drafting.		X	X	X	X			
SLO 3	Analyze descriptions of building plans and sites, and provide written research of building codes and safety requirements		X	X		X			
SLO 4									
SLO 5									

RIVERSIDE COMMUNITY COLLEGE DISTRICT SLO BY SUBJECT 2011-2012		PLOs	PLO 1: An ability to apply and integrate computer technology in the design process, exhibiting skills necessary for entry-level employment in the architecture profession.	PLO Knowledge of architecture theory and practice in the solution of Architectural design problems related to industry.	PLO An ability to work effectively in small and large groups situations similar to those found in industry.	PLO The ability to apply the problem solving process to create and present design solutions.	PLO 5:	PLO 6:	PLO 7:
SLO 6									
COURSE: ARE-26, ARCHITECTURAL RENDERING									
SLO 1	Demonstrate rendering techniques necessary for design interpretation.		X	X		X			
SLO 2	Effectively present architectural projects in appropriate graphic presentation forms.		X	X		X			
SLO 3	Work on problem solving projects both individually and in groups.		X		X				
SLO 4									
SLO 5									
SLO 6									

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COURSE: ARE-28, PERSPECTIVE DRAWING									
SLO 1	Understand how we perceive the three dimensional environment and how we apply principles of convergence, size, location, texture, and light to drawing.			X		X			

**RIVERSIDE COMMUNITY COLLEGE DISTRICT
SLO BY SUBJECT**

		PLOs	PLO	PLO	PLO	PLO	PLO 5:	PLO 6:	PLO 7:
			An ability to apply and integrate computer technology in the design process, exhibiting skills necessary for entry-level employment in the architecture profession.	Knowledge of architecture theory and practice in the solution of Architectural design problems related to industry.	An ability to work effectively in small and large groups situations similar to those found in industry.	The ability to apply the problem solving process to create and present design solutions.			
SLO 2	Understand the Concepts of Graphic tools – cues for distance and form, relationships of surfaces and edges, shaded surfaces and casting shadows.			X			X		
SLO 3	Create appropriate and technically correct one-point, two-point perspective, and multi-point drawings and sketches.			X			X		
SLO 4	Apply the principles of Tonal Value and Relative Tonal Value to communication form and space.			X			X		
SLO 5	Demonstrate knowledge of how to apply shades and shadows in drawings to basic forms and shapes on a variety of surface conditions.			X			X		
SLO 6	Analyze and apply the appropriate graphic construction techniques in drawings and sketches.			X			X		
COURSE: ARE-36, HISTORY OF ARCHITECTURE – RENAISSANCE TO MODERN									
SLO 1	Demonstrate ability to define and discuss architectural terms correctly.			X			X		
SLO 2	Recognize principles of design, function and aesthetic			X			X		

RIVERSIDE COMMUNITY COLLEGE DISTRICT SLO BY SUBJECT		PLOs	PLO	PLO	PLO	PLO	PLO 5:	PLO 6:	PLO 7:
			An ability to apply and integrate computer technology in the design process, exhibiting skills necessary for entry-level employment in the architecture profession.	Knowledge of architecture theory and practice in the solution of Architectural design problems related to industry.	An ability to work effectively in small and large groups situations similar to those found in industry.	The ability to apply the problem solving process to create and present design solutions.			
	characteristics.								
SLO 3	Identify a monument, name of work, location, period style and architect.			X			X		
SLO 4	Relate impact of various cultural influences to the development of architectural styles.			X			X		
SLO 5	Work on problem solving projects both individually and in groups.								
COURSE: ARE-37, ARCHITECTURAL DESIGN I									
SLO 1	Present alternative design strategies to the ultimate solution of a problem.			X		X	X		
SLO 2	Discuss different procedures architects use in design development.			X		X	X		
SLO 3	Plan, carry out and reflect on a process for creating design solutions.	X	X	X	X	X	X		
SLO 4	Generate a variety of solutions to defined two and three dimensional design problems.	X	X	X	X	X	X		
SLO 5	Design abstract compositions and spaces that range from implied to explicit.		X	X	X	X	X		
SLO 6	Understand a range of ways that basic design principles can be employed to create relationships between elements within a design or presentation.		X	X	X	X	X		

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		PLOs										
		PLO	An ability to apply and integrate computer technology in the design process, exhibiting skills necessary for entry-level employment in the architecture profession.	PLO	Knowledge of architecture theory and practice in the solution of Architectural design problems related to industry.	PLO	An ability to work effectively in small and large groups situations similar to those found in industry.	PLO	The ability to apply the problem solving process to create and present design solutions.	PLO 5:	PLO 6:	PLO 7:
SLO 7	Analyze how basic design concepts have been used to create design solutions.			X		X		X				
SLO 8	Understand the value of conscious application of the basic design principles to the creation, development and communication of ideas.	X		X		X		X				
SLO 9	Understand the difference between a design concept and a specific design.			X		X		X				

<p align="center">RIVERSIDE COMMUNITY COLLEGE DISTRICT SLO BY SUBJECT</p>		<p align="center">PLOs</p>						
<p>COURSE: ARE-35, HISTORY OF ARCHITECTURE – BEGINNINGS OF ARCHITECTURE THROUGH GOTHIC ARCHITECTURE</p>		<p>PLO</p>	<p>PLO</p>	<p>PLO</p>	<p>PLO</p>	<p>PLO 5:</p>	<p>PLO 6:</p>	<p>PLO 7:</p>
<p>SLO 1</p>	<p>When asked to communicate about architectural monuments will use architectural terms appropriately and correctly.</p>				<p align="center">X</p>			
<p>SLO 2</p>	<p>When shown a monument(s) will be able to recognize the principles of design, identify the aesthetic characteristics and style.</p>				<p align="center">X</p>			
<p>SLO 3</p>	<p>When shown multiple images will distinguish the characteristics and categorize by monument, period style, designer, or location.</p>				<p align="center">X</p>			
<p>SLO 4</p>	<p>When asked to analyze a monument will describe the influences, conditions and impacts in the development of architectural styles and significant architectural works.</p>				<p align="center">X</p>			