

**Cerritos College
Instructional Program Review**

Instructional Program Review Submittal Form (Appendix F)

This form is completed and submitted as a cover sheet for the self-study report

Name of the Program ARCHITECTURE

Date Submitted 11/29/18

Scheduled Presentation Date 11/20/18

All courses in the program have been reviewed by the Curriculum Committee within the last six year cycle (circle one) Yes No

Explain any exceptions for non-compliance with curriculum requirements:

The self-study report adequately addresses the following components:

| Description of the Program | Yes | No |
|--|-----|----|
| Course and program content | X | |
| Student demographics | X | |
| Human resources | X | |
| Instructional Improvement | Yes | No |
| Teaching effectiveness | X | |
| Activities to improve student learning | X | |
| Course grading | X | |
| Course and program completion | X | |
| Program outcomes | X | |
| Core indicators (if vocational) | X | |
| Student feedback | X | |
| Institutional data | X | |
| Other | Yes | No |
| Strengths and weaknesses of the program | X | |
| Opportunities and threats of the program | X | |
| Goals of the program | X | |

Self-Study prepared by: EDWARD ROTHER

Reviewed by (Division Dean):  11/29/18

Cerritos College CTE Program Review, Fall 2018

Program: Architecture

Division: Technology

Submitted by: Edward Rother

Program Description

The Cerritos College Architecture Department (ARCH) offers intellectually stimulating pre-professional degree and certificate programs for men and women. The faculty is comprised of individuals actively involved in professional practice, energy conservation, green technology and preservation research. The curriculum consists of two complementary paths: (1) for students who will continue their studies and transfer to a professional school of Architecture, and (2) for students seeking job skills to either enter the work force or to enhance their current employment marketability. Most courses are laboratories allowing students close contact with faculty and other students to further advance the exchange of ideas and intellectual development.

The Cerritos College Architecture Department serves the college in three principle areas. First, approximately 135 students per year are classified as Architecture majors with an ultimate goal of obtaining a certificate or degree in Architecture and/or preparing to transfer to a professional school of Architecture. Second, the department provides two general education courses (ARCH 110 and ARCH 112) for approximately 125 students per year in the Fine Arts. Third, the remaining students are enrolled in courses for personal enrichment or to obtain new or increase their existing job skills.

The Architecture Department offers a wide range of courses to meet the diverse needs of our student population. The program consists of thirteen courses, two Associate in Arts Degrees, and one Certificate of Achievement – all detailed in the Cerritos College 2018-2019 catalogue. The thirteen courses can be broken down into the following five areas of study: Building Information Modeling (BIM), Computer Aided Drafting and Design (CADD), Design, Drafting, and Professional Practice/Survey.

The Architecture Department is comprised of one full-time faculty member and five adjunct faculty members. Because of the decreased enrollment during the past 3-4 years, the current faculty are adequate to meet all staffing needs. All adjunct faculty members are currently practicing professionals to ensure the course materials maintain currency to changing industry practices. The only full-time faculty member is eligible for retirement, which may occur during the next six year program review cycle.

Institutional Data

A majority of instructional data was provided by the Cerritos College Department of Institutional Effectiveness, Research and Planning. The data included course

completion, fill, success rates; FTES, WSCH, Degrees and Certificates Awarded, and number of registered major. Supplemental data was obtained from the California Community Colleges DataMart. This data included FTES data from surrounding community colleges offering Architecture programs

WSCH/FTEF:

For the five year span from 2012 to 2017, the WSCH has decreased from 2968 to 2384, a 20% drop, which is the same as the drop in FTES during this period. The 2018 enrollment was particularly weak with the WSCH dropping to 1977. This was the result of increased class cancellations due to lower enrollments. Projecting the actual WSCH count for the fall 2018 semester for the entire year results in a projected WSCH for the 2018-2019 year of approximately 2350, or back to 2017 numbers.

For the six year span from 2012 to 2018, the WSCH/FTEF has decreased from 545 to 400, a 27% drop, which is a reflection of the decrease in fill rates during this period. Many Architecture classes are lab classes that are limited to 28 seats. At full enrollment, these classes would have an individual WSCH/FTEF of 480. There will be instances where the WSCH/FTEF ratio exceeds the state target of 525 but this requires a fill rate exceeding 95% for all classes or overfilling classes with one or two students. For 2012-2013, the only year the WSCH/FTEF exceeded 525, 6 of the 27 classes were over enrolled – not a desirable option. A more realistic target would be 470-480 but the department has fallen 15-20% below this target during the past two years. The solution is to increase the fill rate.

FTES

For the six year span from 2012 to 2018, the FTES range was 100.99 to 68.08 with a mean of 87.44. Trend was generally on decline from 2012 to 2018 with a brief incline in 2014.

The total FTES from 2016-2018 was 21% lower than 2012-2014. Of the ten other community colleges in the region, four had a larger percentage increase and six had a smaller percentage increase. The region as a whole decreased 16% from 2012-2014 to 2016-2018.

For the five year span from 2012 to 2017, the median age of students enrolled in Architecture courses has decline from 27 to 21. During 2012 and 2013, students aged 25 and over were the largest cohort of students enrolled in Architecture courses. However, from 2012 to 2017 this cohort group has decreased sharply from 407 students in 2012 to 89 students in 2017. This group traditionally are working adults and as the economy has grown, their job availability has increased and need to attend college has decreased. This decline has negatively affected the department's FTES, particularly for evening classes.

During the 2014-2017 years, students aged 19-24 were the largest cohort of students enrolled in Architecture courses. This group is traditionally high school graduates. Even

though their enrollment increased, a majority of this was due to increased enrollment in the two general education courses, ARCH 110 and ARCH 112, and did not lead to enrollment increases in other Architecture classes as they were just satisfying their general education requirements and did not enroll in other Architecture classes. ARCH 111 serves as the feeder course for upper division Architecture courses but the number of students enrolled in ARCH 111 decreased from 117 on 2012 to 41 in 2017. This decrease was primarily driven by the cancellation of classes that were previously filled by those students aged 25 and over.

Degrees and Certificates Awarded

For the six year span from 2012 to 2018, Architecture granted 64 Associate degrees and 34 Certificates. Counts fluctuated yearly but overall was stable. During the same period, Cerritos College granted 9,497 Associate degrees and 7,094 Certificates. The Architecture Department contributed 0.67% of the degrees and 0.48% of the Certificates and was 0.48% of the college's FTES.

From 2012 to 2018, the number of Certificates Cerritos College granted increased from 715 to 2,273. This large increase was due solely to the increase in Certificates granted by the Business Administration department (+535) and General Education (+897). Architecture's percentage contribution decreased during this period because of the college's increase in Certificates granted a result of adding more certificates available to students. The Architecture department plans to add new certificate programs to increase its contribution rate to campus Certificates.

From 2012 to 2018, the number of Associates degrees Cerritos College increased from 1,291 to 1,660. This increase was due to the increase in Associates degrees granted by the Business Administration department (+144) and the Humanities Division (+199). The new Architectural Studies AA degree is expected to increase the Architecture department's contribution rate to campus Associates degrees.

Majors

The program was trending upward from 2012 (112 students declaring the major) to 2014 (152 students), followed by two lower years, then a return to 158 students in 2018. This fluctuation is likely the result of faculty encouragement for all undecided students to declare architecture as their major.

For the five year span from 2012 to 2017, 61% of the students declared Architecture Transfer as their major, with the remaining 39% declaring Architecture Technology. In 2018, the Architecture Transfer AA was replaced with the Architecture Studies AA. The counseling department dictated this change as students who transferred to professional schools of Architecture would receive credit for all of their units but very few received credit for a particular course. This situation is typical for all California community colleges as the five year B.ARCH program is not the same as the typical B.A. or B.S.

degree. It is anticipated that the Architecture Studies major will be the most popular for students.

Enrollment/Fill Rate

For the six year span from 2012 to 2018, the class fill rate range was 73% to 97% and on average 82%. Trend was overall on the decline. This is consistent with an overall declining FTES and WSCH during the same period.

Course Completion/Retention Rate

For the six year span from 2012 to 2018, the average completion rate by course ranged from 78% to 99% and on average 86%. Trend was quite stable across six years and much higher than the campus average.

Successful Completion/Success Rate

For the six year span from 2012 to 2018, the average success rate by course ranged from 70% to 96% and on average 77%. Trend fluctuated year to year and is much higher than the campus average.

Grade Distribution Data (Disaggregated)

Data from R&D has been requested but was unavailable by the due date of this report.

SWOT Analysis

Strengths

1. Architecture students were awarded AA degrees higher than the expected numbered compared to the campus average. The Architecture Department contributed 0.67% of the degrees but was only 0.48% of the college's FTES.
2. For the last three academic years, the number of students who transferred to professional schools of Architecture was at an all-time high. Seven students transferred in 2017 while six students transferred in 2018 – since 1990, the previous yearly high was only three students.
3. All adjunct faculty members are currently practicing professionals to ensure the course materials maintain currency to changing industry practices.
4. Faculty members have reached out to educational advisors from local professional schools of Architecture to make class presentations about what their schools offer, their specific transfer requirements and available financial aid.
5. The program retention (86%) and completion (77%) rates are above the institution set standards.
6. The department has collaborated with the Cerritos College Strong Workforce Internship Program to assist students in gaining hands-on work experience required to succeed in the industry.

Weaknesses

1. The department needs to put all classes on Canvas – currently all classes by the full time faculty member are on Canvas but the adjunct faculty has been slow to fully adopt Canvas.
2. The Architectural Advisory Committee membership is small – consists of 15 members but only 20-25% attend any particular meeting.
3. Architectural enrollment has decline 31% during the past three years from 2897 WSCH in 2014-2015 to 1977 WSCH in 2017-2018.
4. The Architecture Department does not offer any Distance Education courses.
5. The Architecture Department does not know where students who leave the program went – i.e. did they discontinue their academic studies, transfer or find employment.

Opportunities

1. The Architecture Design Club has been active in recent years thereby increasing student involvement and learning.
2. AutoDesk offers advanced training for their existing software programs used in the Architecture Department plus an insight to future programs.
3. The department has offered “Project Lead The Way” classes for high school students and many local high schools students have receive credit for ARCH 104 based on their high school classes.
4. The process to create new certificate programs has been simplified and is now faculty driven.

Threats

1. Local high school enrollments have decreased and are projected to continue their downward trend. A majority of Architecture students are from local high schools, which has the potential of lower enrollments from this cohort group.
2. The economy has been performing well with continued high employment. The decreased participation from working adults has led to a dramatic decrease in their college attendance, particularly for evening classes.
3. Students entering the department are demonstrating a lack of basic and study skills, specifically with reading comprehension and math. They are under-prepared for college-level coursework.
4. Local Architecture universities are accepting more high school students thereby reducing the number and quality of students seeking community college Architecture courses.

Goals of the Program

| Ref | Goal | Action to be taken | Completion Date | Person assigned |
|-----|---|--|-----------------|---------------------------|
| | Short-term | | | |
| O1 | The continuation of the Architectural Design Club. | Coordinate activities to ensure that the club identifies future leaders to replace the current leaders who leave the college. | Spring 2019 | Club Leaders Rother |
| O4 | Create three new certificate of achievements programs. | Process new certificate of achievements through the curriculum committee and the LAOC Regional Consortia. | Spring 2019 | Rother |
| W4 | Update three course outlines to offer Distance Education courses. | Process course updates through the curriculum committee for the following courses: ARCH 110, ARCH 112 and ARCH 113. | Spring 2019 | Rother |
| | Mid-range | | | |
| W1 | Have 100% of adjunct faculty courses on Canvas. | Adjunct faculty will put all of their courses on Canvas. | Fall 2020 | Adjunct Faculty Rother |
| W2 | Increase the Architectural Advisory Committee membership from 15 to 25. | The department will increase recruitment activities including contacting local architecture firms seeking new committee members. | Fall 2020 | Adjunct Faculty Rother |
| W3 | Make at least three promotional visits to local high schools annually. | Attend more local high school college fairs, regional advisory committee meetings, and high school class visitations. | Fall 2020 | Rother |
| W3 | Revise class scheduling. | Revise class scheduling to reduce low enrollment classes to match student available times. | Fall 2019 | Rother |

| | | | | |
|----|--|---|-----------|----------------------------|
| W4 | Prepare instructors to offer Distance Education courses. | Obtain training through CTX to become certified to teach Distance Education courses. | Fall 2020 | Rother Adjunct Faculty |
| O2 | Receive advanced AutoDesk Training. | Attend the annual AutoDesk University, typically offered in November in Las Vegas, NV. | Fall 2019 | Rother |
| O3 | Enroll 10% of the high school students who have received credit for ARCH 104 in a Cerritos College Architecture class. | Contact local high schools offering PLTW courses to explain the benefits of and coordinate student enrollments at Cerritos College. | Fall 2019 | Rother |
| | Long-range | | | |
| S2 | Develop a tool to determine how many and to which college students transfer to. | Consult with the college Research and Planning staff and enhance social outreach programs. | Fall 2022 | Rother Research & Planning |
| S4 | Maintain contact with local professional schools of Architecture regarding changing transfer requirements and available financial aid. | Faculty members will continue to reach out to educational advisors from local professional schools of Architecture and update student information activities as required. | Fall 2022 | Rother Adjunct Faculty |
| W4 | Offer a Distance Education course. | Offer at least one Distance Education course from the following: ARCH 110, ARCH 112, and/or ARCH 113. | Fall 2021 | Rother Adjunct Faculty |
| W5 | Develop a tool to track students who discontinued their academic studies, transferred, or found employment. | Consult with the college Research and Planning staff and enhance social outreach programs. | Fall 2022 | Rother Research & Planning |

Annual Student Learning Outcome (SLO) Assessment Goals (Appendix E)

In your self-study report, answer the following questions:

1. Describe your assessment plan:
 - a. How often do assess?
 - i. Course SLOs (CSLOs) **Annually**
 - ii. Program SLOs (PSLOs) **Annually**
 - iii. Institutional SLOs (ISLOs) **Never**
 - b. What overall percentage of CLSOs have been assessed and documented in eLumen in the past five years (Use the table below.) **See the table on the next pages including the comments provided after the table.**
2. What has your department learned from the assessments? Describe any analysis from the assessment results that your department has identified by the assessment data. Be specific as to courses and specific CLSOs in your description. **Less than 17% of reported SLO(s) results were classified as “emergent”. Analysis indicated the primary cause for these were student confusion about faculty presentations and differences about project expectations, which resulted in lower grades.**
3. Describe any action/improvement plans that resulted from your department analysis described in 2 above. **Faculty reviewed their presentation materials (PowerPoint slides, lecture notes, handouts) to identify and correct areas that might lead to student confusion. Faculty also reviewed their course assignments and clarified project expectations. SLO(s) were updated to more accurately reflect classroom topics.**
4. Describe any evaluations your department has developed from implementing your action/improvement plans. **The improvement plans were evaluated during the next course offering. Because the same faculty teaches most courses every semester, student learning could easily be compared to the previous course offering to determine if student understanding improved.**

Please complete the tables below to demonstrate that your department is completing the assessment goals.

| Degree and/or Certificate SLO(s) | | | | |
|---|--|---|--|--|
| Academic Year | Number of Degrees and/or Certificates Offered by the Department | Number of Degrees and/or Certificates Assessed by the Department | Number of Degree and/or Certificate SLOs identified by the Department | Total Number of Degree and/or Certificate SLOs Assessed by the Department |
| 2016-2017 | 3 | 3 | 18 | 10 |
| 2015-2016 | 3 | 3 | 18 | 8 |
| 2014-2015 | 3 | 0 | 18 | 0 |
| 2013-2014 | 3 | 0 | 18 | 0 |
| 2012-2013 | 3 | 3 | 18 | 15 |
| 2011-2012 | 3 | 3 | 18 | 15 |

Because not all courses required to assess every Degree/Certificates SLO(s) or PSLOs were offered every year, annually assessing all PSLOs is not possible. See the comments below the Course SLO(s) table below for more information and limitations.

| Course SLO(s) | | | | |
|----------------------|--|---|--|---|
| Academic Year | Total Number of Courses Offered by the Department | Total Number of Courses Assessed by the Department | Total Number of Course SLOs offered by the Department | Total Number of Course SLOs Assessed by the Department |
| 2016-2017 | 11 | 4 | 55 | 20 |
| 2015-2016 | 10 | 6 | 50 | 30 |
| 2014-2015 | 11 | 0 | 55 | 0 |
| 2013-2014 | 10 | 0 | 50 | 0 |
| 2012-2013 | 11 | 5 | 55 | 25 |
| 2011-2012 | 11 | 5 | 55 | 25 |

A majority of courses are single section and taught by adjunct faculty. The Architecture Department consists of thirteen courses but during the past six years typically only 7 courses are offered per semester – of these 4 are solely taught by adjunct faculty, 3 are solely taught by full time faculty and 2 are multi-section which are primarily taught by

adjunct faculty, except for ARCH 111 which is taught by adjunct and full time faculty 20% of the time. About a quarter of all courses are offered once every two years so assessing SLO(s) for all courses on a yearly basis is impossible. Adjunct faculty volunteer to complete some SLO(s) although not a majority of the time due to the increased unpaid time commitment. The department is hopeful that adjunct faculty will be compensated for assessing SLO(s) which will increase participation rates significantly. Communications with the SLO committee have indicated that annual assessments are acceptable but the department should assess each course at least once. During the past six years 11 of the 13 ARCH courses have been assessed (ARCH 114 and ARCH 221 the exceptions) while 7 courses have been assessed at least twice. One year the SLO committee advised the college to assess only those classes that had multiple sections and instructors. For the Architecture Department that applied to only one course. Courses were assessed during 2013-2014 but were not shown in the eLumen output data. Faculty have reported that not all inputted data is present in eLumen. 2014-2015 was a sabbatical year for the only full time faculty member.

All SLO(s) are directly tied to test questions and completion of a particular project. Data inputted to eLumen as SLO results were essentially derived from gradebook scores. Faculty evaluate SLO(s) on a continuous basis in the class room after entering grades and make adjustments as necessary. Noting that a majority of courses are single section and generally taught by the same faculty year-to year, faculty do not have access to other faculty members who have experienced the same course issues. Faculty do correspond with others seeking out ideas for program improvements, but fortunately less than 17% of all reported SLO(s) results were classified as “emergent”.

**Cerritos College
Instructional Program Review**

Instructional Program Review Checklist (Appendix G)

This form is completed by the IPR committee during the review of each program's self-study report presentation (Phase 4)

Name of the Program Architecture

Visitation Date November 20, 2018

IPR Committee Liaison Ernest Lew

| Evaluation of Compliance with Institutional Requirements | Yes | No |
|---|------------|-----------|
| All courses in the program have been reviewed by the Curriculum Committee within the last six year cycle? | X | |
| Program is in compliance with guidelines established by the Student Learning Outcomes task force? | X | |
| Institutional Data used is current as of the draft due date? | X | |
| Program and Primary Data included information which is less than 2 years old? | X | |

The self-study report adequately addresses the following components:

Description of Component

| Description of the Program | Yes | No |
|--|------------|-----------|
| Course and program content | X | |
| Student demographics | X | |
| Human resources | X | |
| Instructional Improvement | Yes | No |
| Teaching effectiveness | X | |
| Activities to improve student learning | X | |
| Course grading | X | |
| Course and program completion | X | |
| Program outcomes | X | |
| Core indicators (if vocational) | X | |
| Student feedback | X | |
| Institutional data | X | |
| Other | Yes | No |
| Strengths and weaknesses of the program | X | |
| Opportunities and threats of the program | X | |
| Goals of the program | X | |

Cerritos College
Instructional Program Review

Instructional Program Review Approval Form (Appendix H)

ARCHITECTURE

Committee Action taken:

Approved



Not Approved



Recommendations:

Good report!

Program Review Chair

 A. Conley

Explanation for non-approval: