Architecture Department
Program Review
Fall 2015

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1.Overview of Program

Description of program

The Profession of Architecture is in the midst of a complete paradigm shift. Architecture, Design, Construction and other building industries now holistically integrate a wide range of computer technologies into all aspects of the design process and practice. The advancement of design and communication innovations, including 3d printing, CNC fabrication and Building Information Modeling using various computer aided design software creates both a need and an opportunity for the El Camino School of Architecture to respond. We offer students a sufficient foundational education in the field of Architecture so that upon graduation, the student will either be able to be employed in a professional office or transfer, in advanced standing, to a university architecture program. All of the teachers in our department are professionals, practicing some form of architecture in the Los Angeles area. Various kinds of computer, (as well as manual,) graphic presentation techniques, which architects use in daily practice, are taught in most of the courses within the program.

Program History

Historically, Architectural Drafting was one of the original classes offered when El Camino opened its doors to the people of the South Bay for business in 1947. At that time and until the late 1960's, it was a series of courses that existed in the Drafting Department in the Division of Industry & Technology. The first Architecture Department Program originated in the early 1970's when the Drafting Department split into three separate programs; Mechanical Drafting, Technical Illustration and Architectural Technology. An Orientation class and numerous design-oriented courses were added in the 1980's to add substantial critical thinking projects in the curriculum and to evolve it into a more functional transfer program. The Design Studio is the foundation class of the architecture curriculum at the university level of education, so the faculty felt, at that time, if we are going to transfer our students to the university architecture programs, the design studio has to be an important part of the curriculum of our program, so students can create portfolio material to transfer to a university at an advanced level.

In the 1990's the personal computer changed the way architects communicate, so numerous computer-aided-design classes were added in this decade, to stay current with the graphic trends in the field. Also, at the same time the department decided to change the course outlines on numerous lecture/lab courses to reflect an "open" lab time, where each student documents the required lab time on a timesheet, instead of a specific assigned lab time. We did this, at the time, so that a student may enroll in numerous classes attend the required lecture but document the required lab time for each class around their work/school schedule. Our department refers to the "Lab" as the "Design Studio" and was opened from 7:30am to 9:00pm every weekday and 9:00am to 3pm on Saturdays. During this Open Lab time there is always an architecture instructor in the Lab to answer any questions a student may have about any assignment an architecture student may have for a class they are currently taking. At that time many students could not take many of our classes because of the time commitment of the lecture and lab time together did not fit into their academic class schedule and we also had a problem with unemployed students were also coming back to school to expedite the process of getting re-trained in another vocation.

The first decade of the 21st Century brought some new innovations to the Architecture Program; First, an inter-disciplinary/department class was introduced; the Design-Build Studio. This class is team taught by Construction and Architecture faculty with students from each of those respective departments co-mingling to problem-solve & learn more about the other's discipline. This innovative class starts out in the architecture design studio, where each student is given the same building problem to solve for a design competition. Several winners are chosen and the class is divided up into teams of six to go out into the construction yard and build the winning solutions. Various times throughout the construction process of the class, the students have to go back to the architecture design studio to graphically figure out problems with the construction details of the buildings, which were not thought of when the construction documents were being prepared.

We also started a Study Abroad program, going to Italy in 2002, 2004, 2007, 2011 & France in 2010. The architectural faculty believes that it is an important part of the educational process for architecture students to travel to foreign countries to learn more about the cultural aspects and to understand what materials other cultures use in construction and the

process in which they build their structures. Students also learn from the historical aspects of buildings in different countries built over various historical time periods. The faculty has witnessed many students lives changed for the better from what they experienced on these study abroad trips.

The last five years have seen several changes in the operation of our department. First, the "Open Lab" concept has been terminated and we have returned to connected Lecture/Lab times. The faculty feels that holding class this way gives the students in the lectures time to collaborate and work in groups in the lab portion of the class, which is held in the studio space. The last Program Review, written in 2011 initially stated that we were primarily a "Vocational Oriented Program." We see a shift in thinking, even though we teach vocational topics, (like how to engineer the sizes of structural members in a building or how to prepare construction documents,) we are adding more critical thinking problem solving projects for the student to work on, both solo and in groups. The department feels strongly that teaching students how to collaborate is an important objective which will make students understand better what working on teams in an office full of people with the same goal, is like. We have changed the course content of every course in our department so now they all have critical thinking problems for students to solve in a group exercise, so that the objective is attained. The other new addition of curriculum, since our last program review, is the addition of four new courses written and approved by the College Curriculum Committee for the newly revamped Environmental Technology Department. This program is currently completely staffed by architecture department faculty. Subjects dealing with the history of Sustainability and Green Construction practices are just a few of the new things that the coursework from this department teaches in these new classes. Even though these classes are directed at almost all of the disciplines taught in the departments in our division, Architecture students are encouraged to take all these classes and get this certificate of competence as well, because concepts like; Sustainability, Green and other Environmental Issues that play a big part in the education of students that will design the buildings of our future.

Conclusion

Recognizing both the changes in technology and the need for more students to be able to transfer in an advanced status, the future development of more coursework is necessary and the following changes are proposed: Add more Design Studio coursework to create more portfolio material that shows depth of knowledge of conceptual generation and evolution into a building.

Architecture now operates this way at all levels: professionally, academically and in the field, as well. Administrators, students and especially teachers need to embrace the possibilities in our discipline and constantly keep updating our classes to reflect current technology the student will find at the University, when they transfer or the office where they will intern at. Saying all of that, it has become fashionable in many architectural college programs to declare the death of hand drawing. The computer now has tremendous ability to organize and present data, the computer is transforming every aspect of how architect's work, from sketching the first impressions of a concept to creating complicated construction documents for contractors. With all this technology the computer now provides, architecture still cannot divorce itself from manual drawing. Freehand drawings are part of the thought process in evolving an idea into a building. Drawings express the interaction of our minds, eyes and hands. There is a certain joy in the creation of a drawing, which comes from the interaction between the mind and the hand. After studying computer software that has "Parametric Design Capabilities" which allows the computer to generate 3D form from a set of instructions, which results in what some architects refer to as "Blob Architecture." The designs the computer makes are interesting, in their own way, but these drawings lack the emotional content of a design derived by the hand. Drawing by hand stimulates the imagination and allowed us to speculate about ideas, much more than a computer ever would. Many Community College Architecture programs have abandoned their courses that teach freehand drawing techniques, but the Architecture faculty at El Camino feels it is still a necessary part of a students' education and another way of creating a medium to express an idea for the solution of a design problem. So even though we keep adding new digital coursework to our curriculum, we cannot forget the necessary foundational graphic hand drawing courses that students need, to communicate their ideas to design, and evolve the design into unique spaces, which is the primary thing architects do.

b) **Degrees and Certificates Offered**

The Architecture Department currently offers one Associate of Science Degree in Architecture and a Certificate of Competence. Completion of an Associate in Science Degree in Architecture qualifies the student a year of accredited education requirement towards the required internship and education minimum requirements to obtain a license to practice architecture.

The Architecture Department currently has proposals for four more certificates in the College Curriculum Committee Process;

1) Certificate in Computer Aided Design
2) Certificate in Interior Design
3) Certificate in Architectural Design
4) Certificate in Construction Documentation

The Architecture Department is in the process of writing another course in Building Information Modeling, (B.I.M.) series and upon approval of that course the department will apply for another Certificate in B.I.M.

c) **Alignment with the College's Mission Statement**

El Camino College offers quality, comprehensive educational programs and services to insure the educational success of students from our diverse community. In alignment with initiatives B and C, the Architecture department strives to strengthen quality educational and support services to promote student success and foster a positive learning environment and sense of community and cooperation through an effective process of collaboration and collegial consultation.

El Camino College Architecture students will be able to design buildings in accordance with the new Green Building and International Building Code and then create the construction documents for said buildings, so that a licensed contractor(s) will be able to build the designed building. Students will also be able to problem solve in every class through evaluation and analysis. They will provide rational answers to each design problem given through this process.

d) Status of Previous Recommendations

The status of the recommendations itemized in the fall of 2011 Architecture Program Review is as follows:

1. We asked for more computers in our Lab. (Partially Completed) **We received 40 new computers since the last Program Review. We still need more as accessing computer software is a part of every course now. Students are encouraged to buy laptops, but we are still far away from the day when every student will have one.**

2. We asked for a small copier. (In Progress) **We have not received the copier yet, but as a department we are trying to use the copy center.**

3. We asked for a CNC Laser cutting machine. (In Progress) **We have not received one of these but have moved into a new building here there is one, down in the basement in the Machine Tool Technology Program. The faculty is going to see if the Architecture department can use this machine as well.**

4. We asked for an increase in our Supply Budget. (Partially completed) **We have had a slight increase in our budget over the past 5 years but not significant enough to make the changes for the supplies to keep our printer/plotting devices running smoothly.**

5. We asked for more lecture rooms and labs. (Partially Completed) **We just moved into the new ITEC building and now have one studio/lab space, with a lecture room and a computer lab room. We lost a studio space, (we had two rooms we were using as labs in the old Tech Arts building we inhabited,) so the time for our new Lab space is coveted.**

6. Full time instructor. (In Progress) **We have not received another full time teacher yet but need a Full time instructor now, more than ever, because of the added weight of the Environmental Technology courses that our faculty currently teaches.**

2. Analysis of Research Data

a) Head Count of Students in Program

The Head count this semester is 243 students in 12 Sections of classes. The data indicates significant student participation in the architecture program over the last four years. These numbers show strong student support for the program. We expect these numbers to continue to improve as we develop our course content, and develop new course offerings as the program continues to evolve with technological advances. Our program has continued to change to meet the needs of our students based on various factors including our advisory committee. We are continuously seeking to provide students with a greater opportunity for career advancement and mobility. We have a very diverse student population; one that reaches across the gender and ethnicity spectrum, which clearly reflects the real world that our students are about to enter.

b) Course Grade Distribution

The distribution of grades is relatively consistent across the years, having success ratios of 78% in 2010, 72% in 2011, 70% in 2012 and 72% in 2013. The majority of those success percentages are A's and B's but there is room for improvement as we evolve as a department we will strive to have a 90% ratio of success with our program. We probably will not get a ratio higher than that because not every beginning student is successful because it ends up not being what they thought is was going to be and usually more work than they expected.

c) Success Rates

Course grading over the last four years has been consistent, with the distribution of grades in the A, B, and C range. The "W" is of concern, but typically a result of personal issues rather than institutional issues, such as employment issues or family health issues.

d) **Retention Rates**
The Architecture Department retention rates vary from course to course and from year to year. The retention rate, for example, in a beginning course is typically lower than that of an advanced course. The Retention Rate in the Architecture Department, is higher than the latest institutional rate and the Industry and Technology Division rate in 2014 is also much higher than the institutional average.

e) **Comparison of Success and Retention Rates with Distance Education**
The Architecture Department currently has no Distance Education offerings.

f) **Enrollment Statistics with section and seat counts and fill rates**
(See graph below)

g) **Scheduling of Courses**
The Architecture Department typically offers a full schedule of daytime entry level classes (100, 119, 150A, 170, 171), and some advanced classes (179, 199), while offering additional sections of entry level classes (119, 150A), and entry level classes (104,172) and the more advanced classes (121, 125, 150B) in the evening, Friday and Saturday.

h) **Improvement Rates**
SLO's have contributed to the improvement rates for the typical student. Students need to spend more time in the lab portion of the typical architecture course, to gain the experience necessary for development of the techniques that are required to be developed. For the serious student, the availability of the open lab, allows them the place to develop basic knowledge into finely tuned skills.
Adjustments to course offering sequencing and to the course content are additional ways to improve the student success.

Grade Distribution, Success, and Retention
Architecuture
Spring

Program
Session Spring
Do Not select more than one term or Program.

Preliminary Success Standard 76.1%
5 year Success Average 77.6%
5 year Success Minimum 74.7%

Year	COURSE	Method	Weeks	'A'	'B'	'C'	'P'	'D'	'F'	'NP'	Inc P	Inc NP	'DR'	'W'	Total	Succ.	Reten.
2011	ARCH-100	Lecture	14	14	4	3	-	1	8	-	-	-	1	5	36	58.3%	83.3%
	ARCH-104	Lecture	16	36	16	7	-	3	5	-	-	-	2	13	82	72.0%	81.7%
	ARCH-120ABCD	Lecture	16	25	7	4	-	-	2	-	-	-	2	4	44	81.8%	86.4%
	ARCH-125ABCD	Lecture	16	32	7	2	-	-	6	-	-	-	1	3	51	80.4%	92.2%
	ARCH-150A	Lecture	16	22	17	-	-	-	-	-	6	7	5	10	67	67.2%	77.6%
	ARCH-150B	Lecture	16	2	-	-	-	-	-	-	10	2	3	6	23	52.2%	60.9%
	ARCH-170	Lecture	16	12	8	1	-	-	3	-	-	-	2	5	31	67.7%	77.4%
	ARCH-172	Lecture	16	23	8	1	-	-	-	-	1	-	1	3	37	89.2%	89.2%
	ARCH-180ABCD	Lecture	16	12	7	9	-	1	1	-	-	-	2	4	36	77.8%	83.3%
	ARCH-199ABCD	Lecture	16	13	15	6	-	1	5	-	-	-	-	5	45	75.6%	88.9%
	ARCH-99ABC	Independe	16	1	-	-	-	-	-	-	-	-	-	-	1	100.0%	100.0%
2011 Total				192	89	33	-	6	30	-	17	9	19	58	453	73.1%	83.0%
2012	ARCH-100	Lecture	16	21	8	2	-	2	4	-	-	-	2	6	45	68.9%	82.2%
	ARCH-104	Lecture	16	27	11	3	-	1	2	-	-	-	-	1	45	91.1%	97.8%
	ARCH-120ABCD	Lecture	16	13	8	4	-	1	-	-	-	-	-	5	31	80.6%	83.9%
	ARCH-125ABCD	Lecture	16	29	2	-	-	-	2	-	-	-	-	2	35	88.6%	94.3%
	ARCH-150A	Lecture	16	13	13	15	-	3	-	-	-	-	-	13	57	71.9%	77.2%
	ARCH-150B	Lecture	16	2	3	-	-	1	-	-	7	-	-	3	16	75.0%	81.3%
	ARCH-170	Lecture	16	14	3	7	-	4	5	-	-	-	-	5	38	63.2%	86.8%
	ARCH-171	Lecture	16	10	5	5	-	-	8	-	-	-	-	2	30	66.7%	93.3%
	ARCH-172	Lecture	16	26	7	1	-	-	4	-	-	-	-	4	42	81.0%	90.5%
	ARCH-180ABCD	Lecture	16	6	4	3	-	-	1	-	-	-	1	1	16	81.3%	87.5%
	ARCH-199ABCD	Lecture	16	13	11	4	-	-	2	-	-	-	1	2	33	84.8%	90.9%
	ARCH-99ABC	Laborator	16	1	-	-	-	-	-	-	-	-	-	-	1	100.0%	100.0%
2012 Total				175	75	44	-	12	28	-	7	-	4	44	389	77.4%	87.7%
2013	ARCH-100	Lecture	16	18	8	2	-	-	1	-	-	-	-	6	35	80.0%	82.9%
	ARCH-104	Lecture	16	34	5	4	-	4	1	-	-	-	-	1	49	87.8%	98.0%
	ARCH-120ABCD	Lecture	16	18	8	-	-	-	-	-	-	-	-	3	29	89.7%	89.7%
	ARCH-125ABCD	Lecture	16	18	5	1	-	3	3	-	-	-	-	-	30	80.0%	100.0%
	ARCH-150A	Lecture	16	13	14	7	-	1	7	-	-	3	-	20	65	52.3%	69.2%
	ARCH-150B	Lecture	16	5	4	-	-	-	3	-	-	1	-	2	15	60.0%	86.7%
	ARCH-170	Lecture	16	12	7	6	-	-	2	-	-	-	-	6	33	75.8%	81.8%
	ARCH-171	Lecture	16	19	7	1	-	-	1	-	-	-	-	7	35	77.1%	80.0%
	ARCH-172	Lecture	16	21	7	2	-	3	-	-	-	-	-	1	34	88.2%	97.1%
	ARCH-180ABCD	Lecture	16	4	8	2	-	2	1	-	-	-	-	3	20	70.0%	85.0%
	ARCH-199ABCD	Lecture	16	9	5	2	-	1	5	-	-	-	-	3	25	64.0%	88.0%
2013 Total				171	78	27	-	14	24	-	-	4	-	52	370	74.6%	85.9%
2014	ARCH-100	Lecture	16	17	2	3	-	-	4	-	-	-	-	3	29	75.9%	89.7%
	ARCH-104	Lecture	16	33	10	1	-	1	4	-	-	-	-	2	51	86.3%	96.1%
	ARCH-119	Lecture	16	16	4	6	-	-	-	-	-	-	-	3	29	89.7%	89.7%
	ARCH-125	Lecture	16	20	3	3	-	-	4	-	-	-	-	1	31	83.9%	96.8%
	ARCH-150A	Lecture	16	18	16	7	-	2	-	-	7	7	-	6	63	76.2%	90.5%
	ARCH-150B	Lecture	16	7	2	-	-	-	-	-	6	-	-	1	16	93.8%	93.8%
	ARCH-170	Lecture	16	8	8	6	-	2	-	-	-	-	-	4	28	78.6%	85.7%
	ARCH-171	Lecture	16	6	5	4	-	1	4	-	-	-	-	3	23	65.2%	87.0%
	ARCH-172	Lecture	16	-	-	-	-	-	-	-	-	-	-	1	1	0.0%	0.0%
	ARCH-179	Lecture	16	5	9	4	-	-	-	-	-	-	-	4	22	81.8%	81.8%
	ARCH-199	Lecture	16	10	9	1	-	-	-	-	-	6	-	-	26	76.9%	100.0%
2014 Total				140	68	35	-	6	16	-	13	13	-	28	319	80.3%	91.2%

Grade Distribution, Success, and Retention
Architecuture
Fall

Program		Preliminary Success Standard	76.1%
Session Fall		5 year Success Average	77.6%
Do Not select more than one term or Program.		5 year Success Minimum	74.7%

Year	COURSE	Method	Weeks	Grade Distribution 'A'	'B'	'C'	'P'	'D'	'F'	'NP'	Inc P	Inc NP	'DR'	'W'	Total	Success	Retain	Succ.	Reten.
2010	ARCH-100	Lecture	14	17	8	-	-	-	6	-	-	-	5	4	40			62.5%	77.5%
	ARCH-104	Lecture	16	25	18	7	-	2	7	-	-	-	5	7	71			70.4%	83.1%
	ARCH-120ABCD	Lecture	16	28	4	4	-	-	1	-	-	-	1	6	44			81.8%	84.1%
	ARCH-121ABCD	Lecture	16	25	3	3	-	-	1	-	-	-	1	2	35			88.6%	91.4%
	ARCH-150A	Lecture	16	33	27	8	-	3	-	-	2	4	3	13	93			75.3%	82.8%
	ARCH-150B	Lecture	16	2	2	1	-	-	-	-	6	2	-	1	14			78.6%	92.9%
	ARCH-158	Lecture	16	14	13	1	-	-	-	-	-	-	2	3	33			84.8%	84.8%
	ARCH-170	Lecture	16	22	-	4	-	-	5	-	-	-	-	1	32			81.3%	96.9%
	ARCH-171	Lecture	16	26	5	3	-	-	2	-	-	-	-	2	38			89.5%	94.7%
	ARCH-99ABC	Independe	16	1	-	-	-	-	-	-	-	-	-	-	1			100.0%	100.0%
2010 Total				193	80	31	-	5	22	-	8	6	17	39	401			77.8%	86.0%
2011	ARCH-100	Lecture	14	20	5	5	-	1	5	-	-	-	1	2	39			76.9%	92.3%
	ARCH-104	Lecture	16	40	12	8	-	2	2	-	-	-	-	4	68			88.2%	94.1%
	ARCH-120ABCD	Lecture	16	23	-	4	-	2	2	-	-	-	2	4	37			73.0%	83.8%
	ARCH-121ABCD	Lecture	16	26	-	3	-	1	4	-	-	-	-	2	36			80.6%	94.4%
	ARCH-150A	Lecture	16	25	9	10	-	-	14	-	4	1	-	13	76			63.2%	82.9%
	ARCH-150B	Lecture	16	7	-	1	-	-	5	-	11	-	-	3	27			70.4%	88.9%
	ARCH-158	Lecture	16	16	4	2	-	-	4	-	-	-	-	5	31			71.0%	83.9%
	ARCH-170	Lecture	16	19	1	1	-	-	1	-	-	-	-	6	28			75.0%	78.6%
	ARCH-171	Lecture	16	25	3	-	-	-	1	-	-	-	-	3	32			87.5%	90.6%
2011 Total				201	34	34	-	6	38	-	15	1	3	42	374			75.9%	88.0%
2012	ARCH-100	Lecture	16	6	21	4	-	1	4	-	-	-	-	4	40			77.5%	90.0%
	ARCH-104	Lecture	16	26	13	4	-	4	5	-	-	-	-	8	60			71.7%	86.7%
	ARCH-120ABCD	Lecture	16	20	8	4	-	2	2	-	-	-	-	13	49			65.3%	73.5%
	ARCH-121ABCD	Lecture	16	22	4	3	-	-	2	-	-	-	-	2	33			87.9%	93.9%
	ARCH-150A	Lecture	16	19	12	5	-	-	9	-	13	-	-	4	62			79.0%	93.5%
	ARCH-150B	Lecture	16	4	3	-	-	2	1	-	6	-	-	4	20			65.0%	80.0%
	ARCH-158	Lecture	14	17	10	1	-	1	-	-	-	-	-	2	31			90.3%	93.5%
	ARCH-170	Lecture	16	10	11	6	-	2	-	-	-	-	-	5	34			79.4%	85.3%
	ARCH-171	Lecture	16	6	3	1	-	-	1	-	-	-	-	7	18			55.6%	61.1%
2012 Total				130	85	28	-	12	24	-	19	-	-	49	347			75.5%	85.9%
2013	ARCH-100	Lecture	16	14	5	3	-	1	4	-	-	-	-	1	28			78.6%	96.4%
	ARCH-104	Lecture	16	29	18	11	-	4	9	-	-	-	-	2	73			79.5%	97.3%
	ARCH-119	Lecture	16	10	-	1	-	1	-	-	-	-	-	3	15			73.3%	80.0%
	ARCH-121	Lecture	16	8	1	1	-	3	4	-	-	-	-	3	20			50.0%	85.0%
	ARCH-150A	Lecture	16	28	19	4	-	1	4	-	-	-	-	20	76			67.1%	73.7%
	ARCH-150B	Lecture	16	9	13	4	-	-	5	-	-	-	-	1	32			81.3%	96.9%
	ARCH-158	Lecture	16	7	3	4	-	-	-	-	-	-	-	3	17			82.4%	82.4%
	ARCH-170	Lecture	16	10	4	2	-	2	1	-	-	-	-	4	23			69.6%	82.6%
	ARCH-171	Lecture	16	11	5	4	-	2	-	-	-	-	-	4	26			76.9%	84.6%
2013 Total				126	68	34	-	14	27	-	-	-	-	41	310			73.5%	86.8%

Program Participation (4-year Trend)
Architecture
Fall: 2010 to 2013

	Fall 2010		Fall 2011		Fall 2012		Fall 2013	
Ethnicity	Success	N	Success	N	Success	N	Success	N
African-Am	66.7%	27	71.9%	32	47.1%	34	60.0%	30
Amer. Ind.	100.0%	X	0.0%	X	66.7%	X	0.0%	X
Asian	92.3%	91	88.5%	87	83.9%	62	81.5%	65
Latino	76.3%	194	74.9%	179	74.4%	195	67.5%	160
Pacific Islar	75.0%	X	25.0%	X	66.7%	X	100.0%	X
Two or Mo	100.0%	X	50.0%	X	75.0%	X	50.0%	X
Unknown c	81.3%	16	85.7%	14	62.5%	X	100.0%	X
White	87.2%	47	66.7%	51	82.9%	41	88.4%	43
Gender								
M	79.0%	276	75.4%	268	69.6%	250	71.0%	217
F	87.0%	108	77.4%	106	84.6%	104	79.6%	93
X	0.0%	X	0.0%	X	0.0%	X	0.0%	X
Age Groups								
19 or less	76.3%	80	70.4%	81	78.2%	78	80.8%	78
20 to 24	79.9%	169	79.4%	180	70.7%	184	69.7%	142
25 to 49	85.7%	112	74.7%	95	78.8%	85	75.3%	77
Over 49	87.0%	23	72.2%	18	57.1%	X	61.5%	13

X: Counts are suppressed for groups with less than 10 students.
Shaded regions indicate groups achieving at a rate less than 80% of the reference group, respectively.
Reference groups are White, male, and 20 to 24 years old.

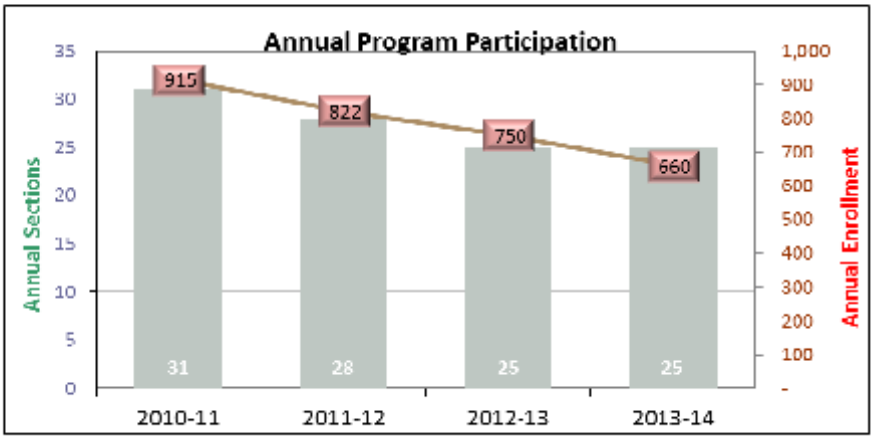
Demographic and Enrollment Characteristics
Architecture
Fall

Will show 0.0% if you did not select Program AND Term on the Academics Tab

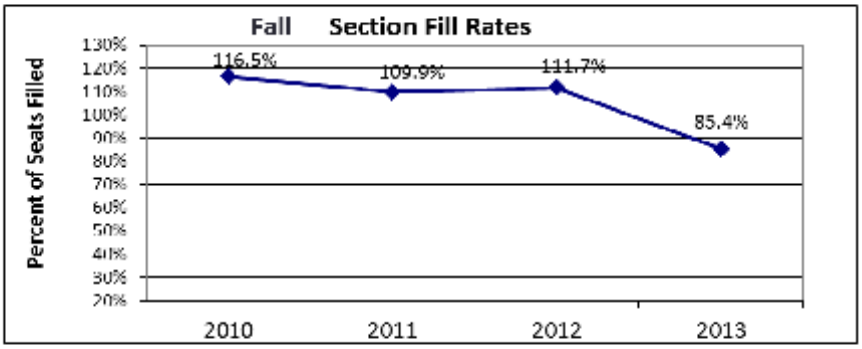
Fall						ECC Student Population	District Boundary Population
		Term					
		2010	2011	2012	2013	Fall 2013	2010 Census
Term Headcount		287	265	245	231	*23,409*	*556,400*
Gender	F	29.3%	27.9%	31.4%	30.7%	*52.6%*	*51.0%*
	M	70.4%	72.1%	68.6%	69.3%	*49.9%*	*49.0%*
Ethnicity	African-American	7.3%	9.1%	10.2%	9.5%	*17.3%*	*15.1%*
	Amer. Ind. or Alask. Native	0.3%	0.4%	0.4%	0.0%	*0.2%*	*0.2%*
	Asian	20.6%	20.4%	18.8%	20.3%	*15.7%*	*13.6%*
	Latino	50.2%	49.4%	54.3%	53.2%	*48.9%*	*34.5%*
	Pacific Islander	1.4%	1.1%	0.4%	0.4%	*0.5%*	*0.5%*
	White	13.2%	13.6%	11.0%	13.4%	*14.6%*	*32.8%*
	Two or More	2.1%	2.3%	2.9%	0.4%	*4.1%*	*2.9%*
	Unknown or Decline	4.9%	3.8%	2.0%	2.6%	*1.2%*	*0.4%*
Age/ Age Group	<17	0.3%	0.0%	0.0%	0.0%	*0.5%*	*24.2%*
	17	1.4%	0.8%	0.8%	2.2%	*2.1%*	
	18	9.8%	9.4%	10.6%	7.8%	*12.2%*	*2.5%*
	19	12.5%	13.2%	11.8%	16.0%	*15.1%*	
	20	13.6%	12.5%	12.7%	13.0%	*13.3%*	*1.2%*
	21	7.7%	12.5%	10.6%	8.7%	*10.1%*	*1.2%*
	22	5.2%	9.8%	10.6%	7.8%	*7.6%*	*3.9%*
	23	7.3%	5.3%	9.0%	8.7%	*6.1%*	
	24	4.2%	5.3%	5.3%	5.6%	*4.7%*	
	25-29	13.6%	13.6%	9.8%	13.4%	*13.5%*	*7.4%*
	30-39	11.5%	8.3%	11.8%	7.8%	*9.1%*	*14.9%*
	40-49	5.9%	3.4%	4.5%	4.3%	*4.1%*	*15.9%*
	50-64	6.3%	5.3%	1.6%	3.9%	*3.3%*	*18.1%*
	65+	0.7%	0.8%	0.8%	0.9%	*0.7%*	*10.6%*
Class Load	Full-time	40.8%	40.0%	42.0%	44.2%	*34.0%*	
	Part-time	59.2%	60.0%	58.0%	55.8%	*68.5%*	
Academic Level	College degree	19.2%	15.5%	12.2%	10.4%	*12.0%*	
	HS Grad	78.0%	81.1%	84.9%	83.5%	*85.7%*	
	Not a HS Grad	0.7%	1.5%	0.8%	0.0%	*1.4%*	
	K-12 Special Admit	0.3%	0.0%	0.0%	0.0%	*1.0%*	
	Unknown	1.7%	1.9%	2.0%	6.1%	*1.9%*	
Educational Goal	Intend to Transfer	31.4%	35.1%	31.4%	33.8%	*31.0%*	
	Degree/Certificate Only	2.1%	3.4%	4.1%	1.3%	*3.8%*	
	Retrain/recertif.	4.9%	4.5%	3.3%	3.5%	*3.4%*	
	Basic Skills/GED	4.2%	3.8%	3.7%	6.5%	*5.8%*	
	Enrichment	5.2%	6.0%	4.1%	1.7%	*2.4%*	
	Undecided	19.9%	17.7%	20.8%	17.7%	*17.2%*	
	Unstated	32.4%	29.4%	32.7%	35.5%	*35.0%*	

Program Participation (4-year Trend)
Architecture
Years: 2010-11 to 2013-14

	2010-11	2011-12	2012-13	2013-14	4 Yr Average
Annual Enrollment	915	822	750	660	787



	2010-11	2011-12	2012-13	2013-14
Students	518	441	403	366
Enrollments/Student	1.77	1.86	1.86	1.80



Enrollment by Time of Day

Fall Term	2010	2011	2012	2013
Day	53.2%	53.3%	57.6%	51.6%
Night	46.5%	46.7%	42.4%	48.4%
Weekend/Unknown	0.2%	0.0%	0.0%	0.0%

3. Curriculum

a) **Curriculum course review timeline**

The ECC Architecture Program is a CTE Program, which requires a two-year cycle on curriculum review. The Architecture Program review at the course level includes complete evaluation each year and reflects changing industry and student needs.

b) **Course Additions to current course offerings**

The Architecture Faculty is currently working on writing outlines for the following new courses:

1. We are proposing to split the current Arch.104 History of Architecture course into 2 separate courses to align and articulate with university architecture programs. The first new history course (Arch 106) will be covering the Paleolithic to Gothic architectural historical periods. The second course (Arch 107) will cover the Renaissance to Modern historical periods.
2. The faculty is creating a new history course in the Buildings of the 20th Century Modern Period (Arch 108). This will be a pre-requisite for the students who wish to take the Arch. 199 Design Studio. The faculty feels that a solid foundation in understanding Modern Architecture is important to understanding and learning Design Theory.
3. The faculty is creating a new course to be called Computer Applications in Architecture (Arch 126). This course will be using computer software that our students, who are on a transfer tract to a university school of architecture, will use both in our design studio courses here and when they eventually transfer. Currently we only teach Construction Documentation CAD software and the knowledge of these Design related software products that architects use is important to the foundational education an architectural student needs to obtain. Some of the software packages that will be taught in this class are: SketchUp, Google Earth, Rhinoceros, Adobe Photoshop, InDesign and Illustrator and ArchiCAD.
4. We just got a new class reviewed by the Curriculum Committee on Advanced BIM features, Arch 127. This will be a final class in a three class BIM package that will lead to a new BIM Certificate for students who want to gain employment in the industry.

c) **Course Deletions or inactivation from current course offerings**

None, technology is our guideline for the ever changing need advance quality and content of the material taught in each course and with direction from our Advisory Committee, we review the content of each course.

d) **Courses and Sections in Distance Education**

We have no Distance Education classes.

e) **Comparison of Courses, Degrees, or Certificates with Students transfer or career training needs:**

1. All Courses that are required for the Architecture Program's degrees and certificates have been offered during the last 2 years, in fact, we have continuously provided for a course offering cycle

2. We have concerns regarding program courses and articulation to the university. In an effort to improve the articulation process and have more students transfer into university architecture programs at a higher standing than first year, there have been adjustments made to the drawing methodologies and mediums used in the existing courses.

3. Students earning degrees and certificates have fallen recently because of several reasons: The economic climate of the construction related fields is on an upswing and this means architects are having more work in their offices, which means they are tapping our advanced students and employing them to work for them. The architecture faculty see this as a success, even though it doesn't appear like one on paper when you see how many W's we have each semester. Many of our students goals are to gain employment in the architecture or construction industry

4. The Architecture Department, as a result of the volatile economic climate surrounding the architecture and construction industry, has shown a recent decline in degrees and certificates. However, the trend seems to have temporarily favored the Training path, as students are finding jobs and leaving the Program early. In some instances, returning for additional training to improve their vocational skills or for educational purposes for transfer to the university level.

Our current goal of is 12-15 degrees and 12-15 certificates for the next year with increasing numbers in years to follow. We have shown a slight decline recently because of attrition rates within the Program.

f) **Related Recommendations**

The Architecture Department Program needs to continue to be involved in the local community through our Advisory Committee members, and through our former students who populate the local work force.

We need to collaborate with them to develop long-term programs and directions to meet to changing and expanding industry that we provide for our students.

We need to continue our direct communication and visitation with the California, Arizona, and Oregon schools of architecture and establish an improved relationship with their program requirements for the improvement of our transfer students.

1. **Staffing – Full Time Tool Room Attendant**
2. **Hardware- 10 additional computers needed in Lab**
3. **Staffing- Full time teacher for Arch/Env. Tech Dept.**
4. **Curriculum – Provide new software for design course**
5. **Facilities- Acoustical adjustments**
6. **Facilities- task lighting for Lab space**
7. **Facilities- reproduction machines for student use**
8. **Facilities- Additional Pin Up Boards for all rooms**
9. **Equipment- Laser cutting machines for student proj.**

4. **<u>Assessment of Student Learning Outcomes and Program Learning Outcomes</u>**
   a) SLO Alignment Grid See tables on Page 19
   b) SLO Assessment Timeline See tables on Page 23
   c) SLO Course and Program Assessment

      Through 2013, the Architecture program course SLO's were reviewed and updated. Additional SLO's were added, typically two per course, so that each course had three SLO statements for assessment. There are currently no overdue SLO assessments, and we will begin a new cycle of assessments upon completion of this Program Review. Over the next year, the SLO statements will be reviewed for effectiveness as the SLO timeline for each course approaches. All of the SLO statements have been reviewed and revised as necessary.

d) SLO and PLO Assessment

In 2013 and 2014, each of the SLO & PLO were reviewed and updated to adjust to the ever-changing class requirements and needs. Each course was initially referenced by one SLO statement, with two additional SLO statements added later to each course. Concurrent with SLO statement updates, SLO and PLO assessment timelines were adjusted.

e) SLO Process and Assessment Results

With the addition of 2 SLO's to each course in the Program and the elimination of repeatable courses, the Architecture Program is reaching a better level of efficiency.

The faculty of the Architecture department meets regularly to discuss the curriculum and the future direction of the Program. We continue to use the Advisory Committee as an additional resource.

We are continuing, on a daily basis, to improve the product that is delivered to our students. We utilize our Advisory Committee members, our colleges in local industry, as well as, our former students who populate the workforce, to bring real life situations into the architecture classroom.

INDUSTRY AND TECHNOLOGY
Institutional (ILO), Program (PLO), and Course (SLO) Alignment

Program: Architecture	Number of Courses: 13	Date Updated: 09.18.2014	Submitted by: SueEllen Warren, ext. 4519 Renee Newell, ext. 3308

ILOs	1. Critical Thinking	2. Communication	3. Community and Personal Development	4. Information Literacy
	Students apply critical, creative and analytical skills to identify and solve problems, analyze information, synthesize and evaluate ideas, and transform existing ideas into new forms.	*Students effectively communicate with and respond to varied audiences in written, spoken or signed, and artistic forms.*	*Students are productive and engaged members of society, demonstrating personal responsibility, and community and social awareness through their engagement in campus programs and services.*	*Students determine an information need and use various media and formats to develop a research strategy and locate, evaluate, document, and use information to accomplish a specific purpose. Students demonstrate an understanding of the legal, social, and ethical aspects related to information use.*

SLO-PLO-ILO ALIGNMENT NOTES:

Mark boxes with an 'X' if: SLO/PLO is a major focus or an important part of the course/program; direct instruction or some direct instruction is provided; students are evaluated multiple times (and possibly in various ways) throughout the course or are evaluated on the concepts once or twice within the course.

DO NOT mark with an 'X' if: SLO/PLO is a minor focus of the course/program and some instruction is given in the area but students are not formally evaluated on the concepts; or if the SLO/PLO is minimally or not at all part of the course/program.

PLOs	PLO to ILO Alignment (Mark with an X)			
	1	2	3	4
PLO #1 Construction Documents Upon completion of a course of study in Architecture, a student will be able to design a building and draw the construction documents and specifications necessary for contractors to build it.		X		
PLO #2 Design Drawings Upon completion of the Architecture Program, a student will be able to create conceptual diagrams that illustrate the main idea in the solution of the design problem given to the student.	X			
PLO #3 Computer Software Upon completion of the Architecture Program, a student will be able to use various computer software to generate various kinds of drawings to show the process of a project from Design Sketches, Massing Models, Building Perspectives to Construction Documents.	X	X		

SLOs	SLO to PLO Alignment (Mark with an X)			COURSE to ILO Alignment (Mark with an X)			
	P1	P2	P3	1	2	3	4
ARCH 100 An Orientation to Architecture: SLO #1 Urban and Social Environment Given lecture information, worksheet eXamples and in-class discussion, students will be able to demonstrate how architecture shapes the urban and social environment on global and local scales.	X	X	X				
ARCH 100 An Orientation to Architecture: SLO #2 Becoming an Architect Given lecture information, worksheet eXamples and in-class discussion, students will be able to demonstrate knowledge of the education necessary, internship and licensing procedures to become a professional architect.	X	X	X	X	X		
ARCH 100 An Orientation to Architecture: SLO #3 Careers Connected to Architecture Given lecture Information and classroom discussions, students will have knowledge of parallel vocations that a student with an education in architecture could pursue after their education is complete, if they choose not to pursue a career as an architect.	X	X	X				
ARCH 104 History of Western Architecture: SLO #1 Important Buildings After completing class lectures, slide presentations, reading assignments, and films, students will be able to identify important buildings covered in the course including the name, location, architect (where applicable), style, and approXimate dates.		X					
ARCH 104 History of Western Architecture: SLO #2 Architectural Styles Students will be able to identify important architectural styles from the ancient architecture of Mesopotamia to the modern architecture of the 21st century in terms of religious, political and social conteXt and relevant dates and architects.		X		X			
ARCH 104 History of Western Architecture: SLO #3 Architecture & Culture This course on architectural history eXpects the students to understand important buildings throughout history including historical conteXt as well as social and religious relevancy, and the important role architecture plays in the development of cultures.		X					
ARCH 119 Computer Aided Architectural Drafting: SLO #1 Commands for Producing Drawings Given lecture information, worksheet eXamples, in-class discussion, and hands-on eXperience, students will be able to know the commands necessary to produce a set of construction drawings for a small house, using AutoCAD Architectural computer software.			X				
ARCH 119 Computer Aided Architectural Drafting: SLO #2 Graphic Techniques Successful students, completing the Architecture Program, following instructions, supervised classroom practice using CADD system, will use proper graphic techniques to complete instructions.			X	X	X		
ARCH 119 Computer Aided Architectural Drafting: SLO #3 Spatial Organization Successful students tracking for graduation transfer, and or employment in the architecture field, will create design drawings and design models to show spatial organization.			X				

SLOs	SLO to PLO Alignment (Mark with an X)			COURSE to ILO Alignment (Mark with an X)			
	P1	P2	P3	1	2	3	4
ARCH 121 Three-Dimensional Architectural Computer Aided Design: SLO #1 Construction Documents By the conclusion of the course, students should be able to: • Understand basic concepts of Revit Architecture 2014 • Create a 3D Revit model to generate building plans, sections, elevations and 3D views • Understand basic concepts of detail and schedule creation • Understand basic concepts of stair and curtain wall creation • Understand basic concepts of creating parametric families • Create simple renderings and shadow studies • Understand how Revit is used in a professional office setting			X				
ARCH 121 Three-Dimensional Architectural Computer Aided Design: SLO #2 Modeled Office Building Using Revit software, students will create a detailed 3D computer model of a 3-story office building complete with floor plans, RCPs, building sections, interior and eXterior elevations, details, and schedules as well as photo realistic renderings. Students will use Building Information Modeling (BIM) in design, analysis and documentation of their buildings.			X	X	X		
ARCH 121 Three-Dimensional Architectural Computer Aided Design: SLO #3 Computer Generated Drawings Students will be able to demonstrate proficiency in the basics of 3D BIM modeling using Autodesk Revit software, and will be able to create detailed computer models of buildings that can be used to generate building plans, sections, elevations, details, schedules, etc. Once completed with this course, the student will be prepared for entry-level employment with an architecture firm using computer software to generate drawings.			X				

SLOs	SLO to PLO Alignment (Mark with an X)			COURSE to ILO Alignment (Mark with an X)			
	P1	P2	P3	1	2	3	4
ARCH 125 Advanced Three-Dimensional Architectural Computer Aided Design: SLO #1 Advanced Concepts By the conclusion of the course, students should be able to: • Understand advanced concepts of Revit Architecture 2012 • Create a detailed 3D Revit model with building plans, sections, elevations, RCPs, enlarged plans and 3D views • Understand advanced concepts of detail and schedule creation • Understand advanced concepts of stair and curtain wall creation • Understand advanced concepts of creating parametric families • Understand how Revit and sustainable design/LEED work together • Understand how Revit is used in a professional office setting • Create renderings, shadow studies, and animations • Create parametric Revit families • Create your own BIM with construction documents that can be used in a portfolio			X				
ARCH 125 Advanced Three-Dimensional Architectural Computer Aided Design: SLO #2 Three-Story Office Building Students will create, using Revit software, a detailed 3D computer model of a 3-story office building complete with floor plans, RCPs, building sections, interior and eXterior elevations, and details as well as photo realistic renderings. Students will also create curtain wall systems, door, window, Revit families, and furniture schedules, 3D animations, and understand the protocol for using Revit in a professional office setting. Students will use Building Information Modeling (BIM) in design, analysis and documentation of their buildings.			X	X	X		
ARCH 125 Advanced Three-Dimensional Architectural Computer Aided Design: SLO #3 3D BIM Modeling The course requires its students to learn advanced concepts of 3D BIM modeling using Autodesk Revit software and to create details computer models of buildings that can be used to generate building plans, sections, elevations, details, schedules, etc. Students will also learn concepts of stair; curtail wall, and family creation and the responsibilities of a BIM Manager. Once completed with this course, student will be prepared for advanced-level employment with an architecture firm using computer software to manage a BIM.			X				
ARCH 150A Architectural Drafting I: SLO #1 Lines and Lettering Upon completion of a beginning course of study in architecture drawing, a student will develop an architectural drawing technique of Lines and Lettering to create a series of drawings.	X	X					
ARCH 150A Architectural Drafting I: SLO #2 Graphic Instructions Successful students, completing the Architecture Program, following instructions, supervised classroom practice using CADD System; will use proper graphic techniques to complete instructions.			X				
ARCH 150A Architectural Drafting I: SLO #3 Spatial Organization Successful students tracking for graduation transfer, and or employment in the architecture field, will create design drawings and design models to show spatial organization.	X	X		X	X		
ARCH 150A Architectural Drafting I: SLO #4 Graphic Technique Given lecture eXplanation and graphic eXamples of architectural drawing line values and line types, students will correctly apply that graphic technique to their project drawings.	X	X					

SLOs	SLO to PLO Alignment (Mark with an X)			COURSE to ILO Alignment (Mark with an X)			
	P1	P2	P3	1	2	3	4
ARCH 150B Architectural Drafting II: SLO #1 Two-Story House Upon completion of this advanced course, the student will be able to draw all of the construction documents for a two story house on AutoCAD software.	X	X	X				
ARCH 150B Architectural Drafting II: SLO #2 Model Upon completion of this class, a student will be able to build a massing model from the drawings they create.	X	X		X	X		
ARCH 150B Architectural Drafting II: SLO #3 Stair Design Upon completion of this course a student will be able to design, calculate and draw a stairway for a pre-described area of space given to them. They will meet all current Building Codes related to stair design.	X	X					
ARCH 158 Structures Analysis - Timber: SLO #1 Beams and Lateral Bracing Given lecture information, handouts and in-class discussion, students will be able to demonstrate the knowledge of the function of structural components in residential buildings. Students will be able to calculate the size of beams, columns and lateral bracing systems of light framed wood structures.	X						
ARCH 158 Structures Analysis - Timber: SLO #2 Graphic Techniques Successful students, completing the Architecture Program, following instructions, supervised classroom practice using CADD system; will use proper graphic techniques to complete instructions.	X				X		
ARCH 158 Structures Analysis - Timber: SLO #3 Spatial Organization Successful students tracking for graduation transfer, and or employment in the architecture field, will create design drawings and design models to show spatial organization.	X						
ARCH 170 Architectural Graphics Techniques: SLO #1 Graphic Tools Given lecture information, handouts and in-class discussion, students will be able to demonstrate the ability to delineate the entourage necessary to illustrate an architectural presentation drawing. The student will be knowledgeable in the use of various graphic tools that architects use in their office to delineate presentation drawings.		X					
ARCH 170 Architectural Graphics Techniques: SLO #2 Orthographic Projection Given lecture material, students will be able to orthographically project elevation and section views of buildings from plan views of said building.	X	X		X	X		
ARCH 170 Architectural Graphics Techniques: SLO #3 Illumination Given lecture material, handouts and classroom discussion, students will be able to illuminate objects in plan, elevation and perspective so as to show materials in illuminated form as well as showing shade and shadow forms.		X					

SLOs	SLO to PLO Alignment (Mark with an X)			COURSE to ILO Alignment (Mark with an X)			
	P1	P2	P3	1	2	3	4
ARCH 171 Architectural Three-Dimensional Illustration: SLO #1 Three Dimensional Drawings Given lecture information, handouts and in-class discussion, students will be able to demonstrate the ability to draw and delineate numerous three dimensional drawings such as Isometrics, AXonometrics, Obliques, One, Two and Three Point Perspectives.		X					
ARCH 171 Architectural Three-Dimensional Illustration: SLO #2 Graphic Techniques Successful students, completing the Architecture Program, following instructions, supervised classroom practice using CADD system; will use proper graphic techniques to complete instructions.		X		X			
ARCH 171 Architectural Three-Dimensional Illustration: SLO #3 Spatial Organization Successful students tracking for graduation transfer, and or employment in the architecture field, will create design drawings and design models to show spatial organization.		X					
ARCH 172 Architectural Color Rendering Techniques: SLO #1 Color Theory and Schemes Given lecture information, handouts and in-class discussion, students will be able to demonstrate the ability to draw and delineate architectural presentation drawings using various color mediums. The student will demonstrate knowledge of color theory and color schemes, (monochromatic, complimentary, etc.) that architectural illustrators use in various circumstances.		X					
ARCH 172 Architectural Color Rendering Techniques: SLO #2 Use of Medium Given lecture information, handouts and in-class discussion, students will be able to demonstrate and ability to illustrate architectural renderings with the following color mediums; color pencils, markers, water colors, pastels and various computer software.		X		X			
ARCH 172 Architectural Color Rendering Techniques: SLO #3 Illumination Given lecture information, handouts and in-class discussion, students will be able to demonstrate and ability to miX colors to create Hue Schemes, (Monochromatic, Analogous, Complimentary, etc.) that will be the right colors for the building they are trying to illustrate.		X					
ARCH 179 Design or Build Studio: SLO #1 Designing and Collaborating Upon completing the course work, students will demonstrate the ability to design a simple house and then successfully collaborate within a team to build the structure in the Lab.		X					
ARCH 179 Design or Build Studio: SLO #2 Design Theory Given instruction in Design Theory, based on lecture material given and handouts and required reading in the book, the student will create conceptual diagrams and analytical drawings, like eXploded aXonometrics, to eXplain the main concept of idea behind the solution.		X		X	X		
ARCH 179 Design or Build Studio: SLO #3 Construction Tool Safety Given instruction on how to handle tools properly and safely, the student will take a safety test and pass with 100% score before they are allowed to work in the construction yard using power and manual tools.	X						

SLOs	SLO to PLO Alignment (Mark with an X)			COURSE to ILO Alignment (Mark with an X)			
	P1	P2	P3	1	2	3	4
ARCH 199 Design or Build Studio: SLO #1 Model Series Given instruction in basic design, a student will eXecute a series of models that demonstrate understanding, and application of those specific design principles.		X					
ARCH 199 Design or Build Studio: SLO #2 Design Theory Research Paper The student will develop an evolving knowledge base of design theory represented by built and unbuilt architecture and its place in history and will incorporate learned content, historical accuracy, relevancy and the application and analysis of theory into a research paper.		X		X	X		
ARCH 199 Design or Build Studio: SLO #3 Drawings & Scaled Models Using his or her own developed research report information on theory and design development, and other design principles taught in class, the student will create an environmentally responsible and sustainable architecture project in the form of drawings and scaled models.	X	X	X				

r by January 31 for input into TracDat.

Course and SLO #

sloplo_worksheet.docx

Course and SLO #	Note if offered only in FA/SU/SP	SP 2014	SU 2014	FA 2014	SP 2015	SU 2015	FA 2015	SP 2016	SU 2016	FA 2016	SP 2017	SU 2017	FA 2017	SP 2018	SU 2018	FA 2018
ARCH 150A SLO #1				✓						✓						
ARCH 150A SLO #2													✓			
ARCH 150A SLO #3																✓
ARCH 150A SLO #4	Pls Remove SLO #4	Will be marked INACTIVE once it has gone through the process described in the SLO Handbook (p. 21).														✓
ARCH 150B SLO #1								✓								
ARCH 150B SLO #2											✓					
ARCH 150B SLO #3														✓		
ARCH 158 SLO #1				✓						✓						
ARCH 158 SLO #2													✓			
ARCH 158 SLO #3																✓
ARCH 170 SLO #1		✓						✓								
ARCH 170 SLO #2		✓									✓					
ARCH 170 SLO #3		✓												✓		
ARCH 171 SLO #1				✓						✓						
ARCH 171 SLO #2													✓			
ARCH 171 SLO #3																✓
ARCH 172 SLO #1								✓								
ARCH 172 SLO #2											✓					
ARCH 172 SLO #3														✓		
ARCH 179 SLO #1	Previously							✓								
ARCH 179 SLO #2	Assessed as										✓					
ARCH 179 SLO #3	ARCH 180abcd													✓		
ARCH 199 SLO #1								✓								
ARCH 199 SLO #2											✓					
ARCH 199 SLO #3														✓		

slo3

5. Analysis of Student Feedback

Instructors in this program have helped me achieve my academic goals.

Response	Frequency	Percent	Mean: 1.37
Strongly Agree	86	69.92	
Agree	25	20.33	
Neither Agree nor Disagree	8	6.50	
Disagree	1	0.81	
Strongly Disagree	0	0.00	
Missing	3	2.44	

Instructors in this program have helped me stay on track.

Response	Frequency	Percent	Mean: 1.36
Strongly Agree	84	68.29	
Agree	31	25.20	
Neither Agree nor Disagree	5	4.07	
Disagree	1	0.81	
Strongly Disagree	0	0.00	
Missing	2	1.63	

Response	Frequency	Percent

I have felt a sense of community within this program.

Response	Frequency	Percent

g

The courses in this program have helped me meet my academic goals.

Response	Frequency	Percent	Mean: 1.50
Strongly Agree	77	62.60	
Agree	29	23.58	
Neither Agree nor Disagree	11	8.94	
Disagree	3	2.44	
Strongly Disagree	0	0.00	
Missing	3	2.44	

There is a variety of extracurricular activities related to this program on campus.

Response	Frequency	Percent	Mean: 2.08
Strongly Agree	45	36.59	
Agree	35	28.46	
Neither Agree nor Disagree	28	22.76	
Disagree	10	8.13	
Strongly Disagree	2	1.63	
Missing	3	2.44	

The library has the resources to help me succeed in this program.

Response	Frequency	Percent	Mean: 2.43
Strongly Agree	32	26.02	
Agree	20	16.26	
Neither Agree nor Disagree	52	42.28	
Disagree	14	11.38	
Strongly Disagree	1	0.81	
Missing	4	3.25	

The buildings and classrooms used by this program are satisfactory.

Response	Frequency	Percent	Mean: 1.99
Strongly Agree	46	37.40	
Agree	41	33.33	
Neither Agree nor Disagree	19	15.45	
Disagree	10	8.13	
Strongly Disagree	2	1.63	
Missing	5	4.07	

I am satisfied with the equipment [projectors- machinery- models- etc.] used in this program.

Response	Frequency	Percent	Mean: 2.01
Strongly Agree	44	35.77	
Agree	41	33.33	
Neither Agree nor Disagree	22	17.89	
Disagree	7	5.69	
Strongly Disagree	3	2.44	
Missing	6	4.88	

I am satisfied with the computers and software used in this program.

Response	Frequency	Percent	Mean: 1.97
Strongly Agree	54	43.90	
Agree	26	21.14	
Neither Agree nor Disagree	25	20.33	
Disagree	10	8.13	
Strongly Disagree	2	1.63	
Missing	6	4.88	

I am aware of the course outcomes - what I should be able to learn and what skills I should possess after completing courses in the program.

Response	Frequency	Percent	Mean: 1.42
Strongly Agree	77	62.60	
Agree	34	27.64	
Neither Agree nor Disagree	6	4.88	
Disagree	1	0.81	
Strongly Disagree	0	0.00	
Missing	5	4.07	

a) Describe the results of the relevant surveys

The Survey indicates that most students, 90% feel that the instructors helped them achieve their academic goals and provided opportunities to actively participate in their architecture classes they are enrolled in. The students polled also felt strongly (93%) that instructors helped them stay on track for achieving their individual goals. 88% felt that they had a sense on community in the program. 91% of the students polled felt that our faculty has valued their contributions. 95% of the students polled felt there was an appropriate range of courses offered in our program. 90% of the students were aware of their course outcomes, what skills they were supposed to be able to possess. 86% of the students felt that they had been able to register for the classes they needed within the program when they tried. 86% felt the courses they took in our program helped them meet their academic goals. Only 42% felt the library resources were able to help them agree, although 42% did not either agree or disagree. Only 70% felt the building and classrooms used by our program are satisfactory. The students were not too satisfied with the equipment or the computers and software only voting 69% agreeing to these topics. Another low percentage in the student response survey was the courses were scheduled on days and times that were convenient to them, only 72% either strongly agreed or agreed to this statement.

a) Discuss the implications of the survey results for the program

The survey seems to indicate the architecture department is doing a good job, (90% or above) in the following areas; Feeling like the instructors helped them achieved their academic goals, helping them stay on tract to achieve their goals, and the students felt that their contributions had been valued by the faculty and that we have an appropriate range of courses offered in our program, and finally the students felt that they knew the Student Learning Outcomes going into an architecture course. We did an admirable job (80%-90%) in getting students registered for the classes they needed when they tried and felt the courses they took in our program felt it helped them meet their academic goals.

The areas the architecture department needs to work on these areas of the student survey that seemed to not get high level responses in agreeing with the questions asked were; The building and classrooms were not satisfactory to their needs. The final area we need to look at as a program is the days and times we are currently offering our classes, which did not get a high rating by our customers.

b) List any related recommendations

The Building and classrooms have been changed since this survey was taken and we, the faculty, have issues with some of the new changes in our new facility and have heard many complaints from the students about several issues the new facility, as well. The biggest concern from the faculty and the students is the acoustics, (in the Computer Lab, Lecture room and Studio Lab - ITEC 202, 206 & 203.) Sound does not travel well in these spaces and there is a problem in hearing anyone, (instructor or students,) speak in these spaces. The students are also complaining about how the new chairs in the lecture and lab rooms are not as comfortable as the old ones we had to leave in the old building. The new tables in the lab move when a student erases a line on a drawing because of poor lateral stability. Imagine trying to draw and accurate drawing while the whole table is shaking back and forth, our old tables did not have this issue. The electrical raceways and environmental control systems are exposed in the ceiling area of all of our rooms, which is a great visual aid for showing students how buildings work, but the loud drone of the air traveling through the conditioning system and out the exposed registers is deafening at times.

We have put several of our books on reserve in our campus library and also have class books that we let students borrow from time to time. This department does not use the Library because we have several computer labs and now with the advent of the Internet we find most of our students can get the research they need from that source. We have a small library in our department of extra textbooks students can borrow, as well as books that architects have donated. Also with the advent of the Internet, students can read book and magazine articles on line now.

The days and times that our classes are currently offered needs to be seriously analyzed by our faculty and we need to change days or times to make it more accessible for a student to enroll and take classes. There is no reason why all of our classes should not be full; there is a current issue of university programs in California being impacted so the students that want to study architecture, that do not get into the college they desired, should be coming to El Camino to get the foundational architecture classes done so they can transfer into a college with advanced standing. We are in the process of generating flyers to use to change the perception of our Program in the greater South Bay area.

6.Facilities and Equipment

The Architecture department just moved into a new facility and consequently, new rooms. We had two Lab rooms a lecture room, a small storage room and an office space in the last building we inhabited. The new architecture department located on the second story of the newly refurbished ITEC building has one large Lab space, which we call our Studio Space. There is a teacher's office space and a reproduction/storage room and one lecture room that will hold up to 40 students adjoining that Studio Space. There is a Computer Lab that has 26 computer stations.

The Studio Space and adjoining classrooms are inspiring spaces for ECC architecture students to get an education in. The exposed environmental control and computer/electrical raceway systems give the student a look at the nervous system of the building. The floor-to-ceiling glass curtain wall facing North gives the spaces a nice ambient natural day lighting that is a great lighting for students to work on their assignments. The lights did not work in the lecture room the first week we moved in and we taught, during the day classes, by natural daylight coming through our windows, showing students what being sustainable was all about in real life experience of using daylight to illuminate a space. Having said how nice it is the architecture faculty feels about the ambiance of our new classrooms and labs, there are a number of problems and issues we are currently struggling with regarding our new state-of-the-art facility that we addressed in the previous section.

The faculty feel, based on the advisory' committee's comments, that the "Studio Space" or Lab feeling for the Department of Architecture should be that of a large Conference Room feeling, where collaboration can take place, not that of a dated, Drafting Room with drawing machines that students are standing behind toiling away at their drawings. With the new curriculum that includes physical model-making, writing, cad-generated drawings, not just drafting is done in Architecture studio spaces anymore, students multi-task more now, than ever, to solve the problems given in their architecture classes. The lighting is rather poorly designed in the new studio/lab space, the lighting should be more varied for task lighting for specific tasks that students have to do in the studio.

7. Technology and Software

We currently have 35 two-year-old quad core computers with 16 MB of RAM for our architecture and environment tech students.
We need another 35 because we have incorporated software education as part of every class now.
We see our department requiring each student to purchase a laptop computer someday soon in our program's future.
We currently have wireless network installed in all of our rooms.
We also have 2 new laser printers and a new large plotter that reside in our reproduction/storage room.
We need to get various sizes of three dimensional computer model making machines.
We need to get software and machines that work with CNC (Computer Numerical Control) programs

The Computer Aided Design software we use is Autodesk Suite, which has AutoCAD, Revit, 3D Studio Max and Maya. We also use software called Sketchup and the Adobe Creative Suite, which includes Photoshop, Illustrator and InDesign, the software that the students use to make presentations and document their work for their portfolios.

The faculty is researching other software currently being used, both at university programs and local architect's offices, to see if it would be advantageous to teach in our program.

New Software needs to be purchased to teach students to be able to do more research in design. Software like; Rhino, Grasshopper and ArchiCAD need to be added to our computers and to our curriculum to provide students the computer medium to produce information that critically analyzes buildings in many new ways.

8.Staffing

a) Current staffing:

1. 2 full-time Professors
2. 6 part-time instructors
3. 1 part time (20hr/wk.) Tool / Reproduction room attendant

b) Explain and justify the program's staffing needs in the immediate and long term. Provide cost estimates and explain how the position will help the program better meet it's long-term goals.

We are growing, as far as sections of classes being offered, by the Architecture and Environmental Tech departments. If the growing Environmental Technology department keeps growing and creating new classes, and it still falls under the umbrella of the Architecture Program, then another full time teacher needs to be hired to manage this new ET Program and they could possibly teach architecture classes as well.

We are currently writing new course outlines to expand our history classes and computer classes, when the new courses eventually get approved by the College Curriculum Committee we will need to hire more adjunct faculty to teach because all of our current adjunct faculty are just about at their maximum limit which they can teach at.

d) recommendations

The greatest staffing need we have as a department now is that we need to have a Full time Tool Room Attendant in our Reproduction Room/ storage space. All reproduction done by the student now goes to this space and so their needs to be a tool room attendant to monitor the amount of reproduction and hand out the work. The need for a tool room attendant is necessary during any class time so because of our new arrangement, where all reproduction equipment is behind a walled in room.

9.Future Direction and Vision

a) Describe relevant changes within the academic field/industry. How will these changes impact the program in the next four years?

Because the construction industry in Southern California is rebounding, according to recent multiple articles in Los Angeles Times. "The once-beleaguered construction industry is forecast to be the top growth sector, in the state through 2019, making up ground after tremendous job losses in the recent recession." (Kirkham, 2014) The construction business fuels the architecture business so the future looks positive for more jobs in architect's offices. The construction industry is supposed to grow at an annual rate of 6.8% over the next five years. That's more than healthcare, and other fast growing industries.

The field of jobs in the architecture industry is widening; historical renovation, modular home design, green and sustainable designers, design/build professionals any many more. The field of jobs that an architecture student can now do their internship in is large and so the future of employment is looking much better than the past five years.

The relevant changes, in the field of architecture primarily have to do with the role of computer software and how it manipulates and operates industrial machines like laser cutting devices and CNC (computer numerical control) machines. These machines fabricate small-scale parts for models and large scale parts, to install as components into buildings, all based on computer documentation done by architectural designers on a number of different software products.

Other changes in our industry include a new Green Building Code that architects have to abide by now. This code forces the architect to design sustainable aspects into the fabric of the building so it will use less fossil fuels and grow to be a structure that can eventually work off the grid. Our CAD software now analyzes and suggests passive and active solar systems that we can design into the building, which will make it more energy efficient.

Still other changes include an increase in Historical Renovation of old buildings. There are thousands of worn down, dilapidated old venerable structures with historical significance in every city of our country. The architecture industry has been doing much more renovation work on these types of structures in the past four years. Even stores like Renovation Hardware have been doing a booming business so that seems to be a sign of the times.

The way these changes will impact our program is that we need to offer more classes to be able to teach the objectives of the new changes in our industry;

1. New CAD software programs need to be taught that can fabricate large and small parts on various types of machines and purchase more of these machines, (Laser cutting, model making, CNC, etc.) for students to use on their assignments in our Lab.

2. More classes in the Parametric Software programs like Revit and ArchiCAD, so the students will understand how to design and build a model of a building that can be tested from a Sustainable aspect of energy conservation and learn how to incorporate more Green materials into the construction of the building.

3. We need to redesign our current Western Architecture History class (Architecture 104) to become two separate History classes and incorporate more information about Eastern architecture in them so that they will then transfer across the board to any university architecture program that our students will transfer to. We also need to write a course outline for 20th Century Modern Architecture as this would not only be a good primer for future Design students but it would serve the need of the popularity in renovation of modern houses and other buildings from that era, that is currently taking place.

The Architecture Program is proposing to change many of the course outlines for their existing classes to reflect current industry standards now practiced in the field of Architecture. For the program to develop the needed direction to support student success in transferring to a university or attaining a job in a local office, it will require documenting the integration of manual graphic techniques and more computer software relating to the course subject, integrated into the course content.

Probably the biggest change happening in our field is the advent of re-using old buildings and materials, like the building we now inhabit. It used to be the Math and Computer Science building but now it is the ITEC Building. It was gutted down to the bare structure and new lighting and environmental control systems were installed along with a new skin of glass to enclose the building. Doing this is much more economical than demolishing a building and building a new one from scratch. We would like to expand our program in the same way, with courses in Green Building Architecture and Sustainability Concepts.

The future of the Architecture Program is that we need to be teaching our students information to know and understand how to design buildings that will provide healthy environments in a resource-efficient manner, using ecologically based principles. While the student often hears the terms, “Green Building” and “Sustainable Design” and are often used interchangeably, they will learn in all of our courses that “Green” means a material, product or process that is not considered to be harmful to the environment. “Sustainability” calls for a whole system approach to development that encompasses the notion of the “Green” building, but also addresses broader social, ethical and economic issues. These new sustainable elements that the student will now analyze will lead, on a large scale, to the urban design of the community context of buildings, and on a smaller scale, passive environmental control systems designed into each individual building to make it operate without the use of any fossil fuels or other utility needs. The students will learn a design approach that efficiency and moderation in the use of materials, energy and special resources.

b) Explain the direction and vision of the program and how we intend to achieve it.

The direction of our department is always refining the courses we teach to better prepare our students for the next level, whatever that happens to be. More of our graduate students go to work in industry, (working for various kinds of design professionals,) than transfer on to college university programs. The El Camino Architecture Department has always been a technical oriented program, but now we are incorporating design problems in every drawing class, (whether it be on computers or manual drawing,) to incorporate problem solving type projects to help develop the students' analytical skills. We would like to update our course outlines so that there will be more group-oriented projects in each class, so the students will be able to learn collaboration skills every semester from a different instructor, as well. We still would like to build a Green Sustainable Building in our construction lab to use as a visual aid for not only construction and architecture students, but for all El Camino students to see and understand what being Green and Sustainable is all about.

c)recommendations

We currently have one of the lowest supply budgets of all the departments in our division. We need more money to cover costs of the materials that our classes require. We teach a design build class that eats up about three to five thousand dollars in materials to build these huge structures the students design. As we acquire new machines (laser, CNC, etc.) we will need more money for the materials for them as well. We will need more space, (rooms) for the Environmental Tech classes as well as a fabrication lab for the models the students will make with these machines as well as full scale mock-ups of building components the CNC machines will be able to fabricate.

We also need to have money for public relations materials, (Brochures, posters, videos, etc.) If we are going to increase in size we need to advertise in the greater south bay area and let all high schools and professional offices somehow know the classes that we offer. Our faculty

believe that if more people, who are possible candidates for our program, knew we existed, we would have not have the current problems having all of our such as promotional videos, flyers, brochures and posters that promote our program and what it has to offer high school students as well as professionals looking to get training in different new areas. This information would be sent to all the high schools and architectural design firms in the immediate area, as well as local civic centers, libraries, etc. We have an amazing program that offers a lot of classes in various areas that have to do with architecture, if people knew they existed then we would not have low enrollment. There is no reason that our classes should be low in enrollment if the university programs in the greater Los Angeles area are impacted and turning away hundreds of students.

10. Prioritized Recommendations

RECOMMENDATIONS	COST EST.	STRAT. INITIATIVE
1. Full time tool room attendant	$50,000	B,E,F
2. CNC and Laser cutting machines	$100,000	A,B,C,E,F
3. Full time teacher	$75,000	A,B,C,E,
4. More Computers for Lab	$75,000	A,B,C,E,F
5. Fixing classroom problems Acoustical, (Hanging clouds, pin up boards, carpeting,) Lighting and electrical issues.	$75,000	

c) <u>Explain why list is prioritized this way</u>

The most important thing our department currently needs is an attendant in our reproduction room to hand out to students and plotting or printing they do on the machines. This is imperative, because we only currently have a part time person doing this, so the teacher has to go get all the reproductions now and that takes them away from being in the lab to help the students with their work.

The cutting edge machines we want is necessary if we are going to train the architects of tomorrow how to fabricate things in real life. These machines exist not only in offices but also in the universities these students will transfer to.

A full time teacher, primarily for the Environmental Technology department, which the Architecture Department currently manages, will be necessary as it is starting to grow and require more teaching load of the adjunct architecture faculty.

More computers are necessary to help students learn the various software products we use in our classes. Currently most of our computers are located in our computer lab but when classes are in session the students only have the use of 12 computers in our design studio.

This Program Review of our Department lists all observations we the faculty have made to make changes to our curriculum and the way we teach our vocation. We feel that we have made recent changes that have improved our classes in our program, but we still have a number of changes to make to perfect the education of an architecture student.

ARCHITECTURE CAREER & TECHNICAL EDUCATION QUESTIONS

1. **How strong is the occupational demand for the program?**
   Architecture jobs have slightly declined over the past five years. Employment in the architecture field is projected to be relatively same in the next five years. The Bureau of Labor Statistics explains that construction jobs will fuel some demand for architectural and civil engineering CAD drafters, yet the efficiencies of computer-aided design and drafting, coupled with Building Information Modeling, will reduce the need and demand for this occupation.

2. **How does the Architecture Program at El Camino College address needs that are not met by similar programs in the region?**
   Our Program has many courses that other architecture programs do not have in the greater Los Angeles area, therefore we get many students from all over the Southern California basin coming to our program. We have an Environmental Technology Program, in which all courses are taught by architecture faculty, that addresses Green and Sustainable design concepts as well as materials and systems to help buildings get off the grid and sustain themselves by the way they are designed. We also have a course that no other Community College in the Los Angeles Area has, it is the multi-disciplinary Design Build Studio that teaches Construction and Architecture students the issues, which professionals who not only design and create the construction documents for buildings, but build them as well, deal with in the process of building these structures.

3. **What are the completion, success and employment rates for the students?**
   The data compiled by our Institutional Research department shows us that we had 10 students receive their Associate of Science Degree and 8 students receive their Certificate of Completion in our program in the 2013-2014 year.

   Female students have a slightly higher success rate averaging 82% to the male 74%. As far as ethnicity is concerned, Asian and White students have a high success rate every year that hovers around the 80% rate, and Latino (74%) and African-American (62%) students come in slightly lower. If you look at all of our classes that we offer on a yearly basis, we have a somewhat steady incline of student success rate from 73% in 2011 to 80% in 2014.

Employment rates have slightly (6% ave.) gone down, across the board, in local state and national statistics in the past five years. In Los Angeles County, jobs have gone down from 3, 244 in 2009 to 3,023 in 2014. In the state of California, architectural jobs have gone down from 14,382 to 13,668 in that same period. In the nation, jobs have gone down from 103,871 to 97,813. In our South Bay area jobs have gone down from 437 to 413.

Although our Institutional Research department does not keep statistics of how many of our students get employed after they leave our program, we have seen many being placed in offices around the south bay area. Sometimes our students do not finish a class they are enrolled in because they find a job in a local office and the monetary requirements of their current living situation require them to take that job and not continue and finish the program. This author has seen that happen many times over the last four years and unfortunately our Institutional Research department does not keep statistics like that. We feel that we, as a department, have succeeded when this happens, because the goal of most of our students is to gain employment in our industry.

4. **If there is a Licensure exam for your students to work in their field of study, please list the exam and pass rate.**
   The exam to become a licensed architect is a National exam that requires the student to hold a Bachelors Degree in Architecture and have approximately 4,000 hours logged in many different work related areas, working under the supervision of a licensed architect. So our program is just the tip of the iceberg, when it comes to getting a license to practice architecture. We like to think that we educate our students as to what it takes to become an architect someday and prepare them for transfer to an accredited university and to also work in an office, so they can acquire both of those components that are necessary to become licensed to practice architecture. The NCARB (National Council Architectural Registration Board) which is the entity which creates the national exam that all candidates to become licensed, (and also logs their internship hours and education,) will give a candidate one year towards the 7.5 years of education and internship required, to all candidates who have an Associates Degree in Architecture from a community college. This is the way in which we do contribute to the ultimate licensure of our students.

5. **Is the advisory committee satisfied with the level of preparation of program graduates?**
   Many of our advisory committee members have questioned numerous teaching techniques that we currently employ in our program. The main concern is the teaching of manual drafting techniques on parallel bars that were mounted to the tables the students work at. In most contemporary offices in our field, the use of a drafting machine or parallel rule bar is not used anymore. Almost all architects use computers to create architectural documents necessary to obtain a building permit. The advisory committee, along with most university programs that we transfer our students to, want us to teach sketching techniques, rather than, "Drafting Techniques" so that our students will be able to accurately sketch an idea out on a piece of paper, and have it be proportionally correct and a sense of professional artistic flair to it as well. The debate that we had at our last advisory committee, which lasted almost two hours, was about how one teaches a student, who has never drawn anything in their life that has to do with architecture, how to "Sketch" professionally, accurately and with an artistic flair. The faculty of our program, feels that certain "crutches" that we use to obtain an accurate, manually drafted drawing, with a pen or pencil, is the best way to ultimately teach a student how to sketch something without the use of these crutches. (These crutches we refer to are instruments like a parallel bar, triangles, circle templates or compasses which will ensure the student to successfully create a professional looking accurate drawing.)

EL CAMINO COLLEGE
ARCHITECTURE ADVISORY COMMITTEE MEETING MINUTES
APRIL 22, 2015

Attendees Representing Industry:

1. Bernice Morales Designer at Architect's Orange – Former Arch. student at ECC
   144 N. Orange ave. Orange CA. 619-206-4260
2. Patricia Ruiz Architect at WaggingTailDesigns – Former Arch. Student at ECC
   11724 S. New Hampshire Ave. Los Angeles, CA 323-755-3403
3. Dean Reuter Architect at Reuter & Reuter inc. – employs ECC students
   23001 Hawthorne Blvd. Torrance Ca. 310-793-7070
4. Brian Winters Architect at ar5+inc.
   413 25th street Hermosa Beach, Ca. 310-788-3465
5. Karen MacIntyre Architect at DLR Group
   3130 Wilshire Blvd. 6th floor Santa Monica,CA. 310-828-0040
6. Dean Nota Architect at Dean Nota Architects
   2465 Myrtle Ave. Hermosa Ave. Hermosa Beach 310-374-5535
7. Anthony Laney Architect at LaneyLA - Former Student at ECC
   15420 Atkinson Ave. Gardena CA. 90249 310-498-2455
8. Ryan Heise Structural Engineer @ Beyond Engineering inc. employs ECC
   18119 Prarie ave. Suite 102 Torrance, CA. 310-793-8410
9. Deborah Shepley Architect at Gensler inc
   500 S. Figueroa St. Los Angeles, CA. 90071 310-243-8828
10. Henry Mera Architect at Gensler inc. – Former ECC arch student
    500 S. Figueroa St. Los Angeles, CA. 90071 213-327-2896
11. Shawn Gehle Architect at Gensler inc.
    500 S. Figueroa St. Los Angeles, CA. 90071 213-327-3826

Attendees Representing El Camino College Architecture Department:

12. Michael Stallings
13. Peggy Johnson
14. James Lemmon
15. Jennifer Doublet
16. Bruce Cook
17. Greg George

Everyone introduced themselves and the meeting began at 6:30pm

The first agenda item was talking about new curriculum being proposed.
The new courses were as follows:
Arch 103 Portfolio Preparation
Arch 106 History I – Paleolythic to Gothic
Arch 107 History II – Renaissance to Present
Arch 108 History III - 20th Century Modern
Arch 118 Computer Aided Design Applications

After the new courses were discussed, the existing architecture department courses were analyzed by the committee members present, which were not faculty members. A conversation began that lasted two hours, here are some of the comments that were made by the attendees;

- The use of drawing devices like parallel bars are not used in most large offices any more. They should not be in architectural schools because it is an old technology & that technology is no longer used in most mid to large offices.
- Teaching students how to Draft construction documents on a drawing board with parallel bars is a waste of time because all drafting is being done on computers using programs like AutoCAD, Revit and ArchiCAD.
- The only manual drawing classes we teach should be sketching classes because that is the only thing an architect does with a pencil or pen now.
- There needs to be more computer software classes offered that help students refine architectural drawings, like 3-D Studio, Photoshop, and illustrator.
- There needs to be more classes taught using software that are capable of operating model making machines and CNC machines which model ideas students have that solve the design problem, Software like; Sketchup & Rhino
- There should be more Design Studio classes teaching problem solving and critical thinking and less Drafting Classes teaching students how to draw with tools like triangles, templates and French curves.
- Instruments like a light box or light table are valuable tools to use for sketching entourage on paper mounted on top of a computer generated perspective skeleton line drawings.
- AutoCAD, although it is a dated cad software, (been around for 34 years,) is still relevant for a student to learn because of all the AutoCAD DWG files that come in from various consultants that still use the AutoCAD software.

There were 6 other topics on the advisory committee agenda, but we did not get to any of them because the conversation about what we were teaching, that was outdated and what we should be teaching dominated the discussion for the entire meeting.

The members, who were not teachers quickly went around the table before we adjourned and stated what the entry level wages were and what the trends in our Industry were.

The average entry level pay was between $12-$17/HR. and that as far as trends go, the architecture industry seemed to be picking up as all the offices represented had numerous jobs that were currently in their offices and they said that the economy was getting better and as long as interest rates stay down low developers will keep investing in property and hiring architects to design buildings to go on these parcels of land.

The meeting was adjourned at 8:40pm.