

# **Spring 2011 Program Review:**

## **El Camino College Construction Technology**

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## Table of Contents

- I. Overview
  - A. Description of Program
  - B. Status of Previous Recommendations
- II. Analysis of Institutional Research Data
  - A. Course grade distribution; success and retention rates
  - B. Enrollment statistics; fill rates
- III. Curriculum – Course, Content and Articulation
  - A. Courses not reviewed in the last 5 years
  - B. Specific timeline for submission of out-of-compliance courses
  - C. Course additions
  - D. Course deletions
  - E. Articulation
- IV. Student Learning Outcomes (SLOs)
  - A. SLOs for each course in the discipline
  - B. Courses with assessments
  - C. Description of changes resulting from assessment of the courses
  - D. Program certificate and degree SLOs and manner of assessment
  - E. Results of the assessment
  - F. Program’s level of SLO/assessment implementation
- V. Facilities, Equipment and Technology
  - A. Facilities, equipment and technology
  - B. Adequacy and currency of these facilities, equipment, and technology
  - C. Immediate needs of facilities, equipment, and technology
  - D. Long-range needs in these areas
- VI. Staffing
  - A. Current staffing
  - B. Future needs
- VII. Planning
  - A. Internal and external changes or trends impacting program in the next 5 years
  - B. Direction of program in 5 years
  - C. Goals and objectives or program related to the college mission and strategic initiatives
- VIII. Conclusion and Summary
  - A. Prioritized recommendations and needs of your program/department
  - B. Estimates of any probably expenditures

# I. Overview

## A. Description of Program

The Construction Technology program offers students entry-level skills in various aspects of construction, including carpentry, framing, cabinet making, furniture making and a variety of other sub-crafts and contracting. The Associate in Science degree qualifies a student to receive a maximum of two years of credit applicable to the State Contractor License Board exam. Construction technology degrees and certificates of achievement provide transferring students with an excellent base of construction knowledge for upper division course study. Specialty and sub-trade areas of study are also ideal for currently employed craftsmen looking for professional development classes. The current program has 2 full-time faculty members and 6 part-time faculty members serving several hundred students on a yearly basis.

## B. Status of Previous Recommendations

The status of those recommendations itemized in the Fall 2006 Construction Technology “Executive Summary” is as follows:

1. Explore ideas for expanding shop facilities, including the tool room, and creating additional storage areas for student projects and materials. Acquire space for interior framing classes, to be utilized for night classes and in inclement weather. **Recommendations have been made for expansion of the shop and tool room. Discussion continues on acquiring space for interior framing classes. See Plan Builder for additional details.**
2. Install stadium lighting. **pending funding.**
3. Expand evening and weekend class offerings in both the yard and shop-based classes, including short-term, specialized technique classes. **Due to budget constraints, we have not been able to implement the expansion of class offerings.**
4. Change the starting time for Construction Technology 100 from 7:00 AM to 8:00 AM. **Accomplished.**
5. Continue creating public awareness of the Construction Technology program in our on-going student recruitment efforts. **Presented on campus at ECC Job Fair, participated in annual Division Advisory Dinner, presented student show library, demonstrated at Rockler Woodworking, conducted community outreach such as tours and workshops for organizations such as the Cub Scouts and the El Camino Woodturning Guild.** Increased enrollment is difficult to directly quantify as a result of participation, but existing evidence, albeit anecdotal and typical of this industry, supports our efforts. **Positive networking is a critical component in this industry.**
6. The department continues its on-going efforts to improve the outdoor construction facilities for the benefit of Construction Technology students. Outdoor lighting for evening classes and a covered area that would allow for framing on rainy days are still on-going projects. **There continues to be strong student interest for evening courses in the yard area. Lights and a covered laboratory are still part of the general plan.**

## II. Analysis of Institutional Research Data

### A. Course Grade Distribution; success and retention rate

Based on the data provided by Institutional Research, the following observations were made:

- Distribution of grades is relatively stable across the years (Course Totals)
- The number of As has risen while the number of Cs has slightly decreased
- The success rate of CTEC is significantly higher than the College-wide success rates.
- While CTEC retention rates in 2007 and 2008 were below the College, the 2009 retention rate was 1 point higher, reflecting CTEC's 8-point upward trend
- An informal analyses of the trends of higher grades, improved success rates, and retention rates in this industry can generally be attributed to: the cyclical nature of this industry and the unavailable spaces at four year universities during depressed economic periods.
- CTEC 100, 107, and 110 are all prerequisite classes, after attending these classes some students move on to different areas of study. The advanced classes are populated with students who have committed to this path of study and tend to have higher success rates.

#### Fall 2007

Course	A	B	C	CR	D	F	I	NC	DR	W	Total Grades	Success Rate	Retention Rate
CTEC-100	7	4	3	0	0	2	0	0	2	8	26	53.8%	61.5%
	26.9%	15.4%	11.5%	0.0%	0.0%	7.7%	0.0%	0.0%	7.7%	30.8%			
CTEC-107ABCD	28	15	9	0	0	0	0	0	2	32	86	60.5%	60.5%
	32.6%	17.4%	10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	37.2%			
CTEC-108ABCD	16	1	0	0	0	0	0	0	0	4	21	81.0%	81.0%
	76.2%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.0%			
CTEC-109ABCD	10	3	0	0	0	0	0	0	0	3	16	81.3%	81.3%
	62.5%	18.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.8%			
CTEC-110	6	8	3	0	0	0	0	0	1	7	25	68.0%	68.0%
	24.0%	32.0%	12.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%	28.0%			
CTEC-121	13	4	5	0	0	1	0	0	1	2	26	84.6%	88.5%
	50.0%	15.4%	19.2%	0.0%	0.0%	3.8%	0.0%	0.0%	3.8%	7.7%			
CTEC-122	12	8	5	0	0	2	0	0	1	0	28	89.3%	96.4%
	42.9%	28.6%	17.9%	0.0%	0.0%	7.1%	0.0%	0.0%	3.6%	0.0%			
CTEC-160	12	8	2	0	0	1	0	0	3	5	31	71.0%	74.2%
	38.7%	25.8%	6.5%	0.0%	0.0%	3.2%	0.0%	0.0%	9.7%	16.1%			
CTEC-172	11	8	5	0	0	1	0	0	2	2	29	82.8%	86.2%
	37.9%	27.6%	17.2%	0.0%	0.0%	3.4%	0.0%	0.0%	6.9%	6.9%			
<b>Course Totals</b>	115	59	32	0	0	7	0	0	12	63	288	<b>71.5%</b>	<b>74.0%</b>
	39.9%	20.5%	11.1%	0.0%	0.0%	2.4%	0.0%	0.0%	4.2%	21.9%			
<b>Division Total/Avg</b>	1,521	1,081	610	551	159	379	32	37	154	711	5,235	<b>71.9%</b>	<b>83.5%</b>
	29.1%	20.6%	11.7%	10.5%	3.0%	7.2%	0.6%	0.7%	2.9%	13.6%			
<b>College Total/Avg</b>	16,244	11,674	8,356	4,788	2,743	5,030	360	1,322	2,566	12,270	65,353	<b>62.8%</b>	<b>77.3%</b>
	24.9%	17.9%	12.8%	7.3%	4.2%	7.7%	0.6%	2.0%	3.9%	18.8%			

Fall 2008

Course	A	B	C	P	D	F	I	NP	DR	W	Total Grades	Success Rate	Retention Rate
CTEC-100	8	8	0	0	0	1	0	0	0	4	21	76.2%	81.0%
	38.1%	38.1%	0.0%	0.0%	0.0%	4.8%	0.0%	0.0%	0.0%	19.0%			
CTEC-107ABCD	27	15	16	0	0	0	0	0	2	25	85	68.2%	68.2%
	31.8%	17.6%	18.8%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	29.4%			
CTEC-108ABCD	15	0	0	0	0	0	0	0	0	7	22	68.2%	68.2%
	68.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.8%			
CTEC-109ABCD	12	0	0	0	0	0	0	0	1	5	18	66.7%	66.7%
	66.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	27.8%			
CTEC-110	9	4	2	0	0	0	0	0	0	8	23	65.2%	65.2%
	39.1%	17.4%	8.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.8%			
CTEC-141	8	6	3	0	0	0	0	0	0	3	20	85.0%	85.0%
	40.0%	30.0%	15.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.0%			
CTEC-142	12	6	5	0	0	0	0	0	0	2	25	92.0%	92.0%
	48.0%	24.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%			
CTEC-160	6	5	0	0	0	1	0	0	0	2	14	78.6%	85.7%
	42.9%	35.7%	0.0%	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	14.3%			
CTEC-172	8	8	1	0	0	3	0	0	2	3	25	68.0%	80.0%
	32.0%	32.0%	4.0%	0.0%	0.0%	12.0%	0.0%	0.0%	8.0%	12.0%			
CTEC-99ABC	1	0	0	0	0	0	0	0	0	1	2	50.0%	50.0%
	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%			
<b>Course Totals</b>	106	52	27	0	0	5	0	0	5	60	255	<b>72.5%</b>	<b>74.5%</b>
	41.6%	20.4%	10.6%	0.0%	0.0%	2.0%	0.0%	0.0%	2.0%	23.5%			
<b>Division Total/Avg</b>	1,616	1,306	675	1,252	161	561	43	84	170	680	6,548	<b>74.1%</b>	<b>87.0%</b>
	24.7%	19.9%	10.3%	19.1%	2.5%	8.6%	0.7%	1.3%	2.6%	10.4%			
<b>College Total/Avg</b>	18,319	12,726	9,310	5,700	3,176	6,871	461	1,814	3,085	10,741	72,203	<b>63.8%</b>	<b>80.9%</b>
	25.4%	17.6%	12.9%	7.9%	4.4%	9.5%	0.6%	2.5%	4.3%	14.9%			

Fall 2009

Course	A	B	C	P	D	F	I	NP	DR	W	Total Grades	Success Rate	Retention Rate
CTEC-100	6	6	3	0	6	1	0	0	1	7	30	50.0%	73.3%
	20.0%	20.0%	10.0%	0.0%	20.0%	3.3%	0.0%	0.0%	3.3%	23.3%			
CTEC-107ABCD	47	12	3	0	0	0	0	0	1	15	78	79.5%	79.5%
	60.3%	15.4%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	19.2%			
CTEC-108ABCD	19	1	0	0	0	0	0	0	0	4	24	83.3%	83.3%
	79.2%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%			
CTEC-109ABCD	17	0	0	0	0	0	0	0	2	1	20	85.0%	85.0%
	85.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	5.0%			
CTEC-110	7	5	3	0	1	3	0	0	1	5	25	60.0%	76.0%
	28.0%	20.0%	12.0%	0.0%	4.0%	12.0%	0.0%	0.0%	4.0%	20.0%			

CTEC-131	12	6	5	0	0	2	0	0	0	3	28		
	42.9%	21.4%	17.9%	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	10.7%		82.1%	89.3%
CTEC-132	7	3	3	0	0	1	0	0	0	0	14		
	50.0%	21.4%	21.4%	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	0.0%		92.9%	100.0%
CTEC-150	6	11	5	0	1	2	0	0	3	5	33		
	18.2%	33.3%	15.2%	0.0%	3.0%	6.1%	0.0%	0.0%	9.1%	15.2%		66.7%	75.8%
CTEC-172	12	16	2	0	0	0	0	0	1	0	31		
	38.7%	51.6%	6.5%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	0.0%		96.8%	96.8%
CTEC-99ABC	2	0	0	0	0	0	0	0	0	0	2		
	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		100.0%	100.0%
<b>Course Totals</b>	135	60	24	0	8	9	0	0	9	40	285		
	47.4%	21.1%	8.4%	0.0%	2.8%	3.2%	0.0%	0.0%	3.2%	14.0%		76.8%	82.8%
<b>Division Total/Avg</b>	1,761	1,199	634	814	168	508	28	48	148	598	5,906		
	29.8%	20.3%	10.7%	13.8%	2.8%	8.6%	0.5%	0.8%	2.5%	10.1%		74.6%	87.4%
<b>College Total/Avg</b>	18,808	13,245	9,880	5,269	3,201	5,941	388	1,538	3,042	9,914	71,226		
	26.4%	18.6%	13.9%	7.4%	4.5%	8.3%	0.5%	2.2%	4.3%	13.9%		66.3%	81.8%

### B. Enrollment statistics; fill rates

Based on the data provided by Institutional Research, the following observations were made:

- Seat count has increased and fill rate has reached a 4-year high of 96%, bearing out the continued demand for CTEC courses

#### Course, Section, Seat Counts Years: 2006-07 to 2009-10

	2006-07	2007-08	2008-09	2009-10
Sections	29	29	29	27
Seats	598	681	578	667
Unduplicated Students	315	370	328	349
Seats/Unduplicated Students	1.9	1.8	1.8	1.9

#### Course Fill Rates

	Fall 2006	Fall 2007	Fall 2008	Fall 2009
	80.7%	89.7%	85.9%	96.0%

### III. Curriculum – Course, Content, and Articulation

A. Courses not reviewed in the last 5 years None.

B. Specific timeline for submission of out-of-compliance courses N/A

### **C. Course additions**

Environmental Technology

### **D. Course deletions**

None.

### **E. Articulation**

No articulation concerns at this time.

## **IV. Student Learning Outcomes (SLOs)**

### **A. SLOs for each course in the curriculum**

This is the SLO for CNST 100, 110, 121, 122, 131, 132, 141, 142: Students will be able to demonstrate a basic application of materials and methods commonly used in residential construction.

CNST 107: Typical SLO – Presented with a piece of stock in rough condition, student will utilize correct squaring procedures to produce material that is square on all six surfaces.

CNST 108: Typical SLO – utilizing skill and knowledge obtained in prerequisite courses, design and construct advance woodworking project of the student's choosing.

CNST 109: Typical SLO – Set up the Ecopress for hinge mortising and insertion of Euro-style hinge in door for face frame application.

Based on the ACCJC rubric, the Construction Technology program's level of SLO implementation is in the Development stage and moving into the Proficiency stage.

### **B. Courses with assessments**

- CNST 107
- The Construction Technology department is currently implementing a timeline to assess the balance of courses within the next four years.

### **C. Changes resulting from assessments**

CNST 107: students will be individually assessed over several course sessions rather than all in one session. This will allow for a more independent assessment of each student, rather than a group effort effect.

### **D. Program certificate and degree SLOs and manner of assessment**

Upon successful completion of the courses in this program, students will be able to identify and safely operate tools commonly used in the construction and/or cabinetmaking industry. Assessment: performance test.

### **E. Results of the assessment**

N/A

## **F. Program's level of SLO/assessment implementation**

Program SLO assessed. Courses assessed: CTEC 100, 107, 109.

## **V. Facilities, Equipment and Technology**

### **A. Facilities, equipment and technology used by the program/department**

Smart classroom, woodworking lab and construction yard.

### **B. Adequacy and currency of facilities, equipment and technology**

Although able to meet students' needs, we are continuously under pressure for additional interior lab and storage space for student supplies, projects and departmental materials.

The current tool room is also inadequate due to the increase in additional subcraft classes, each of which requires its own unique supplies and tools.

Finally, the lack of separate faculty-only lavatory facilities leads to an inappropriate blurring of the lines between the student and teacher roles. Students have commented that they are uncomfortable with the current situation. On a related note, current lavatory facilities do not have hot water.

### **C. Immediate needs of facilities, equipment and technology**

- Dust collector
- Spray booth
- Electrical upgrade
- Additional classroom
- Adequate water distribution in yard area
- Increased electrical power
- Lumber storage racks in yard
- Expansion of indoor lab

### **D. Long-range needs**

- Computer Numerical Control (CNC) equipment: A CNC wood router is a Numerical control tool that creates objects from wood. Parts of a project can be designed in the computer with a CAD/CAM program, and then cut automatically using a router to produce a finished part. The CNC works on the Cartesian coordinate system (X, Y, Z) for 3D motion control. This gives the computer the ability to drive a CNC machine to make parts. The CNC Router is great for engineering prototyping, product development, art, robotic education, and production work. This equipment is the next evolution in the connection between architects, designers, prototype developers and the shop floor.



- Additional yard lighting: Exterior laboratory lighting is essential to developing a strong evening program which is currently an untapped student population. One community college in Orange County has exterior laboratory lighting and a very strong evening program. El Camino College Students have expressed interest in attending evening classes. Many of our students work in the industry during the day and would find it easier to attend class in evening
- The installation of a spray booth will provide the ability to introduce instruction in the use of emerging environmentally-friendly finish materials (green) unique to cabinet making.

## **VI. Staffing**

### **A. Current staffing**

- 2 full-time
- 4 part-time instructors

### **B. Future needs**

As the economy improves and the program grows, we anticipate the need for 1 additional full-time and 2 additional part-time instructors. At present time, incumbent faculty teaching loads are full. In order to expand the program to meet the needs of the community, the current faculty roster must be expanded.

Due to the high level of skill building required for certificates and degrees in the cabinet and construction areas, a strong summer program will provide continuity and expedite students' progress toward their goals. We recommend that two or more classes be offered in each area during the summer, and at the very least, one offered in each area.

## **VII. Planning**

### **A. Internal and external changes or trends impacting program in next 5 years**

According to a report issued in January 2011 by the Joint Center for Housing Studies at Harvard University, cities such as Boston, San Francisco and Los Angeles are well-positioned for an upturn in remodeling activity.

Following a three-year downturn, a sustainable recovery for the remodeling industry is expected in 2011, according to the Leading Indicator of Remodeling Activity (LIRA) released today (01/13/2011) by the Remodeling Futures Program at the Joint Center for Housing Studies of Harvard University. The LIRA projects annual growth in home improvement spending of 6.5% in the third quarter of 2011.

“The number of homes in the housing stock, the age of those homes and the income gains of homeowners making improvements...all point to increases in remodeling spending.” This translates to an increased need for skilled craftsmen in the construction industry

- City of Los Angeles housing demographics further support bolstering the Construction and Cabinet Making program. The median age of houses is 51 years – with an aging marketplace the need for qualified craftsmen is high.

**City of Los Angeles Housing Demographics  
1990 & 2000 Census**

**AGE OF HOUSING**

**MEDIAN YEAR STRUCTURE BUILT (Housing Units)**

Census	2000	1990
Median Year Built	1960	1959

- According to the 1/26/11 posting of Woodshopnews.com, major manufacturers will be returning to the American Woodworkers & Furnishing Suppliers show scheduled for July 2011. These same manufacturers were noticeably absent from the previous show in 2009.

“The fact that many exhibitors have decided to return, including several that have sat out an entire show cycle, is an extremely encouraging sign for the industry,” says Joan Kemp, president of AWFS’ board of directors, in a release. “Ultimately, those that will benefit the most will be our attendees. In the end, that’s what truly matters and we couldn’t be happier.”

- According to an AWFS news announcement dated 4/7/11, “hand-crafted furniture is one of the hottest trends sweeping the home décor market. Made from diverse woods with high quality construction and detail, this unique alternative to mass-produced goods is gaining consumer traction.” The AWFS plans to offer a series of premium skill courses dedicated to the creation of fine hand-crafted furniture.

**B. Direction of program in 5 years**

We also anticipate greater utilization of green technology and Computer Numerical Control (CNC) equipment. California adopted mandatory building regulations for all new construction in the state that will achieve major reductions in greenhouse gas emissions, energy consumption, and water use. The CALGREEN Code is the nation’s first statewide green building standards code and took effect January 1, 2011. Appropriate resources – monetary, personnel and equipment - will be needed to remain current.

**C. Goals & objectives of program related to the college mission and strategic initiatives**

The CTEC program directly addresses the needs of the students through education and outreach, helping to build and maintain successful relationships within the community

## VIII. Conclusion and Summary

### A. Prioritized recommendations and needs of your program/department

1. Incorporate room # 500d and room # 500 in the Construction Technology building in to one larger laboratory
2. Exterior stadium lighting
3. Spray booth
4. Offer evening classes

### B. Estimates of any probable expenditures

1. Incorporate CTEC 500d into CTEC 500 - \$120,000
2. Exterior stadium lighting - \$150,000
3. Spray booth - \$103,000
4. Offer evening classes – to be determined

CTE Program Review  
Construction Technology  
El Camino College

Use labor market data, advisory board input, and institutional data to respond to the following questions:

1. How strong is the occupational demand for the program?

Occupational demand for this program is high. According to a recent interview on National Public Radio, Anthony Carnevale, director of Georgetown University's Center on Education and the Workforce, describes, "a mismatch problem. ... Even though there aren't enough jobs to go around, there are a lot of jobs that people don't have the skills to fill." He continues, "The openings don't really require advanced degrees. But employers do need workers with solid skills in math and other disciplines. And that means more emphasis on vocational training."

According to the attendees at El Camino's Advisory board and local contacts in the "Trades" the need for skilled, well rounded employees is very high.

El Camino College Construction Technology provides students with the knowledge, practical hands on training and educational opportunities to advance in their chosen field.

- How has the demand changed in the past 5 years and what is the outlook for the next 5 years?

In the past 2 years the demand has risen, recovering from a large drop since 2007. This large drop in demand closely mirrors the drop in the economy after the latest economic downturn. The signs of rising demand are encouraging to our industry. The

“new” construction industry has always been cyclical and fairly inelastic in nature, as “new” construction rises the demand for laborers and skilled tradesmen increases. When industry slows down the demand slows down. One interesting point being: When “new” construction slows, skilled tradesmen can make the shift from “new” construction, to remodeling, renovating and other careers with similar skill sets.

In the next 5 years: The consensus of opinions is: growth in the industry. While the housing market finds equilibrium, the bulk of the aging buildings both public and private will still need to be maintained. Many homeowners are opting to fix and remodel instead of purchasing new homes. Students who have been enrolled in solid CTEC programs like the ones at El Camino College are now positioned to fill the industry openings, as described by Mr.Carnevale in the NPR interview.

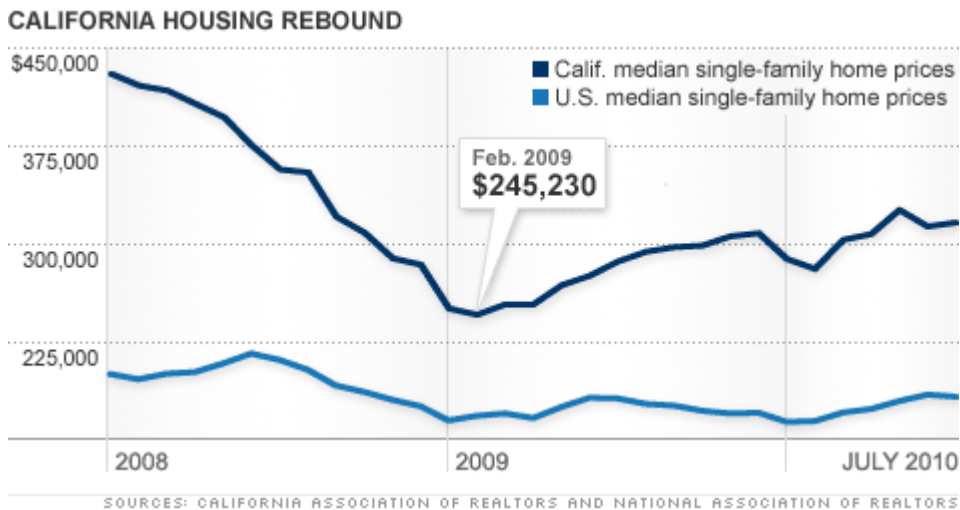
2. What is the district’s need for the program?

The cities serviced by El Camino college: [El Segundo](#), [Manhattan Beach](#), [Hermosa Beach](#), [Redondo Beach](#), [Torrance](#), [Lawndale](#), [Hawthorne](#), Gardena, Lennox and [Inglewood](#), encompass a population of almost one million residents. These communities are in need of locally trained and qualified tradesmen to build, remodel, renovate and maintain private and commercial structures.

3. What is the state’s need for the program?

As illustrated by the graph from a September 15, 2010 article from CNN money, and the **Industry Change Summary** provided in the **Construction Technology Industry Report**

The downward trend in California housing and the subsequent rebound in July 2010 show the connectivity between housing trends and the changes in the construction industry. As housing prices fell and less houses were built and sold the industry also changed.



**Industry Change Summary**

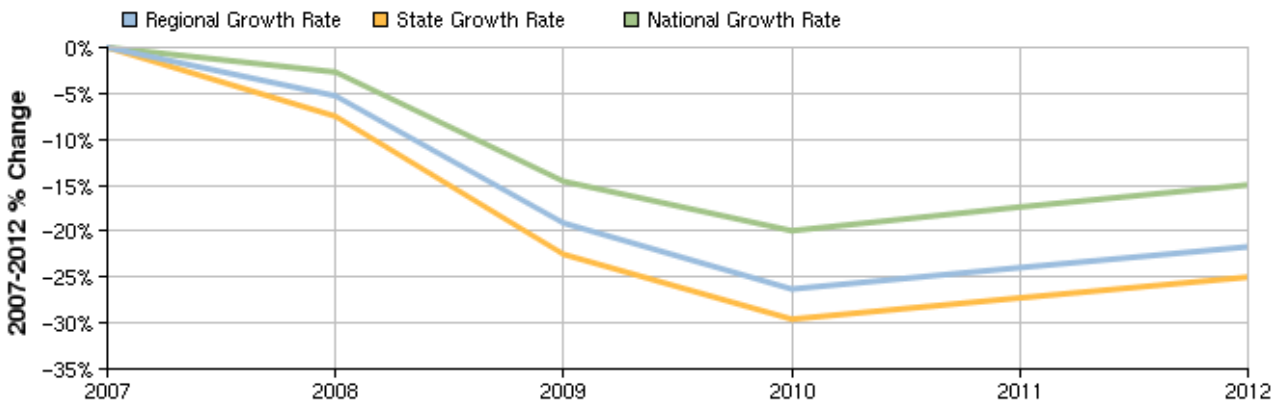
According to the CNN Money Article: “The national housing market is shrouded in uncertainty. But in California, there are glimmers of stability...Home prices are rising in virtually every corner of the state. They've climbed for nine consecutive months, and in July posted a 10.4% gain year-over-year....And the news is even better in coastal cities....Los Angeles jumped 9.2% ...Plus, the California economy is picking up. Even in a recession, it has remained one of the world's 10 largest economies, mainly because it is driven by every major industry -- aerospace, tech, software, finance, agriculture, tourism. So as more of those industries recover and employment picks up, demand for housing will jump.” "California is a much larger, stronger and more diversified economy than the other [bubble] states," according to Stuart Gabriel, director of the Ziman Center for Real Estate at UCLA.

The article concludes “For home sellers in other states, what's happening in California is encouraging. Trends often begin on the coast, so they're hoping the recovery will roll eastward.”

The diversity of the state economy and the potential for future growth translates into a need for tradesmen with the knowledge, skills and abilities to help the housing market and the economy out of the current economic downturn. Community colleges are one of the last places people can turn to **Career Technical Education** and training.

4. How does the program address needs that are not met by other similar programs in the area?

El Camino College is the only institution in the district with the facility and faculty to “fully” educate and train future tradesmen. Institutions with portions of similar programs exist in the L A county, Orange county basin but they do not have the overall breadth of programs to service potential students or are not geographically desirable, with regard to transportation, for local area students.



- Are the students satisfied with their preparation for employment? Are the employers in the field satisfied with the level of preparation of our graduates?

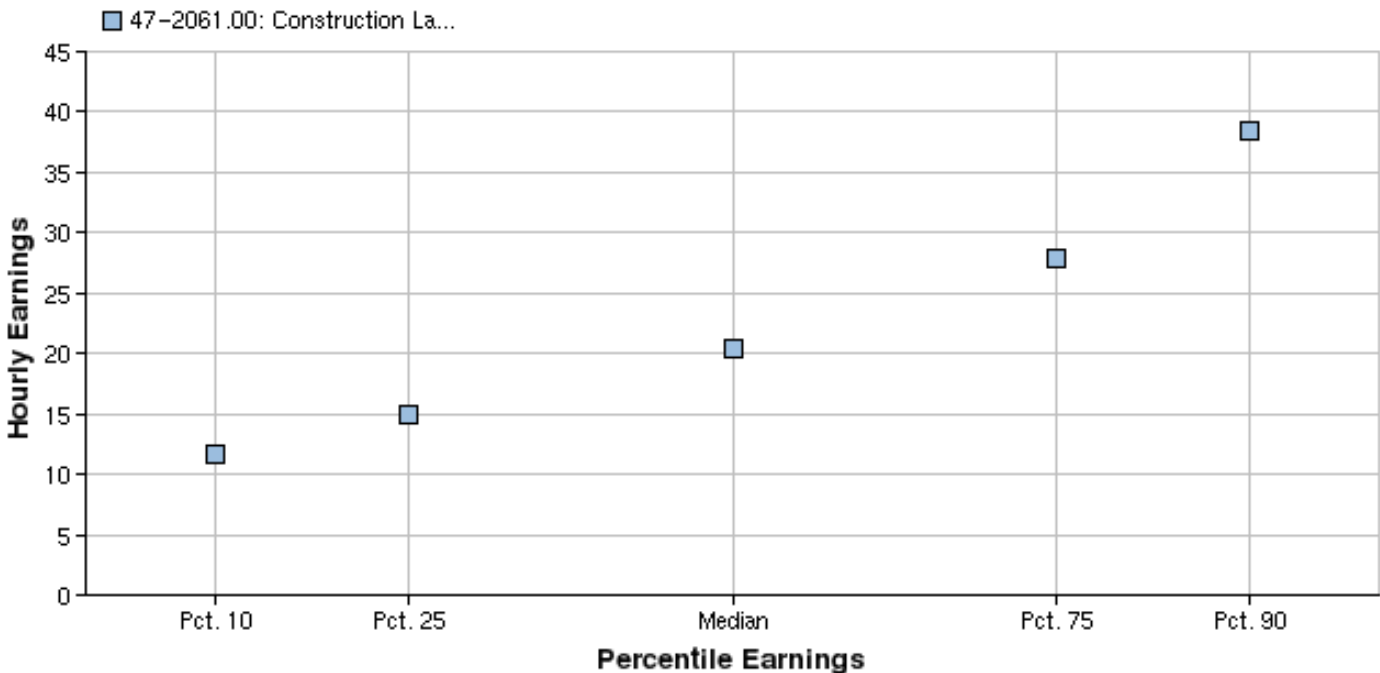
The number one request from students and employers alike is more time in the laboratory portions of the classroom. The skills and techniques learned by our students need time to be perfected. Journey man level skills take years to develop on the job. With concentrated course loads and specific training many of our graduates can shorten the learning curve considerably.

Employers and students have also requested training in other areas of recent importance. Green technology and Green building are highly sought after areas of study. The state mandated implementation of new formulas of environmentally friendly finishes for cabinetry and furniture building has created a rising demand for training with the water based formulas and the specialized equipment needed to properly apply each finish. El Camino College is getting requests from employers, and the advisory committee to create an area for the spray application of the new environmentally friendly finishes.

- What are the completion success and employment rates for the students?

Because the barriers to entry into the construction trade are relatively low, movement into and out of the industry is very fluid especially at the level of laborer. Entry level laborers make considerably less money than the skilled tradesman as seen by the accompanying **Wages** table.

Wages are the median hourly wage for this occupation for the region. The chart above shows wages for the source occupation and the target occupation by percentile, comparing the earnings potential of each occupation.



O*NET Code	Title	Pct. 10	Pct. 25	Median	Pct. 75	Pct. 90
47-2061.00	Construction Laborer	12	15	21	28	38

47-2061.00	Construction Laborers	\$11.66	\$15.00	\$20.33	\$27.90	\$38.36
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Source: EMSI Complete Employment - 3rd Quarter 2010

Often time's students attend Construction Technology classes for the specific reasons of advancement in the work place. Once a particular skill set is satisfactorily acquired, students/employees are promoted or reenter the industry at a higher status and pay scale. Economic downturns are prime times for workforce training. Employers are looking for employees with broad skill sets who can help run a business during lean financial times. The broader the knowledge and skill base the more in demand the employee. Employment rates are hard to quantify because of the transitional nature of the industry. Many of the students in our program are working on a regular basis somewhere in the industry. An increase in pay or position is often the sign of completion and success for many of our students.