

INSTRUCTION PROGRAM REVIEW

Program Name: Building Inspection
Faculty Contact: Adjunct Faculty

Academic Year: 2013-2014
Program Review Submission Date: 2014

I. Description of Program

Provide a brief description of the program and how it supports the college's [College Mission and Diversity Statements](#), [Institutional Priorities, 2008-2013](#), [5 in 5 College Strategies, Spring 2011](#), and other [institutional planning documents](#) as appropriate.

The Building Inspection department at the College of San Mateo provides up-to-date courses and an associate degree in the multiple areas that require passing state certification exams for licensing as a city/county/state building inspector in California. This program provides students with the practical and theoretical knowledge to pass the state certifications that lead to employment in municipal positions inspecting both residential and commercial structures with compliance with all parts of the building code. The function of building inspectors falls in the public safety sector due to their critical role in insuring the safety of residents and employees in their structures during events of fire, earthquake, etc. Although other public safety roles have a higher profile (e.g., firefighters, law enforcement and medical personnel) proper inspection of buildings can prevent the injury or death of hundreds of people in a catastrophic event. It is difficult to measure the value of "preventing harm" but the recent small earthquakes in Northern California with less than a dozen injuries demonstrated the value of this public service and the cost of not enforcing the building code. This curriculum is structured to prepare students to successfully pass the California building inspection certifications for the multiple areas covered in the building code and thereby gain employment in one of the city/county/state building inspection departments.

II. Student Learning and Program Data

A. *Discuss Student Learning Outcomes Assessment*

Reflect on recent SLO assessment results for courses and degrees and certificates offered by the program.

Learning outcomes, assessment methods, success criteria, and schedule have been established for all building inspection courses:

- BLDG 700 Introduction to the Building Code
- BLDG 710 Non-structural Provisions of the Uniform Building Code
- BLDG 720 Electrical Inspection I
- BLDG 725 Electrical Inspection II
- BLDG 730 Plumbing Inspection
- BLDG 735 ADA Building Requirements
- BLDG 740 Mechanical Code
- BLDG 750 Structural Plan Review
- BLDG 760 Energy Regulations
- BLDG 775 Introduction to Residential Dwelling Inspection Technology
- BLDG 790 Blueprint Reading for Construction
- BLDG 880 Accessibility Requirements for Our Built Environment
- BLDG 881 State Certified Inspection

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Assessment for Building Inspection courses will occur each time the course is taught. During the recession the BI program was reduced to only two/three courses per semester. Therefore some courses are only offered every fourth semester. The BLDG 730 (Plumbing) and 790 (Blueprint Reading) will be offered and assessed in fall 2014.

Assessment of program SLOs was completed for the Building Inspection Department. In the SLO survey of degree applicants, 100% of the respondents said that they either agreed or strongly agreed with the three program SLO statements:

- Describe and discuss Building Inspection standards and testing criteria to assure quality inspections.
- Explain the intent of code requirements.
- Identify and explain graphics and terms of structural design and engineering.

Identify trends and discuss areas in need of improvement.

Trends and areas in need of improvement will be discussed upon completion of SLO assessment in Building Inspection courses. The California Building Code was re-written in 2011 to encompass new "green technology" and clean energy alternatives to traditional building materials/systems. Both programs and curriculum will be changing in 2014-15 to encompass changes that will become effective in 2015. In the course of instituting these changes the department faculty has decided to restructure the single large certificate to several smaller certificates divided between residential and commercial inspection. This will allow students to more rapidly find employment in the field for the largest demand area (residential) by reducing the time to completion but it will also provide a distinction for those achieving the larger/advanced certificate in commercial building inspection.

(Explain any recent or projected modifications to the program SLO assessment process or schedule.)

Plans are to assess program SLOs every year. Currently we are using the survey assessment of program SLOs designed by PRIE with students who have completed the program. We will be adding another assessment for these SLOs using authentic assessment results from course SLOs.

B. Student Success Indicators

1. Review [Student Success and Core Program Indicators](#) and discuss any differences in student success indicators across demographic variables. Also refer to the [College Index](#) and other relevant sections of the [Educational Master Plan: Update, 2012](#), e.g., Student Outcomes and Student Outcomes: Transfer. Basic Skills programs should also refer to [ARCC](#) data.

The Building Inspection program for academic year 2012-2013 has a student success rate of 73.7%, a retention rate of 89.4%, and a withdrawal rate of 10.6%. These rates compare favorably to the campus-wide rates of 70% (success), 85% (retention), and 15% (withdrawal) respectively. However, these statistics have deteriorated from the previous year where student success was 84.3%, retention was 93.3 % and the withdrawal rate was only 6.7%. The deterioration is believed to be the result of improved construction activity in the Bay Area in 2012-13 and the opportunity for employment appealed to many of the students who were

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attending due to unemployment. The number/percentage of students over 40 years of age continues to be part of the normal profile for this program as many males in construction are aging out of that field and seeking an alternative employment path within their area of expertise. The results for the Building Inspection Department reflect the quality of the program and the profile of our older, mature students who enroll in our program. .

Across demographics the most significant trend is in the continued spread of success across different age groups. For students 29 years old and under the success rate was 49%. For those students between 30 and 39 years of age the success rate was 88.8%. For all the groups over 40 the success rate exceeded 95%. Faculty attributes this wide spread of success rates to the difference in experience/knowledge from working in construction and the maturity of the older students. The difference in performance between genders is worth noting.

In 2011-12 the female success rate was 93.5% versus 84% in 2012- 13. During this same period the male success rate for males was 82.7% in 2011-12 versus 81% in 2012-13. This decline in success for both groups is attributed to the withdrawal rate increasing as employment opportunities returned for students with previous construction experience. The presence of women in the program has been a refreshing surprise (17% and 14% respectively for the last two years) with 31 women in 2011-12 and 25 in 2012-13. Their success in the program has been encouraging and the department actively recruits women from the various planning departments around the county as the certifications can aid in promotions with their current employers.

Variations in student success rates for ethnic groups are affected by the small sample size in some of the groups. For example, in 2011-2012 the success rate for Black students in 2012-13 was 0%; however, the small sample size of 1 student (who withdrew) skewed the data. The success rate for Black students in 2010-2011 was 33% (for 3 students). All other groups that had 10 or more students had a success rate spread between 55% and 88%. The 55% is thought to be an anomaly tied to a 22% withdrawal rate for Asian students after years of recording success of 76.9% in 2010-11 with 39 students and success of 92.6% in 2011-12 with 27 students. This will be closely monitored to ascertain whether this is a negative development with this group or indeed an anomaly.

2. Discuss any differences in student success indicators across modes of delivery (on-campus versus distance education). Refer to [Delivery Mode Course Comparison](#).

This program does not have alternative delivery modes.

The Building Inspection program has only lecture classes on campus; thus, no data is available for mode comparison.

C. Program Efficiency Indicators. Do we deliver programs efficiently given our resources?

Summarize trends in program efficiency as indicated in the [Student Success and Core Program Indicators](#) (LOAD, Full-time and Part-Time FTEF, etc.).

The Building Inspection program is taught exclusively by adjunct faculty and courses are offered only in the evening. After a decline in 2011-2012, the LOAD in 2012-2013 recovered from 485.3% to 572%, closely matching the LOAD for 2010-2011, which was 542. The

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increase in LOAD is a direct result of an increase in per class enrollment and a decrease in the number of classes offered.

Courses satisfy industry/state continuing education requirements and equip students with the skills and knowledge necessary to pass the California state certification exams. Although fewer classes are being offered per semester, a system of course rotation is now being used to allow students access to complete their courses over multiple semesters.

III. Career Technical Education

A. *Additional Career Technical Education Data – CTE programs only. (This information is required by California Ed. Code 78016.)*

1. **Review** the program's [Gainful Employment Disclosure Data](#), [External Community](#), and other institutional research or labor market data as applicable. Explain how the program meets a documented labor market demand without unnecessary duplication of other training programs in the area. Summarize student outcomes in terms of degrees, certificates, and employment. Identify areas of accomplishment and areas of concern.

For municipal building inspectors who are required to pass the state licensing exams for certification in the various categories of inspection (plumbing, electrical, structural, non-structural, etc.) in residential and/or commercial building code requirements, openings in San Mateo/San Francisco/Santa Clara counties is improving. During the recession many municipalities were required to conduct reductions in force (RIFs) as budgets declined. With the increase in building permit requests building departments have started to hire more inspectors.

In addition, there is a growing demand for First line supervisors of Construction Trades and Extraction Workers with a strong knowledge of the building codes. Construction supervisors/management with state certified knowledge of the building codes have an advantage in competing for employment. The employment opportunities have been increasing as the effects of the recessions have diminished.

Turning to the employment data available through EMSI, we find the following information on employment prospects for building inspectors:

Median Hourly Earnings	\$38.61/hour
2014 jobs (SF/SM/SC counties)	1,369
2009-2015 change	44
Annual openings	44
Associate Degree or less	48%
Training programs = 1	College of San Mateo
Completers 2012	10

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The department used data from Economic Modeling Systems Inc.(EMSI) to analyze the labor demand for Building Inspectors. The Gainful Employment data on the college website had limited usefulness since the program had a falloff in enrollment during the recession and the number of completers was limited. However, the demand for people with building inspection knowledge and certifications is growing and the median wage level is very strong.

The State of California Employment Development Department published, through the Labor Market Information Division, the industrial employment projections for San Mateo County from 2010 to 2020. For this period, employment opportunities in the market for Real Estate professionals will increase from 14,700 jobs to 15,800 jobs, an increase of 7.5% over this ten-year period.

According to the U.S. Department of Labor statistics, "Employment of real estate brokers and sales agents is expected to grow 11 percent from 2010 to 2020, about as fast as the average for all occupations. Job opportunities will fluctuate with the economy and are, like many other sales occupations, highly dependent on the personal drive, motivation, and sales ability of the individual real estate broker or sales agent."

State and federal labor projections reveal job opportunities for real estate professionals. By preparing students to take and pass the California real estate licensing exam, the program is providing students with the only method available for them to enter this labor market.

College of San Mateo offers the only full real estate curriculum consisting of the eight courses required for the broker's license in San Mateo County. Skyline College offers only the three courses required for the sales license, and there are no private real estate schools in the county.

2. **Review** and update the program's Advisory Committee information. Provide the date of most recent advisory committee meeting.

The Building Inspection department benefits from two Advisory Councils – the first is a traditional Council comprise of local inspectors and building industry officials. The other is comprised of the senior members of the Peninsula International Code Council which is part of the network of officials participating in the writing and updating of the International Building Code.

IV. Additional Factors

Discuss additional factors as applicable that impact the program, including changes in student populations, state-wide initiatives, transfer requirements, advisory committee recommendations, legal mandates, workforce development and employment opportunities, community needs. See [Institutional Research](#) as needed.

During the recent recession, the continued viability of the program was questioned in light of the reductions in staff that were taken by the municipalities across the state. However, starting in 2013, construction permit applications in San Mateo County have increased dramatically and the

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Tech Boom has a large number of new Class A commercial permits in the process. Thus, the demand for Building Inspector has increased dramatically and enrollment has recovered.

There is an unfortunate downside to the compression of the course schedule. Since we have only been able to offer a minimum of required classes each semester, it is difficult for the students to complete the program in a timely manner, which has resulted in some frustration. This does not serve the students well – particularly those who are forced to change to a less physically demanding role in the construction industry.

V. Planning

A. Results of Program Plans and Actions

Describe results, including measurable outcomes, from plans and actions in recent program reviews.

The March 2013 Building Inspection Program Review submission outlined the intent to move the program to a system of “stackable credentials”. To implement the plan, the faculty have developed two certificates that will be submitted to the Committee on Instruction for approval this semester. Work on changing the curriculum is elongated by adjunct only faculty in this department being unavailable on a regular basis.

B. Program Vision

What is the program’s *vision* for sustaining and improving student learning and success over the next three years? Make connections to the [College Mission and Diversity Statements](#), [Institutional Priorities, 2008-2013](#), and other [institutional planning documents](#) as appropriate. Address discussion in Section II. Student Learning and Program Data: SLO assessment results and trends in student success indicators.

[Note: Specific plans to be implemented in the *next year* should be entered in Section V.C.]

[Note: CTE programs must address changes in the context of completion and employment rates, anticipated labor demand, and any overlap with similar programs in the area as noted in Sections II.F.1 and II.F.2.]

The CSM Building Inspection program is the only full program for preparation for all the building code inspector exams required by the state.

The Real Estate program supports Institutional Priority 3: Develop Responsive, High-quality Program and Services. The average student success for academic years 2010-2013 was 90.7% and the withdrawal rate is under 8%. These statistics reflect a relatively strong program. This program attracts the type of adult student who attends in order to either change careers or retrain after losing jobs in other fields. Being older and more mature, these students are both diligent and persistent.

1. To guide future faculty and staff development initiatives, describe the professional enrichment activities that would be most effective in carrying out the program’s vision to improve student learning and success.

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There are a number of seminars available for faculty. The faculty meets regularly to update any program needs. The department is staffed with adjunct instructors and most of them have full-time real estate jobs; most courses are taught in the evening. Full-time real estate professionals are required to complete continuing education in order to renew their licenses.

2. To guide future collaboration across student services, learning support centers, and instructional programs, describe the interactions that would help the program to improve student success.

Students needing various types of assistance are referred to the appropriate student services and student support centers. Copies of the latest textbooks (codes, etc.) in the library or in the Learning Center would benefit students who are unable to afford texts.

1. To guide future faculty and staff development initiatives, describe the professional activities that would be most effective in carrying out the program's vision to improve student learning and success.

Because the Real Estate curriculum is taught primarily in the evening and the instructors are all adjunct with full-time day jobs, any professional development activity for the instructors need to take place in the evening.

2. To guide future collaboration across student services, learning support centers, and instructional programs, describe the interactions that would help the program to improve student success.

Interactions and shared information with staff in student services and learning support centers would benefit the adjunct faculty in Real Estate. In turn, they would be more knowledgeable in referring students to appropriate support systems.

3. To guide the [Institutional Planning and Budget Committee](#) (IPBC) in long-range planning, identify any major changes in resource needs anticipated during the next three years. Examples: faculty retirements, equipment obsolescence, space allocation.

Leave items blank if no major changes are anticipated.

Faculty: The Real Estate program has been supported by adjunct faculty only. As the program grows, a full-time faculty member who has knowledge of this field would be of tremendous assistance in coordinating faculty for course assessments, directing community outreach, and completing program review and other department requirements. The Real Estate Department could share the full-time faculty member with another department.

Equipment and Technology: N/A

Instructional Materials: N/A

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Classified Staff: N/A

Facilities: N/A

C. Program Plans and Actions to Improve Student Success

Prioritize the plans to be carried out next year to sustain and improve student success. Briefly describe each plan and how it supports the [Institutional Priorities, 2008-2013](#). For each plan, list actions and measurable outcomes. (Plans may extend beyond a single year.)

All the certificate options have been revised to reflect employer needs and revised building code structures. They will be submitted for approval January 2015.

Plan 1

Title:

Marketing

Description

Continued work with the Marketing Department to provide flyers and posters to publicize the program to the community.

Action(s)	Completion Date	Measurable Outcome(s)
Meet with the Marketing Department	Spring 2015	Higher student enrollment will increase number of course offerings.
Click here to enter action	Choose Year or Semester/Year	Click here to enter measurable outcome
Click here to enter action	Choose Year or Semester/Year	Click here to enter measurable outcome

For additional plans, cut/paste from above and insert here. Or add an additional page. Number your additional plans accordingly.

VI. Resource Requests

A. Itemized Resource Requests

List the resources needed for ongoing program operation.

Faculty

Full-time faculty requests	Number of positions
	Tab to add rows

Complete [Full-Time Faculty Position Request Form](#)

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Equipment and Technology

	Cost

Instructional Materials

	Cost

Classified Staff

	Cost

Facilities

For immediate or routine facilities requests, submit a [CSM Facility Project Request Form](#).

	Cost

VII. Program Maintenance

A. Course Outline Updates

Review the [course outline update record](#). List the courses that will be updated in the next academic year. For each course that will be updated, provide a faculty contact and the planned submission month. See the [Committee on Instruction website](#) for [course submission instructions](#). Contact your division's [COI representatives](#) if you have questions about submission deadlines. **Career and Technical Education courses must be updated every two years.**

Courses to be updated	Faculty contact	Submission month

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BLDG 720	Instructor of Record	May 2015
BLDG 730	Instructor of Record	May 2015
BLDG 740	Instructor of Record	May 2015

B. Website Review

Review the program's website(s) annually and update as needed.

Faculty contact(s)	Date of next review/update
Michelle Schneider	Annually
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C. SLO Assessment

Faculty contact(s)	Date of next review/update
Lilya Vorobey	Spring 2015
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