

Program Name:

Building Inspection Technologies

Program Contact: Francisco Gamez

Academic Year: 2023

Status:

Updated on: 9-22-23

INTRODUCTION: WHAT IS PROGRAM REVIEW FOR?

The goal of program review is to assess how well our programs are doing. Program review asks us to:

- Reflect on the state of student learning or support in our disciplines and programs, by discussing:
 - efforts to achieve equity across student populations and modes of delivery;
 - results of assessment activities aimed at improving or researching student learning;
 - new challenges or changes to the program.
- Identify resources that we need to change and improve.

Though program review is tied to accreditation, ultimately, we want program review to be meaningful for us. This means we want to use program review to highlight and celebrate what is working, identify what isn't and to figure out what we can do about it. Program review also provides an opportunity to assess how those things work in practice, and work to improve our practices to be able to serve our students even better. It also serves to create cross-campus understanding and dialogue and make more informed decisions in our teaching and programs. Program review is also an opportunity to advocate for change and for resources by showing need and equity issues that we need additional support to be able to address.

1. Description of Program (200-400 words)

- Provide a brief description of the program and how it supports the following:
 - [CSM Mission and Values Statements](#)
 - [CSM Statement of Solidarity](#)
 - [CSM's Strategic Priorities](#)
 - [SMCCCD's Strategic Goals](#)
 - [CSM Forward 2028 - Education Master Plan](#)
 - Identify any factors, including federal, state, or local initiatives, that have impacted the program and the students served.

CSM's Building Inspection programs plays a vital role within CSM's Business & Technology Division. The program assists many students in finding jobs at Building Inspection departments throughout California.

This program offers students a selection of certifications and degrees that prepare students for careers as Building Inspectors for both private and public sector employers. This program also allows those currently holding building inspector positions to refresh their Code knowledge and familiarize themselves with changes that are made to the California Codes on a triennial basis.

Students learn essential, current information codified within the California Codes in courses that span electrical, plumbing, structural, ADA and energy applications. Building Inspection courses are taught by experienced building inspectors who combine classroom instruction with their real-life experiences. Students who complete a CSM building inspection certificate will be able to enter this career path with a solid, well-informed foundation.

Although this program is composed solely of adjunct faculty members and lacking a curriculum coordinator, the current team is collegial and productive.

Due to health concerns regarding COVID-19, in March 2020 the program began the transition to a distance learning modality.

Members of the adjunct faculty, together with the department Dean, updated the course sequence through 2025. The schedule was constructed in the most practical way for students to complete the program within a 3- 5 semester timeline to facilitate the needs of the largest number of certificate and degree completers. However, the department Dean has elected to review what the faculty has proffered and has offered a revised version of the projected schedule thereby offering further assistance to assist student completion of the program.

In accordance with the CSM Diversity Statement, the Building Inspection program fosters a safe environment that encourages the exchange of ideas that promotes equal opportunity.

The program has historically been a program with more male students. Recently, due to faculty recruitment efforts, the program has seen an increase in female student enrollment in classes and entering the building inspection profession. The Building Inspection program has high enrollments of re-entry students who seek to retool their career skills and trajectories as well as students already employed in the building inspection industry who desire to upgrade their skill sets for further advancement.

2. Results of Previous Program Review (200-500 words)

- a) Describe the results of your previous Program Review's action plan and identified equity gaps.
 - Previous Goals
 - Results Achieved
 - Changes Implemented
 - Plans still in progress
 - Any notable or surprising results and outcomes
- a. Previous Goals
 - i. Design two new Building Inspection courses:
BLDG 765: Sustainable Green Energy Practices and BLDG 795: Sustainable Building Practices. Goal has not be achieved due to lack of hiring new instructors.
 - ii. Incorporate into the advanced Building Inspection Sustainable Green Energy Practices class and the Sustainable Building Practices classes. Goal has not be achieved due to lack of hiring new instructors.
 - iii. A schedule has been planned through 2025 to address the long term needs

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of graduating students so they can be certificate and degree completers. Goal is in process and being revised to facilitate student completion.

iv. A new 4.5 unit course has been designed - BLDG 710: Building Inspection. This comprehensive course will address the overarching learning needs for incoming building inspection students.

b. Results Achieved

i. A schedule has been planned through 2025 to address the long term needs

of graduating students so they can be certificate and degree completers has been revised by the Dean and will be implemented in the following semesters.

ii. BLDG 710: Building Inspection is currently within the catalog and is offered.

iii. Revised projected schedule cycle that accommodates the needs of certificate and degree completers;

c. Plans still in progress

i. The sustainable and green energy in building design, have not been developed, as the Business and Technology Department has not been able to hire the faculty to develop the new courses in green energy and sustainability.

b) Explain any curriculum or programmatic changes since last program review

- To specific courses, or to any discipline as a whole
- Includes degree, certificate, or course sequences, program delivery or structure, etc.
 - a. To specific courses, or to any discipline as a whole
 - i. A new 4.5 unit course (BLDG 710: Building Inspection) has been implemented and is currently a high demand class.

c) Discipline-level and SLO (Student Learning Outcomes) assessment/Student Services and SAO (Service Area Outcomes) assessment: Describe learning or area assessment plans implemented since last Program Review, including any activities undertaken to address equity or delivery mode gaps. Your summary should explain:

- SLO/SAO
 - What did the assessment focus on?
 - Was it discipline/program/service-specific or interdisciplinary/a collaboration between programs or services?
 - Why was it prioritized (e.g., equity issue, key disciplinary issue, etc.)?
- Assessment results
 - What was the activity or intervention?
 - What were the outcomes?
- Program improvements implemented
 - What did you learn from it?
- What changed?

3. Current Program Review (200-400 words)

Please use the statistics below, which are college-wide, as a reference. Please refer to the Program Review website for individual program data.

College Stats 2022-23	Ethnicity	First Gen	Age	Gender	Total
Headcount (unduplicated)	Latinx 32% White 26% Asian 20% Filipino 7% Multiracial 7% Black 3% Pacific Islander 2% Unknown 3% Native American 0%	45% of our students are the first in their family to go to college.	66% 24 yrs. and under 18% Ages 25-34 17% over 35 yrs.	49% Female 48% Male 3% Non-disclosed or non-binary	13,180 students
Enrollments (duplicated)	Latinx 35% White 26% Asian 16% Filipino 6% Multiracial 8% Black 3% Pacific Islander 3% Unknown 3% Native American 0%	47% of enrollments were by students who are the first in their family to go to college.	76% 24 yrs. and under 13% Ages 25-34 11% over 35 yrs.	48% Female 50% Male 2% Non-disclosed or non-binary	37,014 enrollments

- a) **Student population equity:** Discuss any gaps in student success, persistence, satisfaction, utilization or enrollment across student populations (statistics provided for ethnicity, first-generation, age, gender and total enrollment), or student population served.
- Findings: What has changed from the previous program review?
 - Analysis: What factors do you feel contribute to these gaps?
 - Resources: If you were granted a resource request, please note what that was and the impact it had.
 - Plans to address opportunity gaps: What has your program done to address these gaps? Include information on:
 - interventions implemented
 - any successes in closing gaps
 - ongoing challenges

Findings	Analysis	Resources	Plans to Address Opportunity Gaps
1. Records indicate that of the 89 enrollments 18.4 % are female, 78% male, 3.5% unrecorded.	.	Successful Course Completion Rates 2020-21 to 2022-23.	None N/A

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<p>2. Records indicate that of the 141 students enrolled, there are 26 Female, 110 Male and 5 unrecorded.</p>	<p>s</p>	<p>Successful Course Completion Rates 2020-21 to 2022-23.</p>	<p>None N/A</p>
<p>3. Records indicate that of the 141 students enrolled, the age demographic is older.</p>	<p>19 or less 4 20-24. 24 25-29. 24 30-34. 11 35-39. 10 40-49. 32 50+ 36</p>	<p>Successful Course Completion Rates 2020-21 to 2022-23.</p>	<p>None N/A</p>

b) **Modes of Delivery equity:** Discuss any gaps in student success, persistence, satisfaction, utilization or enrollment, and student population served across different delivery modes. Please comment on in person services/instruction vs hybrid services options/instruction vs completely online services/instruction.

- Changes since last Program Review: What has changed, in terms of gaps, since last program review?
- Analysis of gaps: What factors do you feel contribute to these gaps?
- Plans to address opportunity gaps: What has your program done to address these equity gaps? Include information on:
 - interventions implemented
 - any successes in closing gaps
 - ongoing challenges

Changes since last Program Review	Analysis of Gaps	Plans to Address Opportunity Gaps
<p>1. 1. Student Success Rate is 81.6</p>	<p>None</p>	<p>N/A</p>
<p>2. . Student Retention Rate is 90.1 %</p>	<p>None</p>	<p>N/A</p>
<p>3. Distance modality is offered in all Building Technology courses.</p>	<p>None</p>	<p>N/A</p>

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(c) **Challenges and Opportunities:** Describe any **other** particular challenges, opportunities, or other factors that impact the success of your program (e.g., natural or health disasters, assessing whether a degree program is meeting its learning outcomes, developing new degree programs or courses, adapting to a changing student population, keeping a flagging program alive, starting a learning community, resources, etc.).

(c) Challenges:

- i. Challenges now facing the Building Technology Program begin with limited faculty. Outreach to the industry, by the Program Coordinator/Dean, are paramount to maintaining students timely completion of this program and the viability of this program.**
- ii. The continued lack of regular meetings and communication between faculty and the Administration continue to further erode the facilitation of a substantive cohesion among faculty, Administration and students.**

4. Planning

a) **Discipline-level and SLO (Student Learning Outcomes) assessment/Student Services and SAO (Service Area Outcomes) assessment for 2023-2025:** Describe learning or area assessment plans for this Program Review cycle, **including any activities planned to address equity or delivery mode gaps.** Your summary should explain:

- SLO/SAO
 - What will your assessment focus on?
 - Is it discipline/program/service-specific or will it be interdisciplinary/a collaboration between programs or services?
 - Why is it prioritized (e.g., equity issue, key disciplinary issue, etc.)?
- Assessment plan
 - What is the planned activity or intervention?
 - Describe next steps and the timeline for your SLO/SAO assessment
- Resources for SLO/SAO assessment
 - What resources will you need to assess changes (i.e., PRIE support in the form of specific data, surveys, etc.)?

SLOs/SAOs	Assessment Plan	Resources for SLO/SAO assessment
1. To both recognize and comprehend installation and inspection procedures involved within the California Building Standards Code (Building,	Lectures are offered on subject matter germane to the specific Code/s and particular discipline covered within each code. Each lecture is followed by a group assignment and a follow	College of San Mateo Student Learning Outcomes Overview. Local, (City, County, City and County), State, (California Building Standards) and Federal

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<p>Electrical, Energy, Mechanical, Plumbing, Residential, and Structural Design) as addressed within course lecture, text and supplemental materials. Describe the features of accessible design, installation and recognize their application to State and Federal law and regulations.</p>	<p>up quiz is given on subject matter covered. Midterm and Final exams are given.</p>	<p>Inspection employment and hiring criteria and requirements.</p> <p>Faculty members have deep expertise in the following areas of building inspection: electrical, plumbing, energy and sustainability, building, general and structural, and ADA compliance.</p> <p>With this type of varied expertise, faculty have been able to develop a responsive, high quality program that supports the college mission and enables students to be successful in their certificate, degree and career goals and become successful candidates for employment.</p>
<p>2. Students will understand the difference between the Model Code language and the California Amendments, the adoption process used by the California Building Standards Commission in creation of the California Codes.</p>	<p>Student discussions, quizzes, midterm and final.</p>	<p>Industry Standards.</p>
<p>3.</p>		

b) Program goals

Based on your current review of your program’s equity gaps, learning assessments and challenges and opportunities, identify specific goals and plans. Please note that whereas SLOs/SAOs involve assessing and measuring a specific skill or knowledge students will be able to do/understand upon successful completion of a course, program, service, and/or degree/certificate, program goals reflect overall aspects of your program or service you hope to improve.

Please note that closing equity gaps is a College-wide priority. If there are significant equity gaps in student success, persistence, satisfaction, utilization or enrollment, and student population served in your program, these should be addressed in at least one of your goals (see 3a and 3b).

For each goal, you should include:

- A brief description of the issue being addressed (equity gap, etc.)

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- What actions you plan to take
- What measurable outcomes you hope to achieve
- A timeline
- Who is responsible
- What support do you anticipate needing in order to achieve your goals and plans, including:
 - Professional development activities
 - Institutional support
 - Collaborations
 - Training
 - Resources

Goal	Actions	Measurable Outcomes	Timeline	Responsible Party	Support Needed
1. Program Completion & Student Employment Success.	Student Success Rate is 81.6% and the Student Retention Rate is 90.1%				
2. Marketing of the Building Technology Program.	Attending and involvement with industry organizations, International Code Council and the International Association of Plumbing and Mechanical Inspectors.	Program participation increase. Updated application of Codes. More job success for students.	2 to 3 years	Dean and Faculty	Dean's office.
3.					

5. CE Only

- a) Review the program's available labor market data, as applicable, and explain how the program meets a documented labor market demand. Here are two relevant links:

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- b) [State of California Employment Development Department, Labor Market Information Division](#) (the official source for California Labor Market Information):
- c) [Employment data](#) (by Program Top Code) from the State Chancellor's Office

a) Data has been taken from Program Overview 2 Construction Trades Lightcast Q3 2023 Data Set August 2023:

The annual job openings, median earnings, projected growth and employment concentration are shown below.

Occupation	2022 Jobs*	Annual Openings*	Median Earnings	Growth (2022 - 2029)*	Employment Concentration (2022)*
First-Line Supervisors of Construction Trades and Extraction Workers	942	101	\$47.71/hr	+6.26%	0.77
Construction and Building Inspectors	481	61	\$50.72/hr	+2.70%	1.13
Drywall and Ceiling Tile Installers	130	12	\$37.26/hr	+4.62%	2.29
Fire Inspectors and Investigators	29	3	\$46.75/hr	+13.79%	0.53

The five Bay Area Counties of Alameda, Contra Costa, San Francisco, San Mateo and Santa Clara, all show an increase in future building construction inspector needs.

Based on these needs the Building Technology helps provide qualified job candidates.

- d) Summarize student outcomes in terms of degrees and certificates. Identify areas of accomplishments and areas of concern.

Summary of Student Outcomes: Based upon data from CSM Research Request, Fall 2023 Submission Cycle: Student Success and Core Program Indicators, of the 141 students enrolled in the 2022-2023 academic year, there was a retention rate of 90.1% and a success rate of 81.6%. 14 students withdrew from the program. For the two year period starting in Spring 2021, there was a retention rate of 94% and a success rate of 88.9%.

- e) Review and update the program's Advisory Committee information. Provide the date of most recent advisory committee meeting and outcomes of the meeting (updates, changes, new members, etc.).

The Building Inspection Technologies Advisory Committee meeting was held on May 16, 2023 1:during the 2022-2023 academic year. The Advisory Committee consists of people who are Chief Building Officials (CBOs), Senior Building Inspectors, and members of the community. The Advisory Committee consists of:

1. Martin Cooper Chief Building Official Adjunct Faculty
2. Brent Hipsher Chief Building Official Adjunct Faculty
3. Homer Maiel Chief Building Official Adjunct Faculty
4. Michael Mitchel JD. Senior Plumbing Inspector Adjunct Faculty

5. Mark Sherwood, PhD. Design and Measurement Vocational Education Industry Person / Community Representative (new)
6. Bob Rooney Student Representative (new)

The Advisory Committee discussed what the Academic Senate is doing and rather they are going to continue the program or close the program. What metric CSM is using to justify cancelling the program measure program? Do the metrics measure the skillset that the community and the student needs? The current CSM Building Inspection provides the specific skillset for students to be employed in the Building Inspection Industry. The SLO's are developed to incorporate the course content with the skill set to be certified as an inspector by third-party agency. The measurement of success for the students is defined by employment by a private agency or jurisdiction, not necessarily completion of the College of San Mateo certificate or degree program.

In 2017 the Career and Technical Education Division at CSM was ranked 1 out of 113 colleges in the state for having improved employment for the students, improved income for the students, and best feedback from the employers. The current program at CSM continues to meet these quality measurements.

There is a demographic shift with many students being retired from their careers, with the CSM program providing the opportunity to serve the community.

The state of California is mandating in the state housing element, that every community add 441,000 houses, apartments and condominiums in the to the nine Bay Area counties by 2030, and to build statewide 2,500,000 new housing units by Jan. 31, 2031. This will be an unprecedented demand for Building Inspection Industry professionals that CSM can exploit.

Students in the building inspection technology courses have a mixed demographic. They generally range in age from 30 to 45 years old, are looking for career, enhancement or career change, have experience in the construction industry, but not necessarily in the building inspection industry, several students already have advanced degrees.

Almost all of the students work full-time, and the online hybrid course needs to be flexible to meet their life demands. Some students have family members with special needs, others have children in the primary and secondary education system. Other students have long and arduous commute to and from work.

- f) What strategies have you discussed in your recent Advisory Committee's meetings to meet the needs and challenges of getting people retrained and back to work?

Students enrolling in the Building Inspection Technologies courses are in looking for improved employment opportunities and income associated with the building inspection industry. Additional incentive to the student if the ability to network with peers and receive guidance from instructors for students to serve the industry in an excellent way.

Building Inspection professionals need to maintain their professional certifications through continuing education classes under the California Health and Safety Code § 18949.28 to '...complete a minimum of 45 hours of continuing education for every three-year period, with at least eight hours regarding disability access requirements...' There is not a comparable Building Inspection program offered by any other Community College in the Bay Area. CSM should target student enrollment as a means to fulfill the CEUs required under state law. Additionally AB 811 is currently enrolled and waiting to be signed into law by the governor. If enacted the SMCCCD should enact policies under section 78213.3.(a) of the Education Code so that the College of San Mateo can market the Building Inspection Technologies program in light of the continuing education requirements in the Health and Safety Code.

The Deans Office should partnership with past corporate sponsors such as Tesla, BART, SF Public Utilities Commission, Southern Pacific Railroad, and PG & E.

The College of San Mateo should hire a full-time faculty member to administer the Building Inspection Technologies program. The instructors all have full time employment and the administration of program is to be the responsibility of full-time staff.

Market to local jurisdictions and local model code organization chapters to better serve private agency or jurisdiction agency staff.

Provide online courses and market throughout the state. Once these online courses are developed and refined they can be then marketed nationwide.

There has been no feedback from the Dean's office for adjunct faculty recruitment or communication with the students as to the future of the program.