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August 28, 2018

Leslie Wong  
President  
San Francisco State University  
1600 Holloway Ave  
San Francisco, CA 94132

Dear Dr. Wong :

I am pleased to transmit to you the findings of the Engineering Accreditation Commission (EAC) of ABET with respect to the evaluation conducted for San Francisco State University during 2017-2018. Each of ABET's Commissions is fully authorized to take the actions described in the accompanying letter under the policies of the ABET Board of Directors.

We are pleased that your institution has elected to participate in this accreditation process. This process, which is conducted by approximately 2,000 ABET volunteers from the professional community, is designed to advance and assure the quality of professional education. We look forward to our continuing shared efforts toward this common goal.

Sincerely,

Michael R. Lightner  
President

Enclosure: Commission letter and attachments



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August 28, 2018

Carmen Domingo  
Interim Dean  
San Francisco State U.  
1600 Holloway Ave  
Thornton Hall 323  
San Francisco, CA 94132

Dear Dean Domingo :

The Engineering Accreditation Commission (EAC) of ABET recently held its 2018 Summer Meeting to act on the program evaluations conducted during 2017-2018. Each evaluation was summarized in a report to the Commission and was considered by the full Commission before a vote was taken on the accreditation action. The results of the evaluation for San Francisco State University are included in the enclosed Summary of Accreditation Actions. The Final Statement to your institution that discusses the findings on which each action was based is also enclosed.

The policy of ABET is to grant accreditation for a limited number of years, not to exceed six, in all cases. The period of accreditation is not an indication of program quality. Any restriction of the period of accreditation is based upon conditions indicating that compliance with the applicable accreditation criteria must be strengthened. Continuation of accreditation beyond the time specified requires a reevaluation of the program at the request of the institution as noted in the accreditation action. ABET policy prohibits public disclosure of the period for which a program is accredited. For further guidance concerning the public release of accreditation information, please refer to Section II.A. of the 2017-2018 Accreditation Policy and Procedure Manual (available at [www.abet.org](http://www.abet.org)).

A list of accredited programs is published annually by ABET. Information about ABET accredited programs at your institution will be listed in the forthcoming ABET Accreditation Yearbook and on the ABET web site ([www.abet.org](http://www.abet.org)).

It is the obligation of the officer responsible for ABET accredited programs at your institution to notify ABET of any significant changes in program title, personnel, curriculum, or other factors which could affect the accreditation status of a program during the period of accreditation stated in Section II.H. of the 2017-2018 Accreditation Policy and Procedure Manual (available at [www.abet.org](http://www.abet.org)).

ABET requires that each accredited program publicly state the program's educational objectives and student outcomes as well as publicly post annual student enrollment and graduation data as stated in Section II.A.6. of the Accreditation Policy and Procedure Manual (available at [www.abet.org](http://www.abet.org)).

ABET will examine all newly accredited programs' websites within the next two weeks to ensure compliance.

Please note that appeals are allowed only in the case of Not to Accredite actions. Also, such appeals may be based only on the conditions stated in Section II.L. of the 2017-2018 Accreditation Policy and Procedure Manual (available at [www.abet.org](http://www.abet.org)).

Sincerely,

A handwritten signature in blue ink that reads "Ann L. Kenimer". The signature is fluid and cursive, with the first name "Ann" and last name "Kenimer" clearly legible.

Ann L. Kenimer, Chair

Engineering Accreditation Commission

Enclosure: Summary of Accreditation Action  
Final Statement

cc: Leslie Wong, President

Anne M. Germain, Team Chair



8/28/2018

Engineering Accreditation Commission

Summary of Accreditation Actions  
for the  
2017-2018 Accreditation Cycle

San Francisco State University  
San Francisco, CA

Computer Engineering (BS)

Accredit to September 30, 2024. A request to ABET by January 31, 2023 will be required to initiate a reaccreditation evaluation visit. In preparation for the visit, a Self-Study Report must be submitted to ABET by July 01, 2023. The reaccreditation evaluation will be a comprehensive general review.

This is a newly accredited program. Please note that this accreditation action extends retroactively from October 01, 2016.

Civil Engineering (BS)

Electrical Engineering (BS)

Mechanical Engineering (BS)

Accredit to September 30, 2024. A request to ABET by January 31, 2023 will be required to initiate a reaccreditation evaluation visit. In preparation for the visit, a Self-Study Report must be submitted to ABET by July 01, 2023. The reaccreditation evaluation will be a comprehensive general review.



Engineering Accreditation Commission

Final Statement of Accreditation  
to

San Francisco State University  
San Francisco, CA

2017-2018 Accreditation Cycle

**ABET  
ENGINEERING ACCREDITATION COMMISSION**

**SAN FRANCISCO STATE UNIVERSITY  
San Francisco, CA**

**FINAL STATEMENT**  
Visit Dates: October 15-17, 2017  
Accreditation Cycle Criteria: 2017-2018

Introduction & Discussion of Statement Construct

The Engineering Accreditation Commission (EAC) of ABET has evaluated the civil, electrical, and mechanical engineering programs of San Francisco State University for reaccreditation and the computer engineering program for initial accreditation.

This statement is the final summary of the EAC evaluation, at the institutional and engineering-program levels. The statement consists of two parts: the first addresses the institution and its overall engineering educational unit, and the second addresses the individual engineering programs. It is constructed in a format that allows the reader to discern both the original visit findings and subsequent progress made during due process.

A program's accreditation action is based upon the findings summarized in this statement. Actions depend on the program's range of compliance or non-compliance with the criteria. This range can be construed from the following terminology:

- **Deficiency:** A deficiency indicates that a criterion, policy, or procedure is not satisfied. Therefore, the program is not in compliance with the criterion, policy, or procedure.
- **Weakness:** A weakness indicates that a program lacks the strength of compliance with a criterion, policy, or procedure to ensure that the quality of the program will not be compromised. Therefore, remedial action is required to strengthen compliance with the criterion, policy, or procedure prior to the next review.
- **Concern:** A concern indicates that a program currently satisfies a criterion, policy, or procedure; however, the potential exists for the situation to change such that the criterion, policy, or procedure may not be satisfied.

- **Observation:** An observation is a comment or suggestion that does not relate directly to the current accreditation action but is offered to assist the institution in its continuing efforts to improve its programs.

#### Information Received After the Visit

1. Seven-day response: The institution did not provide a seven-day response.
2. 30-day due-process response: Information was received in the 30-day due-process response period relative to the civil, computer, electrical, and mechanical engineering programs.

#### Institutional Summary

San Francisco State University (SFSU) is a comprehensive state university comprised of seven colleges. The College of Science and Engineering (CSE) offers four engineering programs, all of which were evaluated during this visit. At the time of the visit, the School of Engineering in the CSE had 1,366 full- and part-time students, 19 full-time faculty members, and numerous part-time and adjunct faculty members. The School of Engineering had 154 graduates in the 2016-17 academic year.

The following units were reviewed and found to adequately support the engineering programs: chemistry, computer science, physics, library, career services, registrar, and admissions.

**Civil Engineering**  
BS Program

Program Criteria for Civil and Similarly Named Engineering Programs

Introduction

The civil engineering BS program had seven full-time and six part-time instructors, about 325 full-time and part-time students at the time of the visit, and averaged 61 graduates over the past five years. Six of the full-time faculty members are licensed professional engineers.

Program Strengths

1. Faculty members effectively use their wealth of design-practice knowledge and experience in their courses. Their working relationships with local practitioners provide significant opportunities for student internships and employment.
2. Students are active in the ASCE Timber Bridge, and the EERI Seismic design competitions. Their excellent performance and high rankings at these national competitions reflect enthusiasm and hard work on the part of the student. This is a remarkable achievement for a small department, and it provides opportunities for effective hands-on learning.

Program Concerns

1. Criterion 1. Students This criterion requires that student progress be monitored to foster success in attaining student outcomes, thereby enabling graduates to attain program educational objectives. The program has a process for monitoring prerequisite satisfaction that requires the mapping and evaluation of a student's transfer credits to SFSU courses in order to ensure prerequisite course requirements are met. Though advising does help students with proper course sequencing, the current procedures do not prevent a student who has not met all prerequisites from taking a course. When students are not adequately prepared to take courses, it is possible that their success in attaining student outcomes could be compromised. Thus, there is a potential that compliance with this criterion could be jeopardized.
  - 30-day due-process response: The EAC acknowledges receipt of documentation describing plans to establish a prerequisite checking procedure as part of the enrollment

system with a target implementation date of spring 2019. However, this procedure is not yet in place.

- The concern remains unresolved.
2. Criterion 8. Institutional Support This criterion requires that resources including institutional services, financial support, and staff (both administrative and technical) provided to the program be adequate to meet program needs. It further states that the resources available to the program must be sufficient to attract, retain, and provide for the continued professional development of a qualified faculty as well as to acquire, maintain, and operate infrastructures, facilities, and equipment appropriate for the program, and to provide an environment in which student outcomes can be attained. Although professional development grants of up to \$1,500 per year are available for faculty to attend conferences, this amount does not generally cover the costs of registration and travel expenses for conferences. This limited funding for professional development makes it more difficult for the faculty to remain current in their profession. In addition, continued enrollment increases are now taxing facilities and program equipment, making it more difficult to maintain an effective learning environment and attainment of student outcomes increasingly less certain. Several laboratories have dated equipment.

Without adequate support for faculty professional development as well as program facilities and updates to critical equipment, there is the potential that compliance with this criterion could be jeopardized.

- 30-day due-process response: The EAC acknowledges receipt of documentation indicating that many faculty members use grants to fund conference attendance and travel with additional support available through the school and dean's office. Further, the information received indicates that School of Engineering is in the process of filling one administrative staff position and is seeking approval to hire an additional technician. Both of these new positions are to be shared across all engineering programs. The hiring process is not yet complete, and it is unclear how these new resources will support the civil engineering program. No information was received addressing the impact of student enrollment on facilities and equipment.

- The concern remains unresolved.

**Computer Engineering**  
BS Program

Program Criteria for Electrical, Computer, Communications, Telecommunication(s) and  
Similarly Named Engineering Programs

Introduction

The computer engineering BS program, in the School of Engineering, had its first graduate in 2004, when there were 44 students enrolled in the program. There were seven full-time faculty members with primary teaching and advising responsibilities for both the computer engineering and electrical engineering programs, a number of part-time instructors, and 299 students at the time of the visit. The program had 20 graduates in the 2016-17 academic year. This is the initial evaluation of the program by the EAC.

Program Strength

1. Program faculty members are motivated and highly enthusiastic, engaging student participation in undergraduate research in their areas. Faculty members show genuine interest in student academic success, future professional employment, and continued education. The engagement of the faculty members contributes substantially to the successful attainment of both student outcomes and program educational objectives.

Program Concerns

1. Criterion 1. Students This criterion requires that student progress be monitored to foster success in attaining student outcomes, thereby enabling graduates to attain program educational objectives. The program has a process for monitoring prerequisite satisfaction that requires the mapping and evaluation of a student's transfer credits to SFSU courses in order to assure that prerequisite requirements have been satisfied. Though advising does help students with proper course sequencing, the current procedures do not prevent a student who has not met all prerequisites from taking a course. When students are not adequately prepared to take courses, it is possible that their success in attaining student outcomes could be compromised. Thus, there is a potential that compliance with this criterion could be jeopardized.

- 30-day due-process response: The EAC acknowledges receipt of documentation describing plans to establish a prerequisite checking procedure as part of the enrollment system with a target implementation date of spring 2019. However, this procedure is not yet in place.
  - The concern remains unresolved.
2. Criterion 6. Faculty This criterion requires the program to demonstrate that the faculty members are of sufficient number and have the competencies to cover all of the curricular areas of the program, to accommodate adequate levels of student-faculty interaction, student advising and counseling, to accommodate university service activities, professional development, and to support interactions with industrial and professional practitioners, as well as employers of students. The current program faculty size is adequate to meet instructional and administrative needs, but faculty members have little time to advise students, meet with industry and professional practitioners, or pursue professional development. Continued increases in enrollment without commensurate increase in faculty size would place additional time demands on the faculty, potentially having a negative impact on advising and the quality of the student's professional development. Thus, there is the potential that future compliance with this criterion could be jeopardized.
- 30-day due-process response: The EAC acknowledges receipt of documentation providing information concerning the approval of two tenure-track faculty members for the School of Engineering. It is anticipated that the faculty will be in place fall 2018. Both of these new faculty positions are to be shared across all engineering programs. Hiring is not yet complete, and it is unclear how these new resources will support the computer engineering program.
  - The concern remains unresolved.
3. Criterion 8. Institutional Support This criterion requires that resources including institutional services, financial support, and staff (both administrative and technical) provided to the program be adequate to meet program needs. It further states that the resources available to the program must be sufficient to acquire, maintain, and operate infrastructures, facilities, and equipment

appropriate for the program, and to provide an environment in which student outcomes can be attained. Continued enrollment increases are now taxing facilities and program equipment, making it more difficult to maintain an effective learning environment and attainment of student outcomes increasingly less certain. Several laboratories have dated equipment. Without adequate support for program facilities and updates to critical equipment, there is the potential that compliance with this criterion could be jeopardized.

- 30-day due-process response: The EAC acknowledges receipt of documentation indicating that the School of Engineering is in the process of filling one administrative staff position and seeking approval to hire an additional technician. Both of these new positions are to be shared across all engineering programs. The hiring process is not yet complete, and it is unclear how these new resources will support the computer engineering program. No information was received addressing the impact of student enrollment on facilities and equipment.
- The concern remains unresolved.

**Electrical Engineering  
BS Program**

Program Criteria for Electrical, Computer, Communications, Telecommunication(s) and  
Similarly Named Engineering Programs

Introduction

The electrical engineering BS program, housed in the College of Science and Engineering, had seven full-time faculty members, with teaching and advising responsibilities for both the electrical engineering and computer engineering programs, a varying number of part time instructors, 201 full-time, and 41 part-time students at the time of the visit. The program had 36 graduates in the 2016-17 academic year.

Program Deficiency

1. Accreditation Policy and Procedures Manual (APPM) Section I.E.5.b.(1) of the APPM requires the team to examine the facilities to ensure that the instructional and learning environments are adequate and are safe for the intended purposes. The student power electronics laboratory (SCI 166), contains a large gray 480 VAC patch cord cabinet, characterized by a faculty member as obsolete equipment that was no longer used due to safety concerns. At the time of the visit, the equipment was energized with the meter reading ~500V. In addition, one or more of the patch cords had the potential to be energized at 480 VAC, presenting a significant electrical shock and arc-flash hazard. Neither the faculty member in charge of the laboratory nor the program head had knowledge of this legacy equipment or its status. A similar cabinet is also located in an adjacent laboratory (SCI 164). This equipment presents an extreme life-safety hazard for anyone using either laboratory. Therefore, the program is not in compliance with the requirement implicit in Section I.E.5.b.(1) of the APPM that learning environments be safe for the intended purposes.
  - 30-day due-process response: The EAC acknowledges receipt of documentation outlining actions taken by the program to ensure safety of students and faculty. Access to the cabinets was immediately restricted to necessary personnel, and metal cages were constructed to enforce the limited access and ensure safety.

- The deficiency is resolved.

### Program Concerns

1. Criterion 1. Students This criterion requires that student progress be monitored to foster success in attaining student outcomes, thereby enabling graduates to attain program educational objectives. The program has a process for monitoring prerequisite satisfaction that requires the mapping and evaluation of a student's transfer credits to SFSU courses in order to ensure that prerequisite course requirements have been satisfied. Though advising does help students with proper course sequencing, current procedures do not prevent a student who has not met all prerequisites from taking a course. When students are not adequately prepared to take courses, it is possible that their success in attaining student outcomes could be compromised. Thus, there is a potential that compliance with this criterion could be jeopardized.
  - 30-day due-process response: The EAC acknowledges receipt of documentation describing plans to establish a prerequisite checking procedure as part of the enrollment system with a target implementation date of spring 2019. However, this procedure is not yet in place.
  - The concern remains unresolved.
2. Criterion 4. Continuous Improvement This criterion requires that the program regularly use appropriate, documented processes for accessing and evaluating the extent to which student outcomes are attained. While the program generally has robust methods of assessing and evaluating attainment of student outcomes, the attainment of student outcome (d) "an ability to function on multidisciplinary teams" is determined solely through instructor evaluation of teams in the culminating design project course ENGR 697. The culminating design course sequence ENGR 696/697 segregates disciplines into different sections. Further, about 25 percent of the students in ENG 697 perform individual projects, rather than team projects. Therefore, the utility of measuring attainment of this outcome in ENGR 697 is questionable. Using only this method to evaluate the extent to which students can work on multidisciplinary teams could prevent faculty members from determining whether this outcome is being attained, and there is the potential future compliance with this criterion could be jeopardized.

- 30-day due-process response: The EAC acknowledges receipt of documentation describing new metrics used to assess the attainment of student outcome (d). Data from the fall 2017 semester was used to evaluate attainment of student outcome (d).
  - The concern is resolved.
3. Criterion 6. Faculty This criterion requires the program to demonstrate that the faculty members are of sufficient number and have the competencies to cover all of the curricular areas of the program, to accommodate adequate levels of student-faculty interaction, student advising and counseling, to accommodate university service activities, professional development, and to support interactions with industrial and professional practitioners, as well as employers of students. The current program faculty size is adequate to meet instructional and administrative requirements, but faculty members have little time to advise students, meet with industry and professional practitioners, or pursue professional development. Continued increases in enrollment without commensurate increase in faculty size would place additional time demands on the faculty, potentially having a negative impact on advising and the quality of the student's professional development. Thus, there is the potential that future compliance with this criterion could be jeopardized.
- 30-day due-process response: The EAC acknowledges receipt of documentation providing information concerning the approval of two tenure-track faculty members for the School of Engineering. It is anticipated that the faculty will be in place fall 2018. Both of these new faculty positions are to be shared across all engineering programs. Hiring is not yet complete, and it is unclear how these new resources will support the electrical engineering program.
  - The concern remains unresolved.
4. Criterion 8. Institutional Support This criterion requires that resources including institutional services, financial support, and staff (both administrative and technical) provided to the program be adequate to meet program needs. It further states that the resources available to the program must be sufficient to acquire, maintain, and operate infrastructures, facilities, and equipment appropriate for the program, and to provide an environment in which student outcomes can be

attained. Continued enrollment increases are now taxing facilities and program equipment, making it more difficult to maintain an effective learning environment and attainment of student outcomes increasingly less certain. Several laboratories have dated equipment. Without adequate support for program facilities and updates to critical equipment, there is the potential that compliance with this criterion could be jeopardized.

- 30-day due-process response: The EAC acknowledges receipt of documentation indicating that the School of Engineering is in the process of filling one administrative staff position and seeking approval to hire an additional technician. Both of these new positions are to be shared across all engineering programs. The hiring process is not yet complete, and it is unclear how these new resources will support the electrical engineering program. No information was received addressing the impact of student enrollment on facilities and equipment.
- The concern remains unresolved.

**Mechanical Engineering**  
BS Program

Program Criteria for Mechanical and Similarly Named Engineering Programs

Introduction

The mechanical engineering BS program, housed in the College of Science and Engineering, had 425 full-time students, 75 part-time students, five full-time faculty members, and nine part-time instructors at the time of the visit. The program had 37 graduates in the 2015-16 academic year.

Program Strength

1. The program sponsors student memberships to local, community, manufacturing, and prototyping workshops called TechShop. Access to these workshops significantly increases student access to modern prototyping tools and reduces the cost to the program of maintaining and updating tools.

Program Concerns

1. Criterion 1. Students This criterion requires that student progress be monitored to foster success in attaining student outcomes, thereby enabling graduates to attain program educational objectives. The program has a process for monitoring prerequisite satisfaction that requires the mapping and evaluation of a student's transfer credits to SFSU courses in order to assure that prerequisite requirements have been satisfied. Though advising does help students with proper course sequencing, the current procedures do not prevent a student who has not met all prerequisites from taking a course. When students are not adequately prepared to take courses, it is possible that their success in attaining student outcomes could be compromised. Thus, there is a potential that compliance with this criterion could be jeopardized.
  - 30-day due-process response: The EAC acknowledges receipt of documentation describing plans to establish a prerequisite checking procedure as part of the enrollment system with a target implementation date of spring 2019. However, this procedure is not yet in place.
  - The concern remains unresolved.

2. Criterion 6. Faculty This criterion requires the program to demonstrate that the faculty members are of sufficient number and have the competencies to cover all of the curricular areas of the program, to accommodate adequate levels of student-faculty interaction, student advising and counseling, to accommodate university service activities, professional development, and to support interactions with industrial and professional practitioners, as well as employers of students. The current program faculty size is adequate to meet instructional and administrative requirements, but faculty members have little time to advise students, meet with industry and professional practitioners, or pursue professional development. Continued increases in enrollment without commensurate increase in faculty size would place additional time demands on the faculty, potentially having a negative impact on advising and the quality of the student's professional development. Thus, there is the potential that future compliance with this criterion could be jeopardized.
- 30-day due-process response: The EAC acknowledges receipt of documentation providing information concerning the approval of two tenure-track faculty members for the School of Engineering. It is anticipated that the faculty will be in place fall 2018. Both of these new faculty positions are to be shared across all engineering programs. Hiring is not yet complete, and it is unclear how these new resources will support the mechanical engineering program. No information was received addressing the impact of student enrollment on facilities and equipment.
  - The concern remains unresolved.
3. Criterion 7. Facilities This criterion requires that classrooms, offices, laboratories, and associated equipment be adequate to support attainment of the student outcomes and to provide an atmosphere conducive to learning. It further states that modern tools, equipment, computing resources, and laboratories appropriate to the program must be available, accessible, and systematically maintained and upgraded to enable students to attain the student outcomes and to support program needs. The continuing increase in enrollment is steadily reducing student hands-on access to equipment. Much of the equipment is dated. Facilities available for instruction and student support have reached capacity and it appears that there is no established mechanism for supporting continued growth. Without access to appropriate instructional

equipment located in spaces that encourage effective student learning, student ability to attain student outcomes is in question. Thus, there is the potential that future compliance with this criterion could be jeopardized.

- 30-day due-process response: The EAC acknowledges receipt of documentation indicating that the program has assembled a \$200,000 list of new equipment for approval. In addition, \$800,000 of previously identified equipment that is in the process of being purchased, installed or commissioned will support some student instruction. Installation of this equipment has not yet been completed.

- The concern remains unresolved.

4. Criterion 8. Institutional Support This criterion requires that resources including institutional services, financial support, and staff (both administrative and technical) provided to the program be adequate to meet program needs. It further states that the resources available to the program must be sufficient to acquire, maintain, and operate infrastructures, facilities, and equipment appropriate for the program, and to provide an environment in which student outcomes can be attained. Continued enrollment increases are now taxing facilities and program equipment, making it more difficult to maintain an effective learning environment and attainment of student outcomes increasingly less certain. Several laboratories have dated equipment. Without adequate support for program facilities and updates to critical equipment, there is the potential that compliance with this criterion could be jeopardized.

- 30-day due-process response: The EAC acknowledges receipt of documentation indicating that the School of Engineering is in the process of filling one administrative staff position and seeking approval to hire an additional technician. Both of these new positions are to be shared across all engineering programs. The hiring process is not yet complete, and it is unclear how these new resources will support the mechanical engineering program.

- The concern remains unresolved.