We Define the Future

CSUSB

Academic Program Review 2021 to 2022

California State University, San Bernardino

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Cal State San Bernardino

Liberal Studies Programs
Self-Study Report
Fall 2021

Bachelor of Arts, Liberal Studies Program
Integrated Concentration (Credential)
General Concentration (Pre-Credential)
Spanish Studies Concentration (Pre- Credential)

Prepared by Liberal Studies Programs Coordinator Kelly Straight Dortch and Liberal Studies Assessment Coordinator Daiana Rodriguez in consultation with the students, staff, and faculty.

PREPARATION OF REPORT

This report analyzes the Bachelor of Arts in Liberal Studies at California State University San Bernardino (CSUSB). Instruments of analysis include student questionnaires; self-evident assessments from students completing CAL 5970 and CAL 4970 (Senior Assessment, Program Learning Outcomes presentations); and reports generated by the University's Office of Institutional Research. The focus of this report, using the transition into semesters as the starting point, is to establish a baseline for the Liberal Studies Program in response to COVID considerations, CSUSB's Quarter to Semester conversion, the California Commission on Teacher Credentialing (CCTC/CTC) standards, and a major transition in leadership within the program resulting in loss of historical administrative knowledge – all of which have transpired since the last program review.

I.   DESCRIPTION AND MISSION

A. Description

The Bachelor of Arts in Liberal Studies, provides the foundation for students interested in becoming multiple-subject credentialed K-8 educators. This degree offers three concentrations: General, Integrated, and Spanish Studies. The Bachelor of Arts in Liberal Studies Integrated Concentration provides students the opportunity to complete a Bachelor's degree and a California Commission on Teacher Credentialing (CTC) accredited multiple-subject teaching credential as a part of a seamless, singular degree option. The General and Spanish Studies Concentrations are considered pre-credential degrees and allow students the flexibility to earn a standalone Bachelor of Arts in Liberal Studies that is not directly coupled with a CTC multiple-subject credential while allowing students the choice of a specialized area of study. With these pre-credential concentrations, students earn a Bachelor of Arts in Liberal Studies and can apply for a CTC multiple-subject credential program at a later date if desired. For an overview of the B.A. program and its respective concentration requirements, please see Appendix A.

All three of our Liberal Studies Programs are CTC accredited and provide the vast majority of K-8 teachers to our service area, making us the feeder for Credentialing and Masters Programs at CSUSB and other local four-year universities. We are one of the only truly cross-disciplinary programs on-campus, offering course options from all five of the CSUSB colleges and from a current minimum of twenty-five out of the thirty-four departments within these colleges. Liberal Studies students generate the majority of full-time equivalents (FTEs) for many departments across campus, particularly the smaller ones. We are a series of multidisciplinary concentrations that are extensively reliant on CSUSB's General Education (GE) curriculum. Our Integrated, General, and Spanish Studies Concentrations are specifically geared towards the preparation of K-8 teachers and this is a monumental responsibility that must be given due consideration and provided proportionate resources and support.

Consider the following: if eighty percent of our current 1,065 students (852) ultimately go on to become credentialed teachers, and the evidence supports that they do, and each

of these students experiences a thirty-year career with an average of thirty students per class per year then CSUSB is in the prime position to indirectly impact 766,800 individual K-8 students (852*30*30) over the next four years. Add to that equation the fact that CSUSB admits approximately another 350 students to the Liberal Studies majors each year and using the same 80%*30*30 formula we can extrapolate that each year CSUSB indirectly impacts the lives of an additional 252,000 students per year. This puts CSUSB in the prime position to be the greatest single influencer on any given subject at any given time in this region because every single physician, attorney, business owner, law enforcement officer, engineer, politician, etc. must go through the K-8 ranks in which our CSUSB Liberal Studies graduates are the predominant constituents. If CSUSB is committed to manifesting our core values of diversity, inclusivity, innovation, integrity, respect, social justice and equity, sustainability, transparency, and wellness and safety within our local and our global communities we must create and maintain the environment that fosters robust and advocacy-based Liberal Studies Programs because our current Liberal Studies students will soon be teaching our next generation of leaders in every major at CSUSB.

During the Quarter to Semester Conversion, the Arts and Letters Track--formerly offered as the non-credential pathway within the Liberal Studies Program—initially underwent the elevation process to become its own standalone degree program known as the Bachelor of Arts in Liberal Arts in support of GI2025. This elevation was in response to "closing-the-loop" assessment informed by student feedback, particularly those students who did not necessarily want a career in teaching and those seeking a timely and general interdisciplinary pathway to graduation. Inaugural enrollment in this newly elevated degree program commenced during fall semester 2020. As such, the new B.A. in Liberal Arts will be reviewed in a separate self-study once the program reaches the necessary point in its review cycle.

The conversion, which took place fall of 2020, brought about significant revisions to all Liberal Studies Program requirements, including updated course options to reflect the new Liberal Studies Program Learning Outcomes, updated CCTC requirements, transformed General Education Requirements, and required semester standards set by the Office of the Chancellor.

The titles and catalog descriptions for all courses that fall under the Liberal Studies Program requirements can be found in [Appendix B](#) and/or by following this link: https://bulletin.csusb.edu/colleges-schools-departments/arts-letters/liberal-studies-office/liberal-studies-ba/.

It is of importance to note that the Liberal Studies Program is one of only eleven majors (and the second largest major) at our Palm Desert Campus (PDC) that students can complete fully at PDC without having to commute to the San Bernardino Campus (SBC).

At present, the Liberal Studies Programs Offices are made up of the Liberal Studies Programs Coordinator who serves both campuses as CAL course instructor (average instructional load per term at both campuses as follows: 127 incoming freshman and

transfer students, 59 graduating seniors in writing intensive assessment courses, and 34 Independent Study students to meet various academic/curricular/community engagement/service learning/research/professionalization goals/needs), curricular leadership, faculty advisor, orientation faculty representative, PDC liaison, and campus representative at regional/national/international events and conferences; the Liberal Studies Administrative Support Coordinator (ASC) who serves as the office manager, events facilitator, coordinator support, and program scheduler; and 1-3 student assistants who navigate day-to-day communications with students, faculty, staff, community partners, and guests. The Liberal Studies Programs Coordinator is the only 100% assigned faculty member directly assigned to the 1,000+ students the program serves each year at both campuses; all other faculty members are assigned to their respective departments of instructional specialty.

B. Mission Statement

The programs' mission statement, which was newly revised in 2018 in consultation with the Liberal Studies Quarter to Semester (Q2S) Committee and in support of the Q2S Conversion and CSUSB Strategic Plan, states:

> The Liberal Studies Program at California State University, San Bernardino is a vibrant community of scholars, educators, artists, and support staff committed to the interdisciplinary exploration and development of lifelong learning. Our mission is to serve as a model of transdisciplinary study that fosters student inquiry and learning using a breadth of intellectual approaches and knowledge to enable students to critically engage with our diverse and complex world and meaningfully contribute, with intention, to the public good.

II.   PREVIOUS SELF-STUDY

As a result of the feedback from external reviewers and the University Academic Program Review Committee after our last self-study, action plans were developed to address both immediate and long-term goals. What follows are the 2017 action plans and a 2021 reflection on efforts made to implement those plans.

Note: Multiple changes in leadership since the last review (including a complete break in leadership and administrative/programmatic historical knowledge during the fall 2017 term), the Quarter to Semester Conversion which concluded fall 2020, and the COVID-19 closures spanning the 2020-2021/2021-2022 academic years all had significant impacts on the development and implementations experienced by the Liberal Studies Programs during this review cycle – including this very review report writing process.

A. External Reviewer's Report

Synopsis of Responses to External Review Recommendations

In 2017, we planned to continue to find consistent and effective ways to fund the impactful student services and High Impact Practices (HIPs as identified by the American Association of Colleges and Universities) offered by the program; continue to provide students with key information and experiences that will enable them to succeed and professionalize throughout their undergraduate careers; continue to reimagine Program Learning Outcomes; and continue to develop effective assessments methods to determine their successful implementation and review.

For a complete outline of High Impact Practices, please see Appendix P and/or by following this link: https://www.aacu.org/trending-topics/high-impact

1. Funding Program and Student Services

Recommendation: *"Another challenge for an Interdisciplinary Program such as this is budgetary. With no courses of its own, the program is not directly linked to student credit hours. This creates problematic situations in the program. For example, there is no reliable funding for student advisers and it is not uncommon for [the program] to begin a summer or other term with no assurances that there will actually be funding to support them."*

Response: Peer Advising for Liberal Studies (P.A.L.S.) has been a service offered by the Liberal Studies Programs at the San Bernardino Campus for the past 30 years and in the fall of 2017, it was rebranded as the Liberal Studies Office and Program Ambassadors for Liberal Studies (P.A.L.S.) Studio which provides an intellectual and mentoring space for students seeking to complete a Liberal Studies or Liberal Arts Program as well as a communal space for all students of any major to engage in a variety of High Impact Practices (HIPs) in an interdisciplinary environment. The space houses two sections:

- The Liberal Studies Offices which offered the following during this review cycle:
    - Mentoring (discontinued)
    - Tutoring Services (discontinued)
    - Specialized and exclusive Liberal Studies Advising (discontinued)
    - Workshops (ongoing)
    - Training Sessions (ongoing)
    - Community Engagement Efforts (ongoing)
    - Student Professionalization Opportunities (ongoing)
    - Availability to the Faculty Advisor and Program Coordinator (ongoing)
- The Program Ambassadors for Liberal Studies (P.A.L.S.) Studio which offered the following during this review cycle:
    - Student Workshops (ongoing)
    - Student Tutorials (ongoing)
    - Community Engagement Efforts (ongoing)
    - Interdisciplinary Student Study Space (ongoing)
    - Free (ongoing) student services, including but not limited to:
        - Testing supplies
        - Computer access
        - Printing
        - Intellectual and culturally enriching events
        - Refreshments

The PALS Studio and Student Lounge curate student resources and collaborate with other entities at SBC to provide a well-rounded assortment of student opportunities. As a result of COVID-19 restrictions, part of our community outreach evolved to bring some personal touches to our online and physical studio by creating mental wellness content that encourages people to check in with themselves while we continue a virtual offering and return to a physical format on campus. PALS Ambassadors host Hangout sessions that engage community building practices and allow Liberal Studies and the general student population an opportunity to network and build bonds. As CDC guidelines allow, during the in-person operations of the Student Lounge we grant visitors access to a full-size refrigerator, two microwaves and a supply of coffee and tea to improve study sessions and support the High Impact Practices (HIPs) of Community-Based Learning, Collaborative Learning, Common Intellectual Experiences, Diversity/Global Learning and engagement in Learning Communities. As a result of COVID, we have expanded our offering of virtual alternatives to these practices for the students who remain off campus as well as those who attend our Palm Desert Campus. Physical alternatives for PDC during non-COVID times are hosted at the Student Success Studio (S3).

Since 2015 multiple funding avenues have been explored, but funding consistency is still an issue that our program and student services face every year. Funding over the last six Academic Years (AY) are noted below.

AY	General Fund	IRA Grant	Q2S	Total	Student Enrollment	Per Student Per AY
2021	$4,000	$17,500	--	$21,500	1065	$20.19
2020	$3,350	$17,000	--	$20,350	1109	$18.35
2019	$5,000	$10,000	$52,470	$67,470	1175	$57.42
2018	$5,000	$8,000	$52,470	$65,470	1165	$56.20
2017	$5,000	$45,200	--	$50,200	1155	$43.46
2016	$4,000	$37,176	--	$41,176	1129	$36.47
2015	$4,000	$32,500	--	$36,500	977	$37.36

The purpose of the Program's General Fund is to cover the cost of maintenance, phone use, printing, supplies and services, and any new equipment purchase(s) that may prove necessary during the academic year. In this area, funding has been consistent throughout the last six years, except for AY2020 which saw a drop in funding as a result of COVID-19's impact on overall institutional funding.

The Instructionally Related Activities (IRA) Grant almost exclusively funds Student Assistant labor; in AY2016 ($4100) and in AY2017 ($5100) funds were designated to cover additional Printing and Supplies and Services costs. As the IRA grant is decided upon by members of Associated Students Incorporated (ASI) during the fall term, typically our program is unsure of potential funding until well into the start of the new academic year which is long after the initial influx of student demand has subsided. This makes proper staffing a gamble over the summer, which is the optimal time for training, and thereby causes rippling repercussions to student service provision throughout the fall term, the busiest time of the academic year, every year. During AY2020 the current program leadership was granted an IRA budget return which allowed student services and program resources to make the necessary transition to online services during COVID-19 virtual learning.

Quarter to Semester (Q2S) Conversion Funds were made available for AY2018 and AY2019 and the monies were used exclusively to hire Student Assistants (PALS Mentors) and Instructional Student Assistants (PALS Tutors).

The current program leadership was appointed during AY2017 and as a direct result of additional funding offered for the Q2S Conversion was able to hire a robust team of students (13 PALS Advisors and 2 Tutors) who assisted and supported 1165 Liberal Studies major students through the simultaneous curricular and program culture transformations. Also, during this time and in an effort to foster an improved and increased sense of belonging and intellectual identity among Liberal Studies students, workshops and community engagement efforts were able to be offered and supported at a much higher level than has happened in both previous and subsequent years. At the start of AY2019 and with the support of Q2S funds, the program was able to hire a second Administrative Support Assistant (ASA) specifically to attend to everyday office and student needs during the Quarter to Semester Conversion while the Programs Coordinator and original ASA (now ASC) attended to redesigning the

curricular and assessment requirements of the program. This temporary ASA position has since been defunded and terminated.

For a comprehensive list of events, services, and community engagement efforts offered by the Liberal Studies Programs and PALS Studio, please see [Appendix C.](Appendix%20C.) For a complete outline of High Impact Practices, please see [Appendix P](Appendix%20P) and/or by following this link: https://www.aacu.org/trending-topics/high-impact

2. **Cohort Model**

   Recommendation: *"A longer-range issue that has implications: The Cohort Model described above seems an important innovation, but it is one that has been made possible by external funding. Should that funding cease, the University/ College would be presented with the decision about whether to support that model with more permanent funding."*

   Response: Since 2015, funding termination/reduction and program leadership changes have impeded the progress of the Cohort Model from moving forward in its earlier imagined configuration. Currently, all university freshmen are cohorted for only their freshman year through Undergraduate Studies' Pack Registration and PDC implements a semi-cohort model for all PDC students. There is not a specific cohort model in place for Liberal Studies students as a whole and students in the Liberal Studies Program tend to self-cohort based on personal availability and incoming student level, i.e., incoming transfer students available in the evenings after work will typically take classes with peers who have similar availability and will remain in these groups throughout their undergraduate experience. While self-cohorting has its benefits, it does make data collection a challenge.

   In 2020, Liberal Studies program leadership was invited to join the Teachers of Color Subcommittee, whose mission is to facilitate the undergraduate transition of students of color between community college and 4-year universities. Concurrently, the College of Education's sponsored and funded Project Impact program, received a grant to support their mission of getting more people of color, particularly men of color, into the K-8 classroom. Naturally, a partnership between the two groups was founded which included local community colleges, universities, and K-8 school districts looking to streamline the educational journey of underrepresented minorities of color, particularly men of color, towards becoming educators. One of the main tools explored through Project Impact and the Teachers of Color Subcommittee is also the cohort model for incoming students of color pursuing degree and careers in education. This is still an ongoing conversation and endeavor between all stakeholders at this time and makes permanent funding of this or other types of cohorting an item for further and continued exploration.

3. **Program Learning Outcomes Revision**

Recommendation: *"Direct Measurement of Learning Outcomes: There are two issues that I believe will need attention. The first concerns the program's declared learning objectives. Currently there are too many to permit meaningful assessment of them. I suggest, therefore, a process of identifying a manageable set of measurable objectives..."*

Response: In Academic Year 2018-2019, since the Liberal Studies curriculum so heavily intersects with general education coursework, Program Learning Outcomes (PLO) were reformulated to more closely align to the Quarter to Semester Conversion GE Student Learning Outcomes (GLOs). Additionally, these new PLOs are influenced by CSUSB's Strategic Plan, our recent Quarter to Semester curriculum conversion, as well as CTC standards and alignment with the Early Subject Matter (ESM) matrices for the California Subject Examinations for Teachers (CSET) Waiver Program. Also, since the Liberal Studies Program does not have control over curriculum because courses are administered by their respective departments, senior assessment courses constructed around the PLOs have been created that serve as instruments of self-evident assessment for students of themselves as well as their assessment of overall programmatic success. From these self-evident assessments program leadership is able to assess and evaluate the effectiveness of the program at a per-student level. These courses also allow for programmatic self-assessment and the assessment of student realization of program learning outcomes. Since the last review cycle Liberal Studies PLOs were reduced from 28 to 7 PLOs and written into the coursework of the senior assessment courses (CAL 4970, 5970 and starting fall 2022 CAL 5900).

For a list of the transformed Liberal Studies PLOs and their descriptions, please see Appendix D.

4. **Program Learning Outcomes and Assessment**

Recommendation: *"Once the program has identified this new set of objectives, the next step would be to identify learning artifacts that can be used to assess those objectives. My suggestion would be to focus primarily on the portfolio as a source of data. And, in particular, I would recommend that once new learning objectives have been refined, consideration then be given to revising the portfolio-related assignments to ensure that they will permit meaningful assessment of each of them."*

Response: Currently, CAL 4970 and CAL 5970 students self-select a workshop group in which each group member individually identifies one or more artifacts that meets each of the seven PLOs. From there each student writes a mini meta-narrative that connects each artifact as evidence supporting the completion of the respective

PLO. Next, the students work together within their workshop groups to construct a singular archival presentation for their individual e-portfolios. They will go on to defend their PLO archive as a group during a synchronous presentation. This presentation also includes a group reflection on their experiences as students with High Impact Practices (HIP) as identified by the American Association of Colleges and Universities (AACU). The culmination of this presentation ends with individual student self-evident assessments of what they learned, how they learned it, and why it is meaningful to their overall academic career. This is also the portion of the process where students help assess the success of the Liberal Studies program in providing instruction that meets the prescribed program learning outcomes.

As part of our ongoing program assessment and based on recent CAL 4970 and CAL 5970 Senior Defense PLO Presentations, we have discovered that there are some PLOs that might require further analysis and possible revision. This is evidence of the efficacy and usefulness of the self-evident assessment process.

For a complete archive of Liberal Studies PLO presentations, defense videos, and metawriting reflections, please see Appendix E. For a complete outline of High Impact Practices, please see Appendix P and/or by following this link: https://www.aacu.org/trending-topics/high-impact

B. Recommendations from the University Program Committee

Synopsis of Responses to University Program Committee Recommendations

In 2017, we planned to continue to find consistent and effective ways to increase the enrollment of underrepresented students into the program; provide students with developed assessment courses in which they are able to explore and analyze the transformed Liberal Studies PLOs which newly align to CSUSB's ILOs and GLOs; continue to reimagine Program Learning Outcomes; and continue to develop effective assessments methods to determine their successful implementation and review of Liberal Studies PLOs.

1. Enrollment

Recommendation: *"Explore ways to enhance enrollment."*

Response: Overall, Liberal Studies' enrollment trends are statistically within the margin of error as to having consistent enrollment levels. As a result, and keeping in mind that we do not have the staff or funding for the level of in-the-field outreach in which we desire to engage nor do we control our curriculum or our student advising, we have thus narrowed our focus from increasing general Liberal Studies enrollment to increasing enrollment of underrepresented minorities, particularly men of color, across the program. We have done this by partnering with the College of Education,

Project Impact, the Teachers of Color Subcommittee, local community colleges, and local school districts.

For future consideration, we believe that adding more full-time and/or tenure/tenure-track faculty to Liberal Studies at both campuses will increase enrollment from prospective applicants who wish to have the same opportunities as other majors at CSUSB and/or at other institutions to pursue consistent research and other grant driven scholarly pursuits.

For a breakdown of yearly (AY) student demographics during this review cycle, please see Appendix F.

2. **Align PLOs to ILOs**

   Recommendation: *"Develop a new set of learning outcomes that are aligned with the newly created Institutional Learning Outcomes."*

   Response: In 2019, new Liberal Studies Program Learning Outcomes were finalized.

   These Program Learning Outcomes primarily align to CSUSB Institutional Learning Outcomes (with considerable and varied PLO to ILO overlap) as follows:
   - ILO 1 - Breadth of Knowledge
     - PLO 1 of Reasoning
     - PLO 6 of Applied Knowledge/Theory and Practice/Research
   - ILO 2 - Depth of Knowledge
     - PLO 3 of Community Engagement, Leadership, and Service Learning
     - PLO 6 of Applied Knowledge/Theory and Practice/Research
   - ILO 3 - Critical Literacies
     - PLO 2 of Artistic Expression
     - PLO 4 of Communication
     - PLO 6 of Applied Knowledge/Theory and Practice/Research
   - ILO 4 - Ways of Reasoning and Inquiry
     - PLO 1 of Reasoning
     - PLO 6 of Applied Knowledge/Theory and Practice/Research
   - ILO 5 - Creativity and Innovation
     - PLO 1 of Reasoning
     - PLO 2 of Artistic Expression
     - PLO 6 of Applied Knowledge/Theory and Practice/Research
   - ILO 6 - Integrative Learning
     - PLO 6 of Applied Knowledge/Theory and Practice/Research
   - ILO 7 - Engagement in the Campus, Local and Global Communities
     - PLO 3 of Community Engagement, Leadership, and Service Learning
       PLO 4 of Communication
     - PLO 5 of Professionalization

- ILO 8 - Diversity and Inclusion
  - PLO 7 of Diversity

For an overview of how Liberal Studies PLOs content meet CSUSB ILOs, please see [Appendix G](#).

3. **Assessment Plan**

   Recommendation: *"Develop a more robust assessment plan than what it has now in place."*

   Response: As supported by our Quarter to Semester Conversion and other documents, we have addressed assessment in the following ways:
   - Assessment of Student Learning Outcomes occurs at the student and course level;
   - Assessment of Program Learning Outcomes occurs at the student, course, program, college, institution, and accrediting body (CCTC) level;
   - A Liberal Studies Assessment Coordinator has recently been appointed by the College of Arts and Letters Dean's Office to report collected assessment information to the Dean's Office on a regular basis.

   The titles and catalog descriptions for all courses that fall under the Liberal Studies Program requirements can be found in [Appendix B](#) and/or by following this link: https://bulletin.csusb.edu/colleges-schools-departments/arts-letters/liberal-studies-office/liberal-studies-ba/. For an overview of student service data numbers during this cycle period, please see [Appendix H](#). For an overview of Early Subject Matter Matrix for Liberal Studies Quarter Courses, please see [Appendix I.](#) For the detailed submission of the Quarter to Semester Conversion Assessment Plan, please see [Appendix J](#). For the submitted Liberal Studies Articulation of Q2S Transformation, please see [Appendix L](#). Lastly, for the concentration specific Program Translation Tables submitted for the Q2S Conversion, please see [Appendix M](#).

4. **Assessment Classes**

   Recommendation: *"Work with the College of Arts and Letters to rethink the assessment classes. These classes have been offered for a few years but the results of them are not tracked, documented, or reported. The program and Arts and Letters therefore seem to have a simple but difficult decision to make: Either continue to offer these classes but track and document assessment results or stop offering them altogether."*

   Response: In conjunction with Q2S transformation, Liberal Studies program leadership created new courses for use as assessment tools: CAL 4970, CAL 5970 and beginning fall 2022, CAL 5900. As such, the semester curriculum for CAL 4970 and CAL 5970 (formerly HUM 497 and HUM 597 respectively) focuses on student

self-evident assessment, student program assessment, instructor-student assessment, and coordinated program assessment. In support of this curricular update, CAL 2970 (formerly HUM 197) evolved into a first-year/foundations-esque seminar, high impact practice experience where students are introduced to common intellectual experiences, learning communities, collaborative assignments and projects, as well as the introduction and development of a Liberal Studies programmatic common intellectual identity. It is also in CAL 2970 that students are introduced and informed of best practices for collecting artifacts for their senior assessment PLO projects and presentations.

The transformation of CAL 4970 and CAL 5970 and their efficacy as instruments of assessment has been previously documented under Program Learning Outcomes and Assessment (II.A.4).

For a complete archive of Liberal Studies PLO presentations, defense videos, and metawriting reflections, please see Appendix E.

5. **Implementation**

Recommendation: *"We would like to remind the department - In fact, we are reminding every department in the current review cycle - that by the time the program is reviewed in the next cycle, the department is expected to have implemented a full-fledged assessment plan, have conducted sufficient assessment of the learning outcomes of the program with multi-year data, and have engaged in close-the-loop activities."*

Response: As supported by our Quarter to Semester Conversion and other documents, we have addressed assessment in the following ways:
- Assessment of Student Learning Outcomes occurs at the student and course level;
- Assessment of Program Learning Outcomes occurs at the student, course, program, college, institution, and accrediting body (CCTC) level;
- A Liberal Studies Assessment Coordinator has recently been appointed by the College of Arts and Letters Dean's Office to report collected assessment information to the Dean's Office on a regular basis.

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the new B.A. in Liberal Arts will be reviewed in a separate self-study once the program reaches the necessary point in its review cycle.

For a complete archive of Liberal Studies PLO presentations, defense videos, and metawriting reflections, please see Appendix E. For the detailed submission of the Quarter to Semester Conversion Assessment Plan, please see Appendix J. For the submitted Liberal Studies Articulation of Q2S Transformation, please see Appendix L. Lastly, for the concentration specific Program Translation Tables submitted for the Q2S Conversion, please see Appendix M.

III. STUDENT ENROLLMENT

A. Program Enrollment Data (AY2017-2020)

Term	Headcount	FTEs	SB GPA	Total GPA	Mean Unit Load
Spring 2021	1031	955	3.24	3.14	13.89
Fall 2020	1109	1046	3.15	3.10	14.14
Spring 2020	1007	944	3.10	3.05	14.06
Winter 2020	1076	996	3.10	3.04	13.88
Fall 2019	1175	1105	3.04	3.04	14.11
Spring 2019	1018	974	3.04	2.98	14.36
Winter 2019	1062	1000	3.03	2.97	14.13
Fall 2018	1165	1088	2.96	2.96	14.01
Spring 2018	1020	947	2.99	2.96	13.93
Winter 2018	1084	995	3.00	2.96	13.77
Fall 2017	1155	1058	2.95	2.95	13.74
Spring 2017	1001	908	2.99	2.95	13.60
Winter 2017	1071	986	3.01	2.97	13.81
Fall 2016	1119	1014	2.95	2.94	13.59
Spring 2016	877	798	2.97	2.93	13.65
Winter 2016	921	847	2.98	2.93	13.79
Fall 2015	977	878	2.92	2.92	13.48

During the period under review, in response to external state mandated requirements and the university's conversion from quarters to semesters, the three teacher preparation options experienced three different iterations with students maintaining their catalog year rights, and, therefore existing in different "programs/concentrations/tracks" during these years. Data concerning enrollment and graduation rates of Liberal Studies students show significant promising trends that, however, need to be understood within the frame of the constantly changing infrastructure of the overall program in relation to the various past and current plan implementations.

Approaches to increasing student enrollment have been previously documented under Enrollment (II.B.1).

For an additional breakdown of yearly (AY) student demographics during this review cycle, please see Appendix F.

IV.   PROGRAM LEARNING OUTCOMES

A. Implementation

In AY 2018-2019, Program Learning Outcomes (PLOs) were reformulated to more closely align to the Quarter to Semester Conversion GE Learning Outcomes (GLOs). These new PLOs are influenced by CSUSB's Strategic Plan, our recent Quarter to Semester curriculum conversion, as well as CTC standards and alignment with Early Subject Matter (ESM) CSET Waiver matrices.

For a presentation of a curriculum map showing how PLOs are addressed in program courses, please see Appendix B. For a presentation of a matrix mapping PLO to ILO, please see Appendix G.

B. Program Learning Outcomes Instituted Fall 2019

PLO 1: Reasoning
Engage and show proficiency and competency in various types of reasoning practices that result in both internal and external reflection. These reasoning practices should include: Critical thinking, Analysis, Quantitative, Qualitative, Abstract reasoning, Computational, Processes, Assessment, Evaluation

PLO 2: Artistic Expression
Display an appreciation of and participation in creative, performing, and visual artistic pursuits in order to develop an aesthetic awareness and a sense of artistic and intellectual property to include a public performance, exhibition, publication, or broadcast.

PLO 3: Community Engagement, Leadership, and Service Learning
Demonstrate a desire to effect positive social change through enacted leadership and advocacy by way of community engagement, service learning, and the practice of compassionate emotional intelligence as an intellectually independent and accountable professional who embodies the practice of responsibility for participation for lifelong learning.

PLO 4: Communication
Display the ability to articulate and effectively connect across multiple audiences while justifying perspectives with sensitivity and awareness through verbal, non-verbal, written, non-written, digital, and other multimodal communicative approaches.

PLO 5: Professionalization
Preparation to include the creation and demonstration of innovative lesson plans, where appropriate, along with a completed resume, curriculum vitae, letters of interest, cover letters, and letters of recommendation. Professionalization preparation is also to include participation in an international/multicultural immersion experience and verified examples of leadership, service, and collaborative endeavors.

PLO 6: Applied Knowledge/Theory and Practice/Research
Demonstrate the ability to conduct meaningful research with competency and proficiency while utilizing properly cited critical and information literacies that result in synthesis of process, creative problem solving, and the ability to move between discipline specific, trans/interdisciplinary, integrative, and collaborative approaches.

PLO 7: Diversity
Understand the value of and contribute to an understanding of the vitality, advancement, and conservation of our culturally, linguistically, socioeconomically, and geographically diverse, yet, globally connected society.

C. Annual Assessment Process

Currently, CAL 4970 and CAL 5970 students self-select a workshop group in which each group member individually identifies one or more artifacts that meets each of the seven PLOs. From there each student writes a mini meta-narrative that connects each artifact as evidence supporting the completion of the respective PLO. Next, the students work together within their workshop groups to construct a singular archival presentation for their individual e-portfolios. They will go on to defend their PLO archive as a group during a synchronous presentation. This presentation also includes a group reflection on their experiences as students with High Impact Practices (HIP) as identified by the American Association of Colleges and Universities (AACU). The culmination of this presentation ends with individual student self-evident assessment of what they have learned, how they learned it, and why it is meaningful to their overall academic career. This is also the portion of the process where students help assess the success of the Liberal Studies program in providing instruction that meets the prescribed program learning outcomes.

As part of our ongoing program assessment and based on recent CAL 4970 and CAL 5970 Senior Defense PLO Presentations, we have discovered that there are some PLOs that might require further analysis and possible revision. This is evidence of the efficacy and usefulness of the self-evident assessment process.

For a complete archive of Liberal Studies PLO presentations, defense videos, and metawriting reflections, please see Appendix E. For a complete outline of High Impact Practices, please see Appendix P and/or by following this link: https://www.aacu.org/trending-topics/high-impact

D. Evaluation, Evolution, Development, and Revision

In an effort to close the loop on assessment (as recommended during the last review cycle) and in response to three semesters' worth of student performances during the writing intensive capstone courses' CAL 4970 and CAL 5970 Senior Defense PLO Presentations, it was found that the majority of students demonstrated competency in

PLOs 1, 2, 5, and 6 with itemized exceptions listed below. In response to the revised semester curriculum, the majority of Liberal Studies students demonstrated PLO mastery by the following:

- PLO 1: Students demonstrated a mastery of engagement with and practice of Critical thinking, Analysis, Quantitative, Qualitative, Abstract reasoning, Computational, Processes reasoning practices with the vast majority relying on artifacts (lesson plans) generated during MATH301X.
- PLO 2: Students displayed an appreciation of and participation in creative, performing, and visual artistic pursuits to include a public performance, exhibition, publication, or broadcast with the SBC students relying on artifacts generated during ART2395 (exhibited paintings) as evidence of their mastery and PDC students relying on artifacts generated during ENG3200 (self-authored children's books, published online as part of the *Desert Concrete Review*) and ENG5430A/B (service as editors for the *Desert Concrete Review*).
- PLO 3: The majority of students did not perform well with and seemed to lack an overall understanding of this PLO.
- PLO 4: The majority of students relied on printed, recorded, published, and/or presented lesson plans as artifacts for this PLO thereby demonstrating a mastery of understanding in regards to multimodality. Additionally, students relied on modified lesson plans and recorded resource videos with accessibility accommodations as evidence of effective communication across multiple audiences. Finally, a significant number (but not the majority), identified CAL4970 and CAL5970 essay writing workshops as evidence of justifying perspectives with sensitivity.
- PLO 5: The majority of students demonstrated mastery of the creation of lesson plans, resumes, curricula vitarum (CVs), letters of interest, cover letters, and letters of recommendation. The number of students mastering CVs is an almost 100% increase from the last review cycles as nearly all students have never heard of CVs until being introduced to them in CAL2970 (HUM197) beginning fall 2017. Other than that, COVID restrictions are forcing the Liberal Studies Program to rethink the International/Multicultural Immersion Experience of this PLO.
- PLO 6: The majority of students demonstrated mastery of this PLO with various research essays from across the curriculum as artifactual evidence. However, even while they actually *in practice* engage with critical and information literacies the majority were unable to identify their use of critical and information literacies as a concept.
- PLO 7: The majority of students demonstrated a mastery of this PLO in an unexpected way by citing themselves and their very presence at this institution and their engagement in the academy as emerging scholars and educators as evidence of meeting this PLO.

As part of our ongoing program assessment and based on recent Senior Defense PLO Presentations, we have discovered that there are some PLOs that require further analysis and possible revision. During CAL 4970 and CAL 5970 Senior Defense PLO Presentations it was found that the following PLO areas may require further analysis, discussion, and/or revision:

- PLO 1: The practice and distinction between Assessment and Evaluation reasoning

- PLO 2: The concepts of Aesthetic Awareness and Artistic and Intellectual Property
- PLO 3: The differences between and implementation of Community Engagement and Service Learning
- PLO 5: The ability and opportunity to engage in International/Multicultural Immersion Experience
- PLO 6: An understanding of Critical and Information Literacies and Trans/Interdisciplinary and Integrative Approaches

For a complete archive of Liberal Studies PLO presentations, defense videos, and metawriting reflections, please see Appendix E. For the results of the Program Assessment Survey for Liberal Studies Students, please see Appendix J.

V.   PROGRAM EFFECTIVENESS

In response to the fact that our program is reliant on other departments for the vast majority of our major course offerings, of which acquiring actionable data is exceedingly problematic at this time, we have opted to rely on student self-evident assessments as a measurable tool for program effectiveness. Below are the findings of student perception of program effectiveness along with measurable unit loads and time to graduation information.

For a graduation rates for First-Time-Freshmen and Transfer Liberal Studies Students, please see Appendix N.

A. Program Assessment Survey for Liberal Studies Students

Valuing student input as co-creators, co-explorers, and co-researchers, the Liberal Studies Program frequently surveys our students for their insights, contributions, needs, and desires. Our most recent anonymous self-study questionnaire was distributed to 1062 undergraduate majors during fall 2021, with 184 (17%) returned. Representative responses to the survey are included and contextualized below.

The full self-study student survey can be found in Appendix K.

1. Curriculum Evaluation

> *"My experience with the Liberal Studies department at CSUSB has enhanced my knowledge and abilities to demonstrate the program's PLOs through CSUSB and to my future." Anonymous Student Survey Testimonial*

The Curriculum Evaluation section of the survey returned a response of strong student confidence towards the effectiveness of their professional preparation through rigorous courses taught by effective instructors. All questions under this section (using a one-to-five scale) returned an average of about 106 (58%) students strongly agreeing and an average of about 54 (29%) students agreeing towards the effectiveness of the curriculum for Liberal Studies Program courses.

2. Student Success

> *"This experience has been a growing experience. I've been faced with many obstacles throughout my college career, but I was able to overcome those because of the community at CSUSB. There were some days where CSUSB was my escape. The staff, students, and professors are extremely understanding and thoughtful." Anonymous Student Survey Testimonial*

The Student Success section of the survey responses also returned a generally positive student outlook towards the Liberal Studies Offices and PALS Studio providing effective and useful student resources and communications. The one-to-five scale questions under this section returned an average of about 97 (53%) students strongly agreeing and an average of about 42 (23%) students agreeing towards the effective communication of resources and the effective reception of informational resources and workshops offered by the Liberal Studies Offices and PALS Studio. The program leadership did make note of the number of students who stated that they did not know where to get advising services. Generally speaking, this student sentiment coincides with COVID considerations as well as the recent university wide restructuring of these services towards a centralized advising model aligned under Undergraduate Studies and away from departments and programs, as well as the reassignment of the previous Quarter to Semester dedicated and exclusive Liberal Studies advising specialist to another program within another college.

3. **Other Testimonials**

Finally, the optional Testimonial section of the survey provided valuable student insight into the nuances of the undergraduate experiences of Liberal Studies students. Below are some items which represent consistent student sentiments within this section of the survey which the Liberal Studies program will work to address for the upcoming cycle:

The Liberal Studies Program has a unique curricular structure that is governed by entities outside the influence of the program itself including: CCTC, CSU, CSUSB, General Education, and College of Arts and Letters. In response to these standards and requirements, it is crucial that the Liberal Studies advising specialist(s) be knowledgeable in the nuances and specifics of the program in order for students to graduate within their desired timeframe whenever possible and without missing or repeating courses unnecessarily. Overall, student responses proved more favorable when a specialized advisor was assigned exclusively to Liberal Studies within the auspices of the Liberal Studies/PALS intellectual and communal spaces which also house the additional support of the Liberal Studies Program Coordinator, Liberal Studies ASC and ASA, and the PALS. At present, anonymous student responses indicate that the realignment and centralization of advising is proving unsatisfactory in its current form. As stated by Student A,

> *"Since I transferred, I've experienced several issues due to lack of information or guidance. I enrolled in a credential course and attended it for several weeks until I was informed that I should not be taking it yet. I then continued to receive incredible guidance from Arturo Gutierrez [the Liberal Studies specialized adviser] for a couple of semesters. He's no longer an advisor and I am once again finding myself at a roadblock and without the proper guidance or knowledge..."*

A lack of information and advising availability, especially at the beginning of a CSUSB undergraduate career, can have a significant impact on student enrollment practices which can directly impact someone's graduation timeline. During the time that Liberal Studies had a trained and knowledgeable adviser assigned to the program and offices, students responded favorably and experienced a consistent level of specialized service that effectively communicated the specifics and nuances of the program.

After the reassignment of the Liberal Studies advising specialist and as part the restructuring towards a centralized advising model, access to advising was turned over from Liberal Studies to the College of Arts and Letters (CAL) Advising Center. Here, two advisers were responsible for serving all students housed under all CAL majors from seven other departments and Liberal Studies for an average of 3,000+ students. The student demand coupled with realignment policy updates implemented by Academic Advising as part of Undergraduate Studies brought about significantly increased wait times for booking a CAL advising appointment only to experience heavily reduced advising session times (some students reporting 10-15-minute-long sessions as the standard time block). This is much reduced from the Liberal Studies specialized advisor's and PALS' appointment times of thirty-minute blocks and the Liberal Studies Coordinator's one-hour time blocks as needed. As reflected in the following feedback from Student B, the changes brought about unproductive advising experiences.

> *"[O]nly having two advisors for the whole liberal studies program is very inefficient. It is extremely hard to get an appointment and they aren't much help because the appointments are so short. There is not much guidance."*

While students under other majors have the option of also seeking faculty advising from knowledgeable and specialized instructors within their departments, Liberal Studies is not a department with its own specialized faculty and therefore cannot extend the same flexibility to the student advising experience. At present, Liberal Studies (a major consistently over 1,000 students across two campuses) has one dedicated faculty member and one dedicated staff member to serve a very deserving body of students who are institutionally aligned to seek advising from entities outside of the Liberal Studies Program. This makes day-to-day communication, role confusion, and continuity an ongoing opportunity for improvement.

Transitioning from the undergraduate experience into the credential experience also brings about unique challenges for the student body. As expressed by Student C during the testimonials portion of their survey response,

> *"I would have liked if at some point they made it a bit more clear to those in the integrated program that we would need to reach out to a whole new staff to help us with our credential portion. I was under the impression that those helping me in the Liberal Studies major would also guide me through*

> *the credential process. I found out half way through my senior year that I needed to reach out to the credential program staff and apply for the program. I luckily didn't miss any deadlines but it would have been nice to have known this earlier so I could have had a little more time to prepare."*

Program leadership agrees with the need for a specialized transitional Liberal Studies/Credential Program advisor with further expertise in facilitating student transition into the College of Education Credential Programs. Integrated Concentration students who consistently make up about 45% of the Liberal Studies major are in the unique position of remaining undergraduate students while completing their Multiple Subject Credential requirements. This means that administratively they are assigned to the Liberal Studies Programs while completing curriculum directly controlled by the College of Education Teacher Education and Foundations Multiple Subject Credential Program and if they experience the need to place a request requiring administrative permissions, they must navigate the availabilities and knowledge of leadership across two colleges (College of Education and College of Arts and Letters), two programs (Credential and Liberal Studies), and a department or university office as necessary. Such a process can be not only stressful and overwhelming, but also create unnecessary pockets of response time that can easily push a request past a deadline.

Then there are the students who are part of the Palm Desert Campus (PDC) Cohort who experience all of the frustrations previously stated with the added disruption of having to often navigate the processes remotely. As Student D expresses,

> *"I feel as if PDC students are severely neglected. While PDC staff is exceptional, there is only so much they can do. I have had to fight tooth and nail for communication from the San Bernardino campus . . ."*

The limited manpower within the office places a limit on the effective reach of resources. When the Liberal Studies Offices had the additional support of the Q2S-funded second ASA, the Liberal Studies Coordinator and ASC were able to more purposefully extend their physical availability at the Palm Desert Campus. Also, during the Q2S process, funding made it possible for the program to hire a PALS Mentor at the PDC who was able to meet with students in person and who extended the availability of our physical resources (testing materials, math tutoring supplies, etc.) to the students. Currently, Liberal Studies students receive individual advising and other support from two generalist PDC advisors, the peer mentors at the Student Success Studio, the Liberal Studies Programs Coordinator (physically, one day per week), the Liberal Studies Offices during all business hours remotely via zoom and phone, and one PDC-assigned College of Education tenured, full-professor, faculty member.

Additionally, as Student E extrapolates from their experience,

> *"More classes need to be offered at PDC. I was admitted to PDC as a*

> *Liberal Studies major so I should be able to complete my major here without having to commute to the main campus twice a week."*

Every term Liberal Studies program leadership manually maps out PDC course offerings and contacts the appropriate departmental leadership with need-based requests for course schedule adjustments or additions. As Liberal Studies does not have control over course offerings for the classes that make up the program, this process is started after all classes have been created and at times after course instructors have already been assigned. This is very disruptive to all involved – especially the students and the lecturer faculty who teach the majority of Liberal Studies courses. Program leadership believes that this and other cyclical issues can be solved under the auspices of elevating the program to a department so as to have more administrative access to curricular offerings.

In that same vein, Student F brings up that

> *". . . [m]any of [the Liberal Studies] classes teach the same content and should be eliminated or combined..."*

As Liberal Studies is a program, there is no centralized control over curriculum so the potential and development of cross-listed and/or co-taught courses which could provide students with innovative learning opportunities as well as reduce overall unit requirements has yet to be realized. Access to resources such as course release time, tenure/tenure-track faculty, and a committee structure to fund, develop, and approve the implementation of such courses is not currently available to our program.

B. Program Accomplishments

This section includes student testimonials from our most recent anonymous self-study questionnaire was distributed to 1062 undergraduate majors during fall 2021, with 184 (17%) returned.

The full self-study student survey can be found in Appendix K.

1. Change in Liberal Studies Student Perception

When the most recent program leadership was appointed during Fall 2017 multiple student surveys were conducted. The first survey distributed to Liberal Studies Students was geared to the mending of bottleneck courses which were delaying student graduations. While the short-term goal was to gather feedback for the Upper-division Earth and Space Science bottleneck within the teaching tracks, the survey included questions for long term course scheduling. The information gathered included other potential bottleneck courses such as ECON 311 (ECON3199) and PYSC 350 (PYSC3350), and options to when students would be willing to take courses including times of day and Saturday course creation. This survey was one of the guiding factors during the Q2S decision-making process to include more than one

course to fulfill a requirement wherever it is both possible and makes sense. Such student-informed operations marked the change in leadership and established a more collaborative and student inclusive process towards growth.

It is important for us to grant students the opportunity to practice being a part of their learning community not just as learners, but also as self-advocates, contributors, decision makers, and leaders. As a student anonymously states in our most recent Self-Study Student Survey testimonial,

> *"This program has shaped and helped to build skills and prepara[red me] to become a future educator. To change lives of students and the world. This program has [given] me a new perspective [on] what it is like to be a teacher. New perspectives in many aspects academically and in my personal life. I have what it takes to become an educator. Loved everything this program had to offer. I gained so much knowledge and positive experiences."*

From the onset, student orientation provides a platform for incoming students to resonate with the impactful nature of the vocation they have decided to pursue. An elementary teacher with a 30-year career who has 30 new students every year has the opportunity to directly impact the lives of 900 students over the course of their career – students who will make up the next generations of leaders, innovators, and/or delinquents. If our majors remember the educator that made the difference for them, whether positive or negative, so will their future students. Our students need to carry this knowledge throughout their experience, and they also need to learn what it means to traverse an institution that is not built to bend to the human experience but rather have the human experience bend to fit the institution. Self-advocacy thereby extends into their professional lives, and it should expand to cover the students in their classrooms as well as extend into to the communities our emerging educators choose to serve.

Being able to practice such advocacy in a space where mistakes are more easily remedied and with the support of their peers, staff, and coordinator is an important learning experience we provide our students. As one states in our Self-Study Student Survey,

> *"The liberal studies program was challenging, exciting, and eye opening. Without a doubt I can say that this program has helped shape me into what I am today and what I will be in the future. This program has further inspired me to be a teacher and a role model for the community and the future of our youth. The material and experiences I learned throughout this program [were] extremely helpful in preparing me for graduation and beyond. This was a journey that I'd do a million times as it was a journey*

that takes you out of your comfort zone and helps build character and further interest in being an educator. I also, feel that the program was extremely helpful and supportive throughout my years here at CSUSB as it has all the resources to make you a successful student. It was an honor to be a part of this program."

These experiences led to students petitioning for (and successfully receiving) more course sections offered in the evening and on the weekends, peer-nominated and elected student representatives during commencement ceremonies, students going to their school districts and schoolboard meetings to inform elected officials of substitute teaching permit employment opportunities and then returning and informing their peers regarding said undergraduate substitute teaching permits that can fund at least two academic years of employment, etc. Students are not just told they can make a difference; they are shown through professionalization and community engagement opportunities that they can, in fact and in reality, impact their futures and their communities.

2. **Early Subject Matter (ESM)**

The first long-term project that the new program leadership undertook was the submission of the Early Subject Matter (ESM) matrices for the California Subject Examinations for Teachers (CSET) Waiver Program. The new ASA (now ASC) developed a virtual platform through which student assistants gathered the relevant syllabi, model assignments, sample exams, and textbook material while the Liberal Studies Coordinator requested department chairs (and then Deans) for their feedback regarding how the courses Liberal Studies Students completed aligned with the ESM Matrix. This gargantuan undertaking was completed by the Liberal Studies Coordinator, the ASA (now ASC), and the indispensable support of a number of Student Assistants all while handling the training of new student assistants, the day-to-day demands of the office, advising and instruction (in the case of the coordinator), and the upcoming Q2S Conversion deadlines. The first waiver submission took place February 2018, and the request for an edited submission came in December 2018. Resubmission went out October of 2019 via the College of Education Credential Offices who followed up on the approval progress that same year. Subsequent progress check-ins were halted by COVID-19 and the whole process became nullified by the implementation of AB-130 which was approved by Governor Newsom on July 09, 2021.

For an overview of Early Subject Matter Matrix for Liberal Studies Quarter Courses, please see [Appendix I.](#)

3. **Quarter to Semester (Q2S) Conversion**

A concurrent long-term project undertaken by the Liberal Studies Program alongside the ESM CSET Waiver was the campus wide Quarter to Semester Conversion. In response to the timing of the change in leadership and our dependence on curriculum generated, developed, and administered by other departments, the Liberal Studies Program was one of the last to submit major curriculum transformations for Quarter to Semester (Q2S) Conversion. Once departments across campus finished creating their courses, program leadership as part of the Liberal Studies Q2S Committee was able to evaluate proposed courses for suitability in meeting the CTC accreditation standards. It is important to note that the Liberal Studies Q2S committee, comprised of tenured faculty from all colleges across campus, was disbanded upon approval of the Liberal Studies Program Form (P-Form) at the completion of the Q2S process.

At an institution that values collaboration, shared governance, and the committee-culture it is curious that one of the largest majors (2nd at PDC and top-5, depending on enrollment, at SBC) no longer has a regular standing, interdisciplinary committee of its own. Such an interdisciplinary-dependent major will certainly benefit from funding dedicated to supporting a continual and consistent interdisciplinary Liberal Studies Committee to aid with assessment, research, advising, curriculum, and compliance.

For an overview of all Q2S document submissions please see Appendix B, Appendix J, Appendix L, and Appendix M.

4. **Student Research Symposium**

Our program has had the opportunity to participate in the Office of Student Research (OSR) Symposium twice. The first time was in AY2017-2018 when one of our independent study students presented his research on teaching math through music and won a prize for Outstanding Poster Presentation for the College of Arts and Letters. The second time was in AY2018-2019 when we presented the Students and Coyotes Instruction in Poetry and Prose (SCIPP) Forum as part of our community engagement focus. This interactive forum showcased the collaborative learning community that CSUSB students, faculty, and staff developed with local K-12 students, their parents, K-12 educators, and surrounding community partners. Attendees were able to see how SCIPP unites children, parents, and community members in a fun, creative, and safe learning environment.

The focus of this SCIPP Forum was community publishing with the goal of creating a published text featuring the works of K-12 students, their families, K-12 educators, community partners, and CSUSB students, staff, and faculty. While the initial work has been published as part of CSUSB's ScholarWorks repository, the creation of a published (retail) text has been put on hiatus as a result of insufficient resources to continue the pursuit of this endeavor at this time.

For a full listing of SCIPP related community publishing items, please see [Appendix O](#).

5. **Transition to Virtual**

In March of 2020, we, along with the world, had to make a transition into the virtual realm. We were able to equip our office staff with phone access from home, converted different procedures into virtual processes, and developed a virtual presence which students could access to continue a sense of community and support. Some of the procedures which were turned virtual during this time have remained virtual as an ongoing growth and expansion of our student services, support, and success offerings as we try to integrate back into an in-person/hybrid setting in accordance with COVID-19 procedures and CDC restrictions.

To explore available resources, please visit our Liberal Studies Programs website at: https://www.csusb.edu/liberal-studies

C. **Program Strengths**

CSUSB's Liberal Studies Program prides itself on being a model of student-centric engagement, empowerment and governance. Our program's strengths align under a culture and climate that empowers students and encourages their self-determination with ample support and student success tools. Within the culture and climate of our Liberal Studies Program are the following specific strengths:

1. **Professionalization Opportunities**

A regularly repeated phrase throughout our office and within our student body is "Have you updated your CV?" Students are encouraged from orientation, through their introductory course, through office visits and lounge study sessions, and all the way through their senior assessment courses to develop their academic leadership and experiential records – and utilize CSUSB's Office of Student Affairs supported co-curricular transcript. The concept of a Curriculum Vitae is introduced to students very, very early on so that they can start thinking about what experiences and knowledge areas they want to highlight and build as educators.

In an effort to not only inform students of the existence and differentiation between a CV and a resume, but also to ensure ample opportunities for students to add lines to their CVs, the Liberal Studies Program actively seeks, publicizes, and creates events and occasions for students to practice community engagement, experiential learning, and service learning. These practices have the intentional side effect of encouraging student involvement and engagement with the internal/campus and external

communities. Additionally, as a result of this intentionality, students develop a sense of intellectual identity and social belongingness while constructing a self-identity and performing self-acknowledgement as a contributing scholar to the academy. This is particularly important for a commuter campus like ours as well as for our large majority of first-generation students.

2. **Community Building Practices**

The Liberal Studies Program leadership works diligently to ensure the Liberal Studies Offices, PALS Studio, and the limited number of CAL courses for Liberal Studies all align with and incorporate the AACU's High Impact Practices and other strategies for building a sense of community and belonging. Students are referred to as scholars both in and out of class and encouraged to self-identify as such. Program leaderships makes a concerted and intentional effort to learn students by name and face and to greet students by name and with encouragement in passing, in class, and in the offices and studio. Students are offered experiential learning, community engagement, mentorship, and peer-to-peer support opportunities to help foster a sense of investment in self, colleagues, campus, and service area with the hope that if we invest in our students and our students invest here then they will stay here instead of taking their talents elsewhere for the betterment of another community. Our expressed hope to our students and for our students is that they will identify and position themselves as pinnacles of our community who understand that education is a service-based pursuit and we are best when we invest in the success and advancement of one another.

3. **Collaborative Practices**

As a multidisciplinary major we welcome, encourage, and thrive on collaboration. As such, as part of our ongoing efforts to build and maintain a thriving network of likeminded community partners and campus colleagues with whom to collaborate, the Liberal Studies Program seeks and accepts invitations from a variety of sources.

To date, we have consulted and collaborated with:
- An entire host of nonprofit organizations
- The United States Army
- A half dozen local school districts and dozens of local schools
- Riverside and San Bernardino County museums of various ilks
- Publishers, such as Inlandia Institute
- Community colleges
- Other universities
- Donors
- Local tribes, etc.

We also collaborate with CSUSB's:

- Office of Community Engagement
- Office of Student Affairs
- Office of Student Research
- Office of the Registrar
- General Education Curriculum Committee
- University Curriculum Committee
- College of Arts and Letters Curriculum Committee
- Institutional Research
- Academic Technologies and Innovation
- Pfau Library
- PDC
- Student Success Studio (S3)
- Coyote Radio
- Every college and the majority of the departments on campus – especially for Q2S, ESM, and GE.
- Academic Advising

As a natural extension of sharing our Liberal Studies Integrated Students, our closest collaborative partner is the College of Education's Department of Teacher Education and Foundations and the Multiple-Subject Credential Program within that department. Together we have worked and continue to work towards the creation of cohesive curriculum in compliance with the CTC and our own GE, student access to information for both the Liberal Studies and Multiple-Subject Credential Program, and fostering a culture where students feel supported by both programs and where they experience a seamless transition from one to the other.

We further believe that program transparency and the transfer of knowledge are the greatest strengths of our program and as a result we consistently engage in regular training sessions, workshops, and other planning sessions – both as participants and facilitators. In fact, in support of the university's major move towards centralized advising and with the intent to assist student transition from quarter to semester curriculum, we held weekly, semi-weekly, and monthly training meetings with Academic Advising until discontinued at their request. We still hold regular workshops for students on the use of our Liberal Studies-specific student success tools.

For a comprehensive list of events, services, and community engagement efforts offered by the Liberal Studies Programs and PALS Studio, please see Appendix C.

4. Student Empowerment Practices

> *"The liberal studies program was challenging, exciting, and eye*

opening. Without a doubt I can say that this program has helped shape me into what I am today and what I will be in the future. This program has further inspired me to be a teacher and a role model for the community and the future of our youth. The material and experiences I learned throughout this program where extremely helpful in preparing me for graduation and beyond. This was a journey that I'd do a million times as it was a journey that takes you out of your comfort zone and helps build character and further interest in being an educator. I also, feel that the program was extremely helpful and supportive throughout my years here at CSUSB as it has all the resources to make you a successful student. It was an honor to be a part of this program."
Anonymous Student Survey Testimonial

The main tenet of CSUSB's Liberal Studies Program is to provide students with the space to discover, develop, and master self-advocacy with an eye towards learning how to be effective advocates for their students, schools, and communities. Students are guided to and in the use of campus tools, policies, and other resources designed for their protection, support, and success. Students know they can contact the Liberal Studies Office for support in navigating the institution for assistance with a variety of administrative processes from course overloads to program planning to scholarships to grade appeals and retroactive medical withdrawals, etc. Students are not only navigated through the processes but also regularly informed of their existence.

Additionally, students are surveyed, consulted, and otherwise engaged in the governance of the program from the adoption of the PLOs to the nomination of student commencement representatives. Students in the Liberal Studies Program are not only told that their voices matter, they are also given the platform and the tools with which to make their voices heard.

D. Program Challenges

1. Data Collection and Assessment

Our data collection/access and subsequent assessment practices face a couple of challenges:

- One being that much of our earlier, historical data was recorded on paper and those papers are irretrievable due to multiple changes in leadership and data transfer since the last review.

- The next is that our program requires data from a wide variety of courses and sources across multiple departments, colleges, offices, and campuses. Often

this data is difficult to gather and even more difficult to identify and classify within specific groups.

Furthermore, the Liberal Studies Program consists of three concentrations, including the Integrated option which allows students to remain undergraduate students while completing their credential courses. At this point, while a student might be classified as an undergraduate Liberal Studies major, they are taking courses strictly under the administration of a separate staff, program, department, and college while the data-gathering mechanisms still identify the students as undergraduate students even though the students are taking credential courses that are the equivalent of being a graduate. This often skews time to degree completion, unit load, DFWI rates, and other such measurements.

The good news is that that our data-gathering practices will likely improve as a result of the introduction of CSUSB's Tableau dashboard and our baselining from semesters.

Additionally, the Liberal Studies program faces unique challenges when it comes to assessing student performance relative to its PLOs:
- Students in programs (as opposed to departments) tend to take a wide variety of courses to satisfy the requirements of their major and are therefore difficult to identify as a group.
- Only a small subset of the course work is offered by Liberal Studies, requiring the involvement of faculty from many departments for the collection, rating and evaluation of data.

The Liberal Studies program has undergone (and continues to undergo) major revisions that make it very difficult to target a stable population of students who have all completed what are relatively new paths towards graduation.

The program has limited influence over how assessment is conducted in the subject matter courses that Liberal Studies students take. The more courses the program can own, the more control it will have over assessment. This reinforces the idea of hiring more faculty in-house so we can offer more Liberal Studies developed and administered courses. Furthermore, we agree that there is a critical need to implement a stable assessment model that can be executed every year and provide the opportunity for longitudinal comparison.

2. Limited Resources

Permanent and consistent funding for this program can free up program leadership to plan out future curricular growth and collaborative faculty practices. While the ASI grant is able to provide current student resources, the potential to establish growth over the next five-year cycle is not something this type of grant can guarantee. Also,

such monies should fund concentrated short-term goals, not be responsible for the continued resources provided by our program.

3. **Expansion of Tenure/Tenure-Track Faculty**

Funding and support to secure dedicated Liberal Studies tenure/tenure-track faculty, will allow the Liberal Studies Program to offer mentorship, research and creative opportunities, grant-funded opportunities, conference experiences, and other community engagement, service learning, and experiential learning opportunities to more than the very small current percentage of the students that it does presently - typically less than 0.5% per term. As a service-oriented major, any and all Liberal Studies students should have access to the same robust, high impact, educational experiences as their peers. Having tenure/tenure-track faculty assigned to Liberal Studies will allow for current opportunities, practices, and experiences to expand to all students.

Additionally, the support of tenure/tenure-track faculty will allow Liberal Studies students the added benefit of the early field experiences that are instrumental in directing students towards their career goals. At present, students do not generally engage in field experiences until late in their academic careers – often, not until admission into TEF's Multiple-Subject Credential Program. Finally, tenure/tenure-track Liberal Studies faculty, particularly if they are URM men of color, are absolutely essential to the university's commitment to its core values of diversity and inclusion. This takes on particular urgency when it is noted that at present the Liberal Studies major has:

- 20 African American students (only one of whom identifies as male)
- 0 Native American students of any gender
- 0 Native Hawaiian/Pacific Islander students of any gender

Every student, whether K-8 or CSUSB, deserves to see themselves reflected in the faculty who support them and CSUSB Liberal Studies students are no exception.

For a breakdown of yearly (AY) student demographics during this review cycle, please see Appendix F.

4. **COVID Community Engagement Practices**

The program had a strong focus of engaging the community and providing students with professionalization opportunities, but during COVID-19 virtual instruction and restrictions placed on in-person activities we did not have sufficient funding or manpower to effectively reimagine these offerings and in response have had to put them on hiatus.

5. **Underrepresented Minorities**

Providing the Liberal Studies Program with specified and dedicated human resources and fiscal funding to adequately support at least one additional staff member will allow the program to better serve Liberal Studies students at both campuses by freeing up leadership to engage in recruitment of prospective students, specifically URM men of color, and other community engagement activities as highlighted in the Liberal Studies Program Learning Outcomes and CSUSB's core values.

VI.   PROGRAM RESOURCES

A. Liberal Studies Offices

> *"Professor Dortch and the PALS studio have been incredibly helpful to me throughout my college career. I love having a space to study, get tutoring, attend events and workshops, and get materials. I miss the kitchen and fridge! Going from quarters to semesters, and then online was a giant change but their communication and help made life much easier. They're the only department I can depend on and a lot of the time it feels like they're the only department that cares. I'm graduating knowing I'm as ready as can be for teaching."*
> *Anonymous Student Survey Testimonial*

The Liberal Studies Offices (CE-114) houses the Programs Coordinator and Program Support Staff. This space provides an intellectual and mentoring space for students seeking to complete a Liberal Studies or Liberal Arts Program as well as a communal space for all students to engage in a variety of High Impact Practices. Physical and virtual student services are generated, promoted, and made available through these offices.

1. Program Coordinator and Staff

Presently, we have one Liberal Studies Programs Coordinator and one Administrative Support Coordinator (ASC). This is equivalent to one faculty member (who also serves as student advisor) and one staff member directly supporting about 1,065 students as they navigate complex interdisciplinary curriculum during a time of great institutional and global change. This is FAR below the campus average for other programs and departments. Just within the College of Arts and Letters, the second largest major of English has 494 students (fall 2021) and the third largest major of Communication Studies has 470 students (fall 2021). English has a Department Chair, two full-time ASCs, 12 Professors, 3 Associate Professors, 8 Assistant Professors, 9 Full-Time Lecturers, and 24 Part-Time Lecturers. Communication Studies has a Department Chair, a full-time ASC, a Media Production Specialist, 8 Professors, 5 Associate Professors, 4 Assistant Professors, 2 Full-Time Lecturers, and 32 Part-Time Lecturers. This gives both departments about 9 students per faculty member or about 165 and 235 students per staff member (respectively).

The Liberal Studies Programs Coordinator serves both campuses as CAL course instructor averaging instructional load per term at both campuses as follows: 127 incoming freshman and transfer students, 59 graduating seniors in writing intensive assessment courses, and 34 Independent Study students to meet various academic / curricular / community engagement / service learning / research / professionalization goals / needs. The coordinator is also responsible for curricular leadership, faculty

advising, orientation as the faculty representative, being the PDC liaison, and participating as the campus representative at regional events and conferences.

Term	HUM 197	HUM 397	HUM 497	HUM 597	Indpndt. Study	TOTAL
F17	174	--	7	--	9	**190**
W18	56	--	9	--	14	**79**
Sp18	85	77	--	55	10	**227**
Su18	--	19	2	17	2	**40**
F18	194	36	9	8	26	**273**
W19	70	74	10	39	53	**246**
Sp19	95	--	6	45	43	**189**
Su19	--	--	--	--	1	**1**
F19	133	--	2	46	26	**207**
W20	108	--	8	51	5	**172**
Sp20	73	--	7	50	147	**277**
Term	CAL 2970	N/A	CAL 4970	CAL 5970	Indpndt. Study	TOTAL
F20	151	--	21	25	69	**266**
Sp21	152	--	56	22	86	**316**
F21	172	--	67	6	20	**265**
Sp22	191	--	54	--	9	**254**

This table shows student enrollment by term for every class that the Program Coordinator teaches during the year while attending to regular Coordinator duties also assigned to her. The second heading in the chart represent the Quarter to Semester Conversion and follows the course enrollment of quarter courses with the equivalent semester course enrollment numbers. Independent Study course enrollment is presented as a total sum but includes enrollment in the following:

- quarter courses of HUM 595 A-F
- semester courses of CAL 5951-5955

For a comprehensive list of events, services, and community engagement efforts offered by the Liberal Studies Programs and PALS Studio, please see Appendix C. For an overview of student service data numbers during this cycle period, please see Appendix H.

2. **Temporary Staff**

From January 2019 to June 2020 Q2S conversion funds made it possible to hire a (then) second Administrative Support Assistant to support day-to-day office management while the Coordinator and (current) ASC carried out semester conversion tasks. From November 2019 to May 2020 the program had a Liberal Studies Adviser who also reported to both Undergraduate Studies and the College of

Arts and Letters. Access to added personnel support allowed the program to experience a relatively smooth transition into semesters while providing consistent and expanded student services and support.

For a comprehensive list of events, services, and community engagement efforts offered by the Liberal Studies Programs and PALS Studio, please see Appendix C.

3. Staff Reclassification

During the academic year of 2019-2020 the Liberal Studies Administrative Support Assistant I (ASA) underwent the reclassification process approximately two years after the original hire date as temporary staff. In May 2020 they were reclassified as an Administrative Support Coordinator I (ASC) for the program based on the updated responsibilities that came with the administrative support position.

B. PALS Studio and Student Lounge

PALS Studio (CE-114) houses PALS Ambassadors, Mentors, and Tutors. This space provides an intellectual and mentoring space for students seeking to complete a Liberal Studies or Liberal Arts Program as well as a communal space for students of all majors to engage in a variety of High Impact Practices.

1. Student Assistants and Instructional Student Assistants

> *"This was an overall great experience for me. The only thing I would say to maybe help, would be to provide more availability for math tutors, who [specialize] in the math series. In-person tutors as well as online tutors (via zoom). During covid19 I benefited greatly by having access to online tutors/professors due to zoom." Anonymous Student Survey Testimonial*

During the academic year of 2017-2018, the program was able to hire and train 16 student assistants (PALS Mentors) who specialized in supporting their peers throughout their undergraduate experience, employ the expertise of two instructional student assistants (PALS Tutors) who mainly focused on facilitating the Upper-Division Math Series learning objectives, and one Independent Study Student who assisted with front desk duties while learning basic policies and procedures of the office. This amount of support was funded by the Q2S grant and allowed the program to traverse the conversion into semesters. During this time, we were able to provide a total of 4577 support sessions to 1465 individual students, community partners, and guests.

The following year (2018-2019) with continued Q2S grant support, we had 15 student assistants (PALS Mentors), and one instructional student assistants (PALS Tutors).

We were able to provide a total of 6742 support sessions to 1622 individual students, community partners, and guests.

With revised funding for academic year 2019-2020, student support was reduced to 7 PALS Mentors and no PALS Tutors. During that time, we were able to provide a total of 7876 support sessions to 1205 individual students, community partners, and guests.

2. Online Studio

In March of 2020, we, along with the world, had to make a transition into the virtual realm. We were able to equip our student assistants and ASC with phone access, converted different procedures into virtual processes, and developed a virtual presence which students could access to continue a sense of community and support. Some of the procedures which were turned virtual during this time have remained virtual as we try to integrate back into an in-person/hybrid setting. We do not have reliable data at this time of the number of students served as a result of COVID recalibration.

During this time, many of the students who had enjoyed the comradery of the PALS Studio in which they engaged in study among their peers experienced a sense of isolation and nonbelonging which was reflected in their outreach to our offices. In order to provide a sense of communal experience, the PALS Ambassadors focused on providing virtual workshops, student tutorials, and recreational video activities for their peers. This was a hard change as people soon experienced zoom fatigue, making this virtual branch of our services feel like an added task instead of the intended reprieve it was meant to embody. Therefore, we switched gears and decided to provide wellness outreach over the phone, a service we'd implemented previously over the summers when in-person visits were low. The earlier summer process (now defunct in response to discontinued Q2S funding) included, but was not limited to, calling incoming students to welcome them to the program and the university, inquiring as to whether they needed any assistance with their transition, and then following up with these same students at the end of the first term to determine how they were faring and whether or not we missed anything in our welcome, and/or what they wished they would have known before their first term but did not. Students **seemed** to respond positively to such outreach, thanking different individuals on multiple occasions for reaching out and/or researching resolutions for an inquiry on their behalf.

C. Additional Student Resources

1. Program Guide Shortsheets

Liberal Studies Program Guide Integrated Concentration

Your PAWS Report is the only official record of your Liberal Studies Program requirements. This Program Guide is merely a supplemental tool to assist in the planning towards degree completion and is NOT an official record of progress or requirements.

A. Reading, Language, and Literature (18 UNITS)
- Freshman Composition (G.E.) (3) — ENG 1060 A/B, ENG 1070 A/B, HON 1100
- Oral Communication (3) — COMM 1006, HON 1300
- Lower Division Literature (3) — ENG 1120, 1200, 1210, 1700, 2100, 2180, 2250, 2300, TA 1160, 2612
- Analysis of Literature (3) — ENG 3010, 3030, 3230, 3260, PHIL 3006*, 3007*, 3008, TA 3602
- Linguistics (3) — ENG 3110
- Children's and Young Adult Literature (3) — ENG 3200, PHIL 3006*, 3007*, TA 4664

B. History and Social Science (21-22 UNITS)
- World Civilization I (G.E.) (3) — ANTH 1400, HIST 1400
- World Civilization II (3) — HIST 1440
- American Civilization (G.E.) (3) — HIST 1460, 1460H
- American Government (G.E.) (3) — PSCI 2030, 2030H
- California History (3) — HIST 2700
- Economics (3) — ECON 3199**
- Geography (3-4) — GEOG 3605, 3520***

C. Mathematics (13 UNITS)
- Ideas of Mathematics (G.E.) (3) — MATH 1201, 1203
- Fundamental Concepts of Math for Educators (10) — MATH 3011 and MATH 3011L, MATH 3012, MATH 3013
- *Recommended, but not required — MATH 3012L, 3013L

D. Science (16-17 UNITS)
- Life Science (G.E.) (3) — BIOL 1010 + Preferred BIOL for Liberal Studies students OR Meets Next Generation Science Standards. BIOL 1000 and BIOL 1000L
- Physical Science: Chemistry (G.E.) (4) — CHEM 1000, CHEM 1000L or CSE 1110L
- Physical Science: Physics (G.E.) and Upper-Division Earth and Space Science (8-9)

Option A (8 units):		Option B (9 units):
PHYS 3050 and PHYS 3050L, GEOL 3090 or GEOG 3520***	OR	PHYS 1000 and PHYS 1000L, PHYS 3050L, GEOL 3090 or GEOG 3520***

E. Visual and Performing Arts (14-16 UNITS)
- Dance Standards (3) — TA 4440***, 4451

- Media Arts Standards (2-4) — ART 1130, 1140, 2240, 2260, 3000, 3710, 4520, 4530, COMM 2301, 2351, 2391, 2392, 3371, ENG 2400, 5430A, 5430B, MUS 2266
- Music Standards (3) — MUS 3705, 4100, 4110, 4455
- Theatre Arts Standards (3) — TA 1410, 3410, 4410, 4420, 4430, 4450
- Visual Arts Standards (3) — ART 2395, 3400, 4450, 5499

F. Physical Education and Health (3-5 UNITS)

Option A (3 units):		Option B (5 units):
KINE 3520	OR	TA 4440****, HSCI 1000

G. Human Development (6-9 UNITS)
Child Development (3-6)

Option A (3 units):		Option B (6 units):
EDMS 3010	OR	CD2240 or ENG 3310 Concurrent or next-term enrollment in: CD2246 or EDMS 3011

- Exceptional Child (3) — CD 3350, PSYC 3350, ESPE 3350****

H. Additional G.E. Requirements (7-10 UNITS)
- Critical Thinking (G.E.) (3) — COMM 1007, OES 3001, PHIL 1005, 2100, 3001, CSE 1100, MATH 1501, PSYC 1105, SOC 1800, HON 1200
- World Languages and Literature OR International Immersion Experience (G.E.) (1-4) — ASL 1112, ARAB 1112, 2900, CAL 5763, 5783, 5823, 5843, CHIN 1112, 2900, ENG 5020, FREN 1112, 2900, 3701, 3702, 3703, 3704, JAPN 1112, 2900, 3701, 3702, 3703, KOR 1112, 2900, SPAN 1112, 2900, CAHU 1112, LUIS 1112, PORT 1112, SERR 1112
- Lower-Division Ethnic Studies (G.E.) (3) — ES 1000, 1400
- Upper-Division Social Science (G.E.) (0) — ECON 3199**
- Foundation Seminar: Recommended but not required (0-3) — ART 1200, CAL 1000, 1110, 1120, 1130, 1140, COMM 1000, 1002, ENG 1300, PHIL 1001, CSE 1290, KINE 2050, NSCI 1200, PSYC 1115, SOC 1100, SSCI 1110, ADMN 1001, 1002, 1003, HON 1000

I. Additional Liberal Studies Requirements (6 UNITS)
- Introduction and Assessment Prep (2) — CAL 2970
- Senior Assessment (2) — CAL 4970 or CAL 5970
- Classroom Experiences (2) — EDMS 2301

Courses in your Integrated Concentration should not be taken until you are admitted into the Credential Program at CSUSB. You can review your Multiple Subject Credential Program, Integrated Concentration Program Admissions File (P.A.F.) Requirements here: https://www.csusb.edu/sites/default/files/MultipleSubjectIntegratedTrackP.A.F_1.pdf

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One of the first resources that the new program leadership developed in fall 2017 was individual Program Guide Shortsheets for each concentration (known at that time as *tracks*) of the Liberal Studies Programs. While the Program Advising Workshop for Students (PAWS) Reports are the only official record of Liberal Studies Program requirements, Program Guides function as supplemental tools that assist students in planning towards degree completion. Instead of having to print out fifteen or more pages of a PAWS Report, students can annotate this single page and cross off what they have already completed and get a better idea of what they have outstanding while planning their course enrollment. The Liberal Studies Offices and PALS Studio provide printed hardcopies of these double-sided resources free of charge, but students can access the files at any time on our website (https://www.csusb.edu/liberal-studies/programs).

2. Revolving Roadmaps

On the back page of the Program Guide Shortsheets students can find Liberal Studies Revolving Roadmaps. These were uniquely developed by the Liberal Studies Coordinator to provide a recommended order of prioritization of course completion considering that First-Time-Freshmen and Transfer students would require different pathways towards enrollment. First-Time-Freshmen start with the Primarily Lower-Division column and Transfer Students start at the Primarily Upper-Division column, especially since their transferred credits should complete the Primarily Lower-Division portion before coming in to CSUSB. The order of courses is designed to prioritize sequential prerequisites like the golden four listed under the Primarily Lower-Division column or the three-term sequential MATH 301X series which are prerequisites to other courses, as

Liberal Studies Revolving Roadmap

THIS IS THE RECOMMENDED ORDER OF COURSE COMPLETION.

First-Time-Freshmen should start with the Primarily Lower-Division section. Transfer Students should start at the Primarily Upper-Division section as transferred credits should complete the Primarily Lower-Division portion; if upon review the Primarily Lower-Division section has courses outstanding completion, additional enrollment in those courses is strongly encouraged.

#	Primarily Lower-Division	#	Primarily Upper-Division
1.	MATH 1202 or 1201	1.	MATH 3011 + 3011L
2.	Freshmen Composition	2.	ECON 3199
3.	Critical Thinking	3.	GEOL 3090 or GEOG 3520
4.	World Languages *1111 or 1112 pending placement results*	4.	GEOG 3605 or 3520
5.	CAL 2970	5.	CAL 2970
6.	PSCI 2030	6.	A) KINE 3520 B) TA 4440 and HSCI 1000
7.	Ethnic Studies (G.E.)	7.	Dance Standards
8.	ANTH 1400 or HIST 1400	8.	MATH 3012 +/- lab
9.	MATH 1203 *if applicable*	9.	Child Development Option
10.	ENG 1060 *if applicable*	10.	ENG 3110
11.	World Language 1112 *if applicable*	11.	Music Standards
12.	BIOL 1010 *preferred*	12.	EDSM 2301
13.	HIST 1440	13.	Exceptional Child
14.	COMM 1006 or HON 1300	14.	Analysis of Literature
15.	Media Arts Standard	15.	A) PHYS 3050 + 3050L B) PHYS 1000 + 1000L + 3050L
16.	CHEM 1000 + CHEM 1000L or CSE 1110L	16.	MATH 3013 +/- lab
17.	HIST 1460	17.	Children's & YA Literature
18.	HIST 2700	18.	Senior Assessment
19.	Lower Division Literature		**Credential Admissions P.A.F. Processing**
20.	Theatre Activity	19.	Concentration Specific Courses (See Section J)
21.	Visual Arts Activity		

To stay on track for graduation, it is recommended that students take **at least 15 units every semester**.

well as courses that have limited enrollment parameters such as the Upper-Division science courses with physically/spatially restrictive laboratory components. In essence, potential Upper-division bottleneck courses that could hold up student graduation are given higher priority so that a graduating senior can be left with the agency of accessible and flexible course requirement options that will allow for a timely graduation. Furthermore, since courses are offered by their respective departments, the Liberal Studies Programs cannot adjust to fill a course need or accommodate a course schedule change as departments might have the ability to do for their major students; thus, providing flexibility for this contingency as well as for student availability became the driving force towards the creation of this tool.

VII.   CONCLUSION: PROGRAMATIC B.A. GOALS

Presently, Liberal Studies students constitute a 1065-person population distributed between three concentrations and two campuses: the three teaching concentrations are the Liberal Studies General Program (LBST), the Liberal Studies Integrated Program (LBIT), and the Liberal Studies Spanish Studies Program (LSSS).

There is a shortage of qualified teachers in our region and in our state and the three teaching concentrations within Liberal Studies are necessary for meeting this need, but graduating emerging educators with content knowledge is only half of the equation. It is also important to take steps to help ensure students graduate with a sense of self and intellectual identity to ensure that they are fortified to self-advocate and advocate for their students so as to withstand the rates of attrition that greatly reduce the ranks of new educators within the first three to five years of their careers. This is why our Liberal Studies Program is committed to honoring CSUSB's emphasized core values of equity and equality along with social justice and diversity and inclusion in our curriculum and in our service to our students.

Our goal between all three programs is to support our students as they increase units taken per term, overall GPAs, and graduation rates, while lowering time to degree and DFWI rates so as to graduate the most prepared populace within an optimal period of time in which to also allow the greatest breadth and width of exploration and discovery. The Liberal Studies Program hopes to utilize our continued accrual of data of self-evident assessments in order to analyze program growth at the two-year Q2S analysis benchmark (fall 2022) and define areas in which further analysis and development is required in the meantime. The ongoing long-term goal is to increase diversity recruitment, retention, and graduation so as to have the Liberal Studies Programs reflect the local Inland Empire, High Desert, Low Desert/Coachella Valley, and Mountain demographic/population which the students will eventually serve by becoming the educators, advocates, and community leaders that make up the Inland Empire and the Coachella Valley.

We believe that this can best be accomplished by the following multitier process:

1) Provide the Liberal Studies Program with specified and dedicated **human and fiscal resources** to adequately support at least one additional staff member to better serve Liberal Studies students at both campuses and to free up the program leadership to engage in recruitment of prospective students, specifically URM men of color, and other community engagement activities as highlighted in the Liberal Studies Program Learning Outcomes and CSUSB's core values. This will serve the dual benefit of both increasing and diversifying enrollment/graduates.

2) Provide the Liberal Studies Program with the funding and mechanism(s) to implement and sustain a consistent and cohesive **interdisciplinary Liberal Studies Committee** to evaluate processes and offer recommendations on curriculum, assessment, and how to shorten students' time to degree completion (GI2025), increase recruitment and retention of URM students, and otherwise more adequately serve the needs and desires of 1,000+ students across two campuses.

3) Provide human and fiscal resources to hire at least two **specialized and dedicated advisors** to adequately meet the needs of all Liberal Studies students at both campuses so that they can complete their degrees as soon as possible and with as little financial expenditure and/or debt as possible as well as make a more seamless transition from undergraduate Liberal Studies to Multiple-Subject Credentialing.

4) Provide the framework to explore the possibility of, and hopefully begin the transition, of **elevating Liberal Studies from a program to a department**; so that students of a major that is among the largest at both campuses can equally and equitably benefit from the same cohesive and comprehensive curriculum and services that are created and thoughtfully administered by departments with tenure/tenure-track faculty for students within their majors. Additionally, the elevation of Liberal Studies to a department will allow for a more responsive and proactive approach to curriculum, such as the creation and administration of minors to meet student learning, student needs, and community needs.

Furthermore, by creating a Liberal Studies Department, not only will curriculum be more student-friendly while also meeting prescribed standards of various stakeholders, but Liberal Studies students will also have the advantage of the enrichment and experience that follows having specialized tenure/tenure-track faculty support at their disposal. Additionally, having access to an increased number of specialized, full-time, tenure/tenure-track faculty will facilitate the added benefits that follow departmental faculty investment from which students in other (often much smaller) department-supported majors benefit, including:

- Liberal Studies students' access to mentorship
- Research and creative opportunities
- Access to grants and grant-funded projects
- Conference presentation opportunities
- Shared interests with faculty and other students as part of a robust, high impact practice, learning community
- Intentional curriculum, programming, and events

This will not only be good for our Liberal Studies students, but also for the entire university by freeing up valuable resources across campus and preparing our students for their future as educators and community leaders. Eventually, action upon these recommendations will benefit the current K-8 students who will be our future CSUSB students and future educators of even later generations, thereby benefitting our entire service area and by extension California as a whole. And as the oft repeated axiom states, "As goes California, so goes the nation," so if we desire and are committed to the ideals of equality, equity, diversity, inclusion, and innovation, and if we want to graduate compassionate and critically thinking educators then we will invest in the future by investing in Liberal Studies now. To conclude with that which we assert is self-evident, an investment in CSUSB's Liberal Studies Program will repay in massive and exponential social and intellectual dividends later (or most desirably, sooner rather than later).

CSUSB: LIBERAL STUDIES

External Reviewer Report

REVIEW VISIT: February 11, 2022

I. LEARNING OUTCOMES AND PROGRAM EFFECTIVENESS

Program Learning Outcomes and Curriculum
a.   How well do the program's PLOs represent a scope and depth of student
     learning appropriate for the degree type/level?
b. How well are the PLOs aligned with CSUSB's ILOs?
c. To what extent does the program's curriculum exhibit the breadth and depth
     commensurate with the expectations for student learning?
d. Is the program advancing the field(s) of study or state of the profession? Is theprogram
     teaching the right content for the field(s)? Does it respond to the profession's needs?

STRENGTH:
The Liberal Studies Program Learning Outcomes (PLOs) appear to primarily align to CSUSB
Institutional Learning Outcomes (ILOs), with a high degree of PLO to ILO overlap, as follows:

• ILO 1 - Breadth of Knowledge
    ▪ PLO 1 of Reasoning
    ▪ PLO 6 of Applied Knowledge/Theory and Practice/Research

• ILO 2 - Depth of Knowledge
    ▪ PLO 3 of Community Engagement, Leadership, and Service Learning
    ▪ PLO 6 of Applied Knowledge/Theory and Practice/Research

• ILO 3 - Critical Literacies
    ▪ PLO 2 of Artistic Expression
    ▪ PLO 4 of Communication
    ▪ PLO 6 of Applied Knowledge/Theory and Practice/Research

• ILO 4 - Ways of Reasoning and Inquiry
    ▪ PLO 1 of Reasoning
    ▪ PLO 6 of Applied Knowledge/Theory and Practice/Research

• ILO 5 - Creativity and Innovation
    ▪ PLO 1 of Reasoning
    ▪ PLO 2 of Artistic Expression
    ▪ PLO 6 of Applied Knowledge/Theory and Practice/Research

• ILO 6 - Integrative Learning
    ▪ PLO 6 of Applied Knowledge/Theory and Practice/Research

• ILO 7 - Engagement in the Campus, Local and Global Communities
    ▪ PLO 3 of Community Engagement, Leadership, and Service Learning
    •   PLO 4 of Communication
    ▪ PLO 5 of Professionalization

• ILO 8 - Diversity and Inclusion
    ▪ PLO 7 of Diversity

Currently, there is a clear assessment process for the Liberal Studies PLOs in place through the vehicle of the CAL 4970 and CAL 5970 presentations where students self-select a workshop group in which each group member individually identifies one or more artifacts that meet each of the seven PLOs. In these workshop presentations, the Liberal Studies Coordinator, who also serves as the Professor of Record for these courses, provides detailed guidance, questioning, support, and feedback on the individual and group aspects of the presentations, particularly in relation to explicit alignment to artifacts as evidence of meeting the individual PLOs. In addition to the oral aspect of the presentation, students are also required to write a mini meta-narrative that connects each artifact as evidence supporting the completion of the respective PLO. The students then work together within their workshop groups to construct a singular archival presentation for their individual e-portfolios.

The culmination of this presentation ends with individual student self-assessment(s) of what they learned, how they learned it, and why it is meaningful to their overall academic career. There is also a meta-opportunity for students in providing their assessment of the success of the Liberal Studies Program in providing instruction that meets the prescribed PLOs. Attention to, measuring of, and student facility with, the PLOs are clear and evident from the videos of those 4970/5970 presentations (Appendix E).

Student input during the Review Visit was overwhelmingly positive regarding the guidance/ feedback the Coordinator/Professor gives in these courses (i.e, "I couldn't have done this Program without Kelly!" and "In my 5970, Professor Dortch made me see how standards guide instruction.") as well as the value of the individual and group aspects of the workshop presentation. The PLOs clearly evidence that the Program intends to be advancing the field of study and/or state of the profession. The evidence of the CAL 4970 and 5970 videos indicates the Program is teaching the right content for the field and is responding to the profession's needs, but there is a need (see below) for more prescriptive collection of evidence and analysis of that evidence.

NEED:
The dual role of Liberal Studies Coordinator also serving as Professor of Record for these culminating CAL courses seems convoluted at best. With only one guiding voice playing three distinct roles: Coordinator, Advisor, and Professor, students have a difficult time separating the person from the Program. In the instance of Professor Dortch, CSUSB (and the students) is fortunate to have a capable person presently in place who is able to wear many hats, even if the

students do not perceive (and often appear unaware) that those hats are changing. In the instance of the courses being responsible for the PLO assessment, it appears the students sometimes convolute the meanings, uses, and distinct differences of the content of the seven PLOs and the videos evidence that Professor Dortch is able to offer direction and guidance in better crafting their narratives and alignment – but the students are consistently hearing only one voice in this regard.

The Report suggested, "As part of our ongoing program assessment and based on recent CAL 4970 and CAL 5970 Senior Defense PLO Presentations, we have discovered that there are some PLOs that might require further analysis and possible revision. This is evidence of the efficacy and usefulness of the self-evident assessment process", but provided no explicit evidence of this analysis. It is clear the Professor of Record/Coordinator is doing a more than effective job with students in terms of them leaving with a clear understanding of the PLOs as they relate to their profession and the field of education, as the videos evidence articulate and explicit conversations (and written evidence) of their individual understanding of the PLOs.

However, this speaks to only individual understanding and allows for grades to be assigned in 4970 and 5970, but programmatically there needs to be some kind of systemic collection of this evidence in terms of student self-reporting, or an analysis of the portfolios and which PLOs get more robust student attention/understanding than others. The Professor of Record could clearly be responsible for this kind of "close the loop" assessment of PLOs to be provided to the Coordinator if those roles were separated.

<u>Evidence of Student Learning</u>
   a. How effective is the program's assessment plan for evaluating student learning in the program?
   b. Does the program collect, maintain, and use summative evidence of studentlearning on a regular basis?
   c.   To what extent are students achieving the learning outcomes? What evidence have you examined that indicates student learning? What do you see as avenues for improvement of student learning?
   d.   To what extent has systematic evaluation of student work been used to improve the program?

STRENGTH:
The CAL 4970 and CAL 5970 appear to be a robust opportunity for students to self-assess their learning broadly as reflected in the PLOs. After the Quarter to Semester (Q2S) conversion, the addition of the CAL 2970 as an introduction to this process has been invaluable to students according to their substantive, vociferous, and consistent feedback in this regard (i.e., "I would have been lost without 2970!" and "Kelly was a saint in 2970."). There is a robust Assessment Plan (Appendix J) but the Program has been in such flux with/since the Q2S conversion, it is unclear to what extent any of those plans (except the implementation of those courses and the collection there of student self-assessed knowledge) have been implemented.

It is clear that much assessment and collection of student input was done which informed the pathway forward in the Q2S conversion, but aside from 2970, 4970, and 5970 it is unclear what consistent assessment mechanisms might be enacted to inform decision making in the Program since the Q2S conversion. There has been an appointment of an Assessment Coordinator at the College level, which I imagine will help provide needed structure for the assessment process as the University re-focuses its effort in program improvement based on systemic assessment plans.

NEED:

It is clear that the intent and implementation of the CAL 2970, 4970, 5970 sequence of classes provides students the opportunity to self-assess their learning in relation to the PLOs. Beyond this self-assessment, however, there was no evidence that systemic collection and analysis of student learning appears to be occurring. This, in large part, appears to be due to the dearth of human resources in the Liberal Studies Program.

There exists a robust Assessment *Plan*, but how much of that plan is getting implemented remains to be seen. There has been an appointment of an Assessment Coordinator at the College level, which I imagine will help provide needed structure for the assessment process at the College level, but Liberal Studies requires more human resources in order for any kind of meaningful collection and analysis of data could occur beyond the implementation of the existing efforts in CAL 2970, 4970, and 5970. This collection could certainly be part of the Coordinator's role if the Advising load were removed from that plate, for instance.

Stakeholder Views of Program Effectiveness
   a. What do students and other stakeholders (e.g., faculty, staff, alumni, advisory groups, professionals in the field; employers; etc.) view as the strengths of the program?
   a. What do they view as components of the program that could be improved?

STRENGTH:

Easy answer: Professor Dortch. Consistently and with the fewest of exceptions. The Coordinator recused herself from every interview with every constituency and even without her presence, almost to a human, every person mentioned the tireless engagement, deep commitment to student success, and positive demeanor and comportment of Professor Dortch in the Coordinator role. Students are happy; faculty love being a part of the Program; community partners are tirelessly excited about present and future opportunities – largely because Professor Dortch is "a gem" and "so responsive" and "so caring". I found myself wanting to ask, "Aside from Professor Dortch, what do you consider to be the strengths….?". But without prompting and with the open-ended question of "What are the strengths…?", Professor Dortch was named in every instance from every constituency.

This is both an incredible asset and an enormous challenge, because this reality indicates that in almost every instance, the person is perceived as synonymous with the Program, a huge feather in the cap of Professor Dortch (and CSUSB for apparently being wise enough to assign her in this role), but a challenge for longitudinal success of the *Program*.

<u>NEED</u>:
Students in particular are frustrated with the advising process, indicated with comments like, "No one gives you a clear answer unless you can ask Kelly". The centralized nature of the advising process at CSUSB makes engagement with Liberal Studies majors very challenging as the courses are delivered across colleges and other departments (minus the few CAL courses offered in Liberal Studies) making course substitutions and planning a trajectory a very difficult process, especially for transfer students who make up the bulk of your enrollment. People outside of Liberal Studies very rarely understand the unique challenges of Liberal Studies, especially in that so much of the content and coursework is offered outside of the Program itself. Liberal Studies could benefit from having Program-specific Advisors (plural) housed within the Program and University support/direction for not needing to participate in the centralized advising structure.

Students at the PDC are also particularly frustrated (often angry), believing that they have "no one to go to". There appears to be no consistent support at the PDC indicating a somewhat precarious situation that might be perceived as inequitable from the students' perspective, indicated by comments like, "If it weren't for Kelly, I wouldn't know what to do" and "I wish there was someone I could go to that knew what the hell is going on in Liberal Studies" and "my friends at the main campus seem to get more than we do". The PDC could benefit from full time support in advising, faculty presence, and a central administrator and staff who could serve the over 15% of the Program enrollment in place there.

II.   FACULTY ENGAGEMENT
    a. Do the program faculty have an appropriate distribution of academic expertise and professional experience to deliver the degree program?
    b. Does the program have an appropriate balance of tenure-line and lecturer faculty?
    c. If applicable, to what extent does the program effectively integrate non-faculty specialists (e.g. technologists, advisors, field coordinators, assessors, etc.) into the professional team?

<u>STRENGTH</u>:
A strength of the Program is that the Coordinator drives the distance from the main campus to the PDC in order to be 'present' (even inconsistently) to the students on the PDC. A strength of the Program is that every faculty participant in the Program Visit, to a person, supports teacher preparation explicitly and appears to be aware they are teaching future teachers (not always the case in Liberal Studies Programs/courses) and also maintain open communication with the Coordinator and evidence content-area expertise from their home departments; there appears to be both tenure line and lecturer faculty who deliver content to students across these disparate departments. A strength of the Program is the CAL courses because of the centralized nature of oversight, delivery, and content. A strength of the Program is the vast array of community partnerships, initiatives, and support in service of student success, and the innovative thinking, openness, and willingness of the Coordinator to work with such a wide variety of programs, initiatives, and efforts in support of student success and access.

<u>NEED</u>:
Liberal Studies Departments/Programs often require the buy-in, support, and structural/systemic delivery of departments outside of their home Colleges and Liberal Studies (Departments/ Programs), and this is true at CSUSB as well. The challenge at CSUSB is that there appears to be little evidence of centralized support of the Program (human and fiscal), and without the dynamism, tireless efforts, and overall respect for the present Coordinator (and ONE staff member!), it is unclear how the Program would survive over the next five-year period of Review, especially with the advent of the Liberal Arts pathway as distinct from the Liberal Studies pathway.

There is a clear intent/desire for the Liberal Studies Program to be housed elsewhere (in the College of Education) and a willingness to provide systemic support of the program in that context (As you are very likely aware, @50% of Liberal Studies Departments/Programs are housed within Colleges of Education and @50% are like CSUSB's, housed outside of Colleges of Education). This potential move might need to be considered if the human and fiscal support can be provided in ways it is not present at the moment.

This is a Program of over 1000 students, served only by one Coordinator and one staff member (a conversation highlighted below in the "Program Resources" section). The lack of social capital and programmatic support of consistent faculty presence (tenured or otherwise) speaks loudly to students with comments like, "My friends outside of education don't get why I can't get more help" and "I don't really get any mentoring and wouldn't know who to go to anyway" and "No offense, but Kelly's doing her best but she doesn't always get back to you right away. I mean I don't blame her, but come on". A consistent faculty (or even administrative?) voice at the PDC would be particularly helpful in this regard, as well as more humans, generally (advisors, faculty hires, staff), in support of student success. The low graduation rate of the Program speaks volumes to the need for guidance of all type and kind that is needed for students in order for them to better succeed.

In terms of (non-faculty) specialists, I would argue that the Liberal Studies Program lacks oversight (in spite of the Herculean effort on the part of the Coordinator). What I mean to suggest is that ONE voice is all that appears to be driving any/all effort(s) of Liberal Studies. The Program could benefit from an Advisory Committee and/or Interdisciplinary Committee that attends to the wide swath of needs of a multidisciplinary program like Liberal Studies which has a foot in the College of Arts and Letters as well as the College of Education (credentialing courses/needs for the integrated pathway). With the history of ESM (even mis-identified in the Program Report as Early Subject Matter; it is Elementary Subject Matter!) and the advent of AB 130, the implementation of subject matter programs like Liberal Studies at CSUSB carries an immense need to be aligned with current legislation, credentialing guidelines from the CCTC, and the complicated relationships with community college partners (feeders to Liberal Studies) and local districts (end users of integrated programs).

One person/Coordinator simply cannot occupy every role and serve all constituencies with depth and substance, not to mention be responsible for student success.

III.   PROGRAM RESOURCES
   a. Has the program been adequately resourced relative to the size and scope of the program or the stated mission and goals of the program?
   b. Are the resources requested by the program appropriate to meet program goals?
   c. Assess the effectiveness of program actions given the resources the program has had available for executing its Plan of Action during this program review cycle.
   d. If the program is under-enrolled, what would you suggest to recruit more students?
   e. If the program is impacted (over-capacity), what would you suggest to address the issue?

STRENGTH:
It should be clear by now, there are many strengths to this Program in terms of the present Coordinator, the fortitude of students, a robust alignment of (CAL) coursework to PLOs, an exhaustive commitment to student success on the part of all satellite constituencies (faculty, community), and the substantive efforts of the Coordinator and one staff member serving over 1000 students. However….

NEED:
….in order to truly meet Program mission and goals, the Liberal Studies Program, as presently resourced administratively for the size and scope of the Program, is simply not sustainable.

Advising: There needs to be some attention paid to how 1000+ students can be *consistently* advised over time. The students presently over-rely on self-guidance and the amazing efforts of PALS, but no structure has been consistently supported, fiscally or structurally, and the pervasive frustration is palpable from the voices of students, in spite of praising the Coordinator for all current efforts.

PDC: There might be a variety of ways/structures here, but some *consistent* presence is needed. You might consider a tenure track hire who would serve partially as a Coordinator of the PDC Program and some combination of also teaching and/or serve as an Advisor. You might consider an Assistant Coordinator of Liberal Studies as a staff position also responsible for Advising. You might consider a full time Advisor (the PDC appears to consistently be over 15% of the overall enrollment in the Program). You might consider faculty from other departments (who teach in Liberal Studies) with some amount of re-assigned time to serve as an Advisor for Liberal Studies students. Or some combination of all of these ideas.

Instruction: There is no *consistent* faculty voice. This is largely beyond the scope of the Liberal Studies Program itself, as the subject matter content is delivered by content-area departments across the University. However, CSUSB could benefit from explicit messaging from centralized

administration in support of teacher preparation: encouraging departments to offer the number of needed sections (particularly outside of CAL) staffed by tenure-line faculty who are aware and able to prepare elementary school teachers, not simply to teach math or science content, for instance. Our future K-5 teachers must be prepared for the content, yes, but they must also be instructed how to bring that content *to* K-5 students in developmentally appropriate ways (and an awareness of typical mis/conceptions of content across the developmental spectrum). Although the integrated pathway students take credentialing/methods classes in the College of Education, this same *consistent* language/messaging must be present in subject matter classes as well, and it is clear from the voices of both students and faculty who contributed to this Program Review, that this is not happening.

Staffing: The present ASC receives as much praise from students and faculty as the Coordinator receives. But one ASC serving over 1000+ students and Program implementation seems woefully inadequate to help ensure student success. There also needs to be some effort to create/constitute some kind of Advising and/or Interdisciplinary Committee that helps guide programmatic efforts and a trajectory of success. If tenure-line faculty are to serve in this role (and they absolutely should), there must be a commitment on the part of CSUSB to honor this service/role. An Interdisciplinary Committee across departments and colleges must be honored as service to the university in order for faculty to be confident and comfortable that this commitment to serving students would be perceived as valuable structurally beyond their own desire to serve student success. Beyond this Committee being considered service, it could certainly be a re-assignment of some kind if there was the fiscal will to support this role in that manner.

IV. OVERALL COMMENTS AND RECOMMENDATIONS

    a. What overall comments do you have about strengths, areas of improvement, and weaknesses of the program?

    b. What recommendations do you have for the program over the next five-year period?

STRENGTH:

1) HUMAN RESOURCES: The present Coordinator and ASC are to be commended for the overwhelming amount of work that has been required of them in serving 1000+ students since the last Review (with a variety of other inconsistent supports intermittently over time). Their appointment/hiring was well-conceived on the part of whoever might have been responsible for putting these particular human resources in place.

The present Community Partnerships are to be especially praised, along with the innovative thinking on the part of the Coordinator in support of these efforts. There are a variety of ways students are being supported by a variety of amazing professionals in a wide array of capacities outside of CAL and CSUSB. Every effort

should be maintained (and enhanced) in this regard.

The faculty across other departments/programs who contributed to the Program Visit are uniformly dedicated to student success in Liberal Studies, far beyond the structural support they presently receive.

2) FISCAL RESOURCES: The work the Coordinator has done in concert with community partners in securing outside funding is to be praised. It is never enough.

3) STRUCTURAL SUPPORT: The three CAL courses allow students to have benchmark experiences in support of programmatic requirements, PLO content and guidance, and consistency across the main campus and PDC. The presence of the three CAL courses allows for some direct oversight on the part of the Program. In this way, the content, staffing, and delivery can be assured – they are clearly the hallmark of the student experience, receiving consistent praise.

NEED:

1) **HUMAN RESOURCES: Dedicated Advising, PDC Presence, and overall Staff needs should be addressed in order to better support a Program of 1000+ students.**

Efforts should be made to conduct an audit of like-enrolled departments and/or programs to ensure parity, a diverse inclusion of voices supporting and guiding students, and consistent employment of tenure-line teaching faculty across departments (or even hired in Liberal Studies!) as to better ensure consistent preparation of subject matter over time. The intimate knowledge of present CSUSB administration regarding how the main campus and PDC are supported might largely drive the parametized way(s) these needed changes would be required to be made across the two contexts.

2) **FISCAL RESOURCES: The complete lack of consistency in budgetary support must be remedied at the College and/or University level.**

You might consider re-naming the CAL courses to LBST courses, for instance (even though the hegis code does not yet exist, it could certainly be submitted to whatever Curriculum Committee driving University process/structure). This would provide the ability of the Program to gain their own FTES and thus, a local and predictive funding source. Over time, you might also consider delivery of course content more aligned with teacher preparation than presently being delivered across other content-area departments by creating LBST content-area classes that intentionally differ from the present MATH and BIO courses (just as

a for instance) in intentionally addressing the preparation of teachers (I am robustly aware of the political will this would require).

In lieu of this kind of change, CSUSB must consider how the Liberal Studies Program will be consistently supported fiscally. If, for instance, you prefer to maintain PALS rather than hire dedicated Advising staff, then ensure the support of this PALS structure and the ability to train and pay these student mentors/advisors as a budget line item consistently in support of student success in Liberal Studies. In any case, there has to be a University-level commitment to teacher preparation beyond the FTES-budget-model, since that is presently not available to the Liberal Studies Program.

3) **STRUCTURAL SUPPORT: An Interdisciplinary and/or Advisory Committee should be constituted to support the present and future direction of the Program. In concert with the Human and Fiscal support that is needed, careful thought should be given to reconstituting/restructuring the administration of a Program of 1000+ students.**

Minimally, I would encourage a prescriptive organizational chart that accounts for the varied needs of implementation (policy, curriculum, advising, collaboration with the College of Education and credentialing, grant writing, community collaboration/partnering, student mentoring, staffing of faculty) across the main campus and PDC contexts. One Coordinator and one staff member cannot maintain the successful implementation of this Program.

Respectfully submitted by Greg Knotts, External Program Reviewer, 2.25.22.

2021-22 BA Liberal Studies Committee Review Report
Reviewer:
Academic Program Review/Self-Study Review Committee

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:

Strengths:
The connection of the Liberal Studies Program with the Institutional Learning Outcomes of CSUSB is the program's most significant strength. The alignment of the PLOs to the ILOs is critical to the success of the Liberal Studies Student as a teacher and as a citizen of the world, and it is a requirement for graduation.

Potential Improvement:
Additional advantages include the fact that the Q2S conversion allowed the program to change its curriculum to the degree that it allowed for better assessment of students and allowed the program to concentrate on fewer PLOs.

Even though the committee recognized the program's capabilities, the committee's key issue is the lack of resources offered by the College and the University. Administrative responsibilities are placed on the shoulders of one faculty member who acts as Program Coordinator, with one staff person providing assistance for the program's over 1,000 students. This is not a sustainable situation.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:

As the external reviewer said, "…in order to truly meet Program mission and goals, the Liberal Studies Program, as presently resourced administratively for the size and scope of the Program, is simply not sustainable."

The program and college should address the following:

1. Hire more faculty,
2. Hire more administrative aid
3. Become a Department in the College of Arts and Letters
4. Better address the alignment with the PLOs
5. Supply better advisement for Liberal Studies students

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:

In conclusion, while the Liberal Studies program has its challenges, both external and internal, it is a worthwhile endeavor. These challenges are due to insufficient and inconsistent funding, as

well as coping with more than 1000 students enrolled in the program. Because of the insufficient financial and personnel resources available, the Program, the College, and the University should collaborate to support the program in both traditional and innovative manners.

In order to support the current and future orientation of the Program, it is recommended that an Advisory Committee be formed. In conjunction with the human and financial resources that will be required, significant consideration should be given to the reconstitution and restructuring of the administration of a program with more than 1000 students.

2021-22 BA Liberal Studies College Dean Report
Reviewer:
College Dean

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:

Areas of our Liberal Studies Program's strength include:

- Careful alignment of Program Learning Outcomes (PLOs) with Institutional Learning Outcomes (ILOs);
- Creation and implementation of courses such as CAL 2970- Liberal Studies: Introduction and Assessment Preparation, CAL 4970- Liberal Studies- Non-integrated Senior Assessment, and CAL 5970- Liberal Studies and Liberal Arts Senior Assessment and Writing Workshop to bolster student learning and conduits for assessment;
- High-impact practices;
- Most of the Liberal Studies Program's courses are housed in various departments, such as English, Geography, Mathematics, and Physics. Faculty in these departments are the content experts and they provide a wide array of diverse perspectives for students.
- Testimonials from the students in the self-study attest to the strengths of the program;

and

- Excellent coordinator and ASC who are extremely dedicated to student success.

Improvements that Liberal Studies Program effectively made as a result of self-study and external review reports:

A. Funding Program and Student Services: Liberal Studies received funding from the college through the general fund to cover the cost of maintenance and equipment purchases. The college also supports its permanent lines for the coordinator and ASC. Liberal Studies effectively uses Instructionally Related Activities (IRA) Grant to fund student assistants and PALS Advisors. In addition, Liberal Studies rebranded Liberal Studies Office and Program Ambassadors for Liberal Studies (P.A.L.S.) Studio to provide an intellectual and mentoring space for students seeking to complete a Liberal Studies or Liberal Arts Program. PALS offered student workshops, student tutorials, community engagement efforts, interdisciplinary student study space, free student services such as testing supplies, computer access, printing, intellectual and culturally enriching events, and refreshments.
B. Liberal Studies strategically utilizes CAL 2970 as a way to acclimate students to the program.
C. Program Learning Outcome Revision: The previous outsider evaluator recommended having "a process of identifying a manageable set of measurable objectives." In response to the previous reviewer's recommendation, Liberal Studies reformulated its PLO to be in alignment with the GE Student Learning Outcomes (GLOs). It mentioned in the self-study report that these new PLOs align with "CSUSB's strategic plan, new curriculum in the semester calendar, and California Commission on Teacher Credentialing (CTC) standards, Elementary Subject Matter (ESM) matrices for the California Subject Examinations for Teachers (CSET) Waiver Program."

Additionally, it reduced its PLOs from 28 to 7, and integrate them into the coursework of the senior assessment courses, namely, CAL 4970, 5970, and 5900.

D. Program Learning Outcomes and Assessment: In response to the previous reviewer's suggestion to identify learning artifacts that can be used to assess learning objectives, specifically focusing on the portfolio as a source of data, Liberal Studies Program uses CAL 4970 and CAL 5970 as conduits for collecting portfolios. Specifically, students are required to self-select a workshop group to identify one or more artifacts that meet each of the seven PLOs. Students then are required to write a mini meta-narrative that connects each artifact to the respective PLO. Students then construct an archival presentation for their e-portfolios.

E. Align PLOs and ILOs: The Liberal Studies Program has matched CSUSB's 8 Institutional Learning Outcomes (ILOs) to its 7 PLOs. For example,

ILO1: Breadth of Knowledge

PLO 1 of Reasoning

PLO 6 of Applied Knowledge/Theory and Practice/Research

ILO2: Depth of Knowledge

PLO3 of Community Engagement, Leadership, and Service Learning

PLO6 of Applied Knowledge/Theory and Practice/Research

F. The Liberal Studies Program streamlined its PLOs to seven which will be assessed annually. Specifically, it will examine the following seven PLOs:

PLO 1: Reasoning

PLO 2: Artistic Expression

PLO 3: Community Engagement, Leadership, and Service Learning

PLO 4: Communication

PLO 5: Professionalization

PLO 6: Applied Knowledge/Theory and Practice/Research

PLO 7: Diversity

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:

During this review cycle, Liberal Studies Program conscientiously has improved its program effectiveness and assessment plan by tying its PLOs to CSUSB's GLOs and ILOs, CTC standards, and ESM CSET Waiver matrices.

The Liberal Studies Program streamlined its PLOs to seven which will be assessed annually. Specifically, it examines the following seven PLOs:

PLO 1: Reasoning

PLO 2: Artistic Expression

PLO 3: Community Engagement, Leadership, and Service Learning

PLO 4: Communication

PLO 5: Professionalization

PLO 6: Applied Knowledge/Theory and Practice/Research

PLO 7: Diversity

Liberal Studies Program indicated in its self-study report that it will assess its PLOs in CAL 4970 and CAL 5970 by requiring students to identify artifacts that meet each of the seven PLOs and write a mini-narrative and present their e-portfolios. In addition, in their presentation, students are expected to include reflection on their experience concerning High Impact Practices as identified by the American Association of Colleges and Universities (AACU). Liberal Studies Program intentionally requires students to reflect on their learning and tie it PLOs.

I agree with our external reviewer's observation that the realization of needing to revise PLOs upon reviewing CAL 4970's and CAL 5970's student self-assessment reports attest to the "evidence of the efficacy and usefulness of the self-evident assessment process." However, as he noted, "this speaks to only individual understanding and allows for grades to be assigned in 4970 and 5970, but programmatically there needs to be some kind of systemic collection of this evidence in terms of student self-reporting, or an analysis of the portfolio and which PLOs get more robust student attention/understanding than others." He further stated that "[t]he Professor of Record could be responsible for this kind of "close the loop" assessment of PLOs to be provided to the Coordinator if those roles were separated." The outside evaluator is referring to Prof. Dortch serving both as the coordinator and the instructor of record for CAL 4970 and 5970. Another way to remedy this is to assign other faculty to independently review students' portfolios using an agreed-upon rubric which is closely tied to the PLOs. The team of faculty members can be faculty who teach Liberal Studies courses or CAL assessment coordinators or members of the Liberal Studies Advisory Board members.

The outside evaluator pointed out, and I agree, that it is evident that implementation of CAL 2970, 4970, 5970 sequences of classes provide ample opportunities for students to self-assess their learning pertinent to the PLOs. However, he questioned that beyond using these courses as a conduit for student self-assessment, "there was no evidence that systemic collection and analysis of student learning appears to be occurring." He lauded Liberal Studies Program's "robust Assessment Plan." However, he commented that "how much of that plan is getting implemented remains to be seen."

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:

Given the structure of the Liberal Studies Program and its curriculum, I strongly disagree with the outside evaluator's comments that "[t]here is a clear intent/desire for the Liberal Studies Program to be housed elsewhere (in the College of Education) and "the potential move [to College of Education] might need to be considered." There are only three individuals in the Department of Teacher Education and Foundations housed in the College of Education who wish to take over the Liberal Studies Program, however, their intention is not widely supported. The College of Arts and Letters firmly intends to keep the Liberal Studies Program under its auspices and has received support from the Central Administration to maintain the current structure. A dramatic structural change for Liberal Studies is not warranted or in order, specifically in light of the urgent need to meet the GI 2025 goals and the challenging circumstances that we endured amid a global pandemic.

On most CSU campuses, Liberal Studies are housed outside of the College of Education. Based on our research, we found only 6 out of 23 CSUs house Liberal Studies Programs in Colleges of Education. These six CSU campuses are: Channel Island, San Diego, Dominguez Hills, Monterey Bay, Long Beach, and Fresno State. The interdisciplinary breadth of the Liberal Studies Program is more closely aligned with the nature of CAL at CSUSB than with the College of Education. Given the interdisciplinary nature of the Liberal Studies curriculum and given that the majority of the core courses in Liberal Studies are within the disciplines represented at CAL, we believe that CAL faculty are better suited for guiding and supporting Liberal Studies students. Our college strongly believes that large and structural changes hurt students, as we have seen our graduation and retention numbers drop with online teaching, Q2S, and changes in the advising system. As such, CAL should maintain our administrative responsibility for the program.

However, to respond to the reviewer's comments and address other concerns such as advising and the extremely complex curriculum, we have made plans to make certain changes. I suggest the following as we continue to develop our next plan of action:

(1) to provide more staff support, we have hired an Administrative Support Assistant (ASA) in addition to our existing ASC. We will try to turn the ASA into a permanent position.

(2) With regard to advising, since CSUSB centralized advising, our college no longer has control over allocations of professional advisors. However, we decided to enlist our tenure-track faculty to assist in advising. In many ways, having more faculty advisors who understand the complexity

of the Liberal Studies curriculum will better serve our Liberal Studies students. In subsequent years, I suggest our Liberal Studies Program provide additional faculty advisors on both the main campus and PDC.

(3) Liberal Studies will constitute a Liberal Studies Task Force to assist revision of the Liberal Studies curriculum so that it will be more streamlined and easier for students to understand. It will also address Records Office's concern regarding our Liberal Studies not taking enough GE courses and building the ADT (Associate Degree Transfer) with community colleges.

(4) Liberal Studies will reconstitute an Advisory Committee to address the needs for the integrated pathway. At the onset of AB 130 and the history of ESM, this interdisciplinary Advisory Committee will assist the Liberal Studies Program to be aligned with current legislation and credentialing guidelines from the CCTC, and maintain productive partnerships with community colleges in local districts.

(5) With regard to assessing the portfolios collected from CAL 4970 and CAL 5900, I request that Liberal Studies Program assign more faculty to teach CAL 2970, CAL 4970, and CAL 5970 to release the Liberal Studies coordinator's burden and provide multiple perspectives so that students will not only hear one single voice from the Liberal Studies Coordinator. In addition, the College will appoint faculty members to assess students' portfolios using agreed-upon rubrics.

(6) Concerning the outside evaluator's comment on human resources and financial support for Liberal Studies, I recommend that the College will allocate a specific budget to Liberal Studies based on the FTEs generated from Liberal Studies' own CAL 2970, CAL 4970, CAL 5900, and CAL 5970 core courses. Since the rest of the Liberal Studies courses are offered by other departments and colleges, CAL cannot distribute the financial incentives for courses that originate from other departments and colleges.

Responsible Users:
Rueyling Chuang (000023750)

I. Proposed Action:

Introduction: When applying a strategic lens to the crafting of CSUSB's Liberal Studies action plan for the five-year cycle of assessment and organizational/programmatic planning - and in order to accurately assess strengths, needs, and accomplishments with the purpose of effectively engaging in future recommendations and planning - the first and foremost step of any sound approach is to **identify and record the purpose of the Liberal Studies Program**. Once an acknowledged and agreed upon purpose has been established at the institutional, college, and program level only then can the overall recommendations as identified by the Liberal Studies internal review, external review, College of Arts and Letters Dean's action plan, and subsequent University Academic Program Review/Self-Study Review Committee report be considered and best implemented as appropriate. Therefore, **the first item for the Liberal Studies action plan is to identify and expressly articulate the purpose of the Liberal Studies Program so that we can coalesce all of our efforts and align our action plan items under the established purpose.** While it is generally understood that the Liberal Studies Program is designed to prepare emerging educators, what exactly does that mean? What does it look like to various constituents and stakeholders such as: CSUSB students, Liberal Studies Program, Liberal Studies Interdisciplinary Advisory Committee, CSUSB administration, community colleges (feeders), local school districts (end-users), community partners, etc.? What are the program's learning outcomes? Who does the program serve? What are the program's priorities?

A. Summary of Recommendations and Program Action

Recommendations by External Reviewer	Program Action
HUMAN RESOURCES: Dedicated Advising, PDC Presence, and overall Staff needs should be addressed in order to better support a Program of 1000+ students.	We will be recruiting a pool of faculty to help teach the large number of students who regularly enroll in LBST courses every term on both PDC and SBC. In summer 2022, we will advertise the position, constitute a selection committee, and hire instructors for this purpose. We will also draw on the existing pool of CAL faculty who may be qualified for teaching these courses. One faculty member will specifically be assigned to PDC. We have also hired an Administrative Support Assistant (ASA) in addition to our existing ASC. We intend to turn the ASA into a permanent position. In Fall 2022 and

	Spring 2023 two additional faculty members will be advising LBST students. We will also have an Assessment Fellow who will assess the LBST portfolios based on agreed-upon rubrics and submit an annual assessment report.
FISCAL RESOURCES: The complete lack of consistency in budgetary support must be remedied at the College and/or University level.	Actually, each academic year Liberal Studies is given a set of budget for operational O&E and equipment. This has been done for decades. Nonetheless, we will augment Liberal Studies budget by distributing the PT budget based on FTEs for CAL 2970, CAL 5900, & CAL 5951-5955.
STRUCTURAL SUPPORT: An Interdisciplinary and/or Advisory Committee should be constituted to support the present and future direction of the Program.	The College of Arts and Letters has constituted a Liberal Studies Advisory committee, with an interdisciplinary group of faculty from the departments of English, Communication Studies, and World Languages and Literatures, in addition to the assistant dean of the College of Education, the associate dean of the College of Natural Sciences, the associate dean of the College of Social and Behavioral Sciences, and the Associate Registrar of Transfer Credit & Articulation Officer. The committee is tasked with supporting the Program in a multiplicity of ways, including curriculum changes, credit articulation, community engagement, retention, graduation, and student recruitment. We will also enlist the help of a faculty member from an academic department in the College to help the Program with the assessment process.
Recommendations by the College Dean	**Program Action**
Increase Staff Support	We have hired an Administrative Support Assistant (ASA) in addition to our existing ASC. We will try to turn the ASA into a permanent position. We will continue to hire peer advisors who will serve as mentors for other LBST students. We also plan to have an Associate Coordinator for the Liberal Studies Program. The

	Associate Coordinator for LBST (Liberal Studies) will be a faculty position.
Increase Advising	Since advising at CSUSB is now centralized, our college no longer has control over the allocation of professional advisors. However, we decided to enlist our tenure-track faculty to assist Coordinator Dortch in advising. In many ways, having more faculty advisors who understand the complexity of the Liberal Studies curriculum will better serve our Liberal Studies students. In subsequent years, Liberal Studies Program will provide additional faculty advisors on both the main campus and PDC. At least two additional faculty members will be advising LBST students in collaboration with Prof. Dortch in both Fall 2022 and Spring 2023.
Augment Curriculum Revision	In order to update and streamline the curriculum, we have constituted a Liberal Studies Task Force to assist with the revision of the curriculum. The revision will enhance students' overall learning experiences and address the Registrar's Office's concerns regarding LBST students' fulfillment of GE requirements and building the ADT (Associate Degree Transfer) agreement with community colleges.
Re-establish Liberal Studies Advisory Committee	Liberal Studies reconstitutes an Advisory Committee to address the needs for the integrated pathway. At the onset of AB 130 and the history of ESM, this interdisciplinary Advisory Committee will assist the Liberal Studies Program to be aligned with current legislation and credentialing guidelines from the CCTC, and maintain productive partnerships with community colleges in local districts.
Assess Program Learning Outcomes and Student Learning Outcomes	To help with the assessment of students' portfolios collected in CAL 5900, LBST will recruit and assign additional faculty to

	teach these (LBST-specific) assessment courses and to evaluate the portfolios. This measure will also release the Coordinator's burden and address the external reviewer's suggestion involving increasing the diversity of voices who mentor the students.
Increase human resources and financial support for Liberal Studies	The College will allocate a specific budget to Liberal Studies based on the FTEs generated from Liberal Studies' own CAL 2970, CAL 5900, and CAL 5951-5955 (independent studies) core courses. We plan to add a 3000-level LBST gateway class to strengthen the course offering to students, support equitable opportunities for their professionalization, and increase FTEs.
Recommendations by the University Committee	**Program Action**
Hire more faculty	The Liberal Studies Program plans to hire more instructors for its core courses. (i.e., for CAL 2970, CAL 5900, etc.).
Hire more administrative aid	The Libral Studies Program already hired an ASA. It plans to hire more student assistants.
Become a Department in the College of Arts and Letters	Per FAM 112.5, in order to establish a department, the originator(s) must submit a proposal, seek approvals from the Dean, the Faculty Senate, the Provost, and the President. Given the fact that: 1) currently there are no tenure-line faculty members hired by the Program and that we must have a certain number of TL faculty members within a program in order to qualify for this elevation (from a program to a department), and 2) the Program has only a few LBST-specific courses, (i.e., CAL 2970, CAL 5900, and independent studies), we don't believe that this recommendation is justifiable at this point. LBST is an inherently interdisciplinary program, and curricular courses are most effectively taught by

	expert faculty, which is one of its greatest strengths. In addition, all of the suggested resources can be allocated to the program in its current state without the need to change the Program into a department. Liberal Studies will continue to hire more faculty, have an associate coordinator, establish a network of affiliated faculty, and augment its curriculum prior to contemplating the possibility of proposing a new department.
Better address the alignment with the PLOs	An interdisciplinary faculty advisory committee will include a diversity of voices/perspectives who can explore enhanced PLO alignment as appropriate.
Supply better advisement for Liberal Studies students	LBST will enlist our tenure-track faculty from other departments to assist existing LBST Coordinator in advising. In subsequent years, Liberal Studies Program will provide additional faculty advisors on both the main campus and PDC.
Self-Study Recommendations	**Program Actions**
Provide the Liberal Studies Program with specified and dedicated **human and fiscal resources** to adequately support at least one additional staff member to better serve Liberal Studies students at both campuses and to free up the program leadership to engage in recruitment of prospective students, specifically URM men of color, and other community engagement activities as highlighted in the Liberal Studies Program Learning Outcomes and CSUSB's core values. This will serve the dual benefit of both increasing and diversifying enrollment/graduates.	We have hired an Administrative Support Assistant (ASA) in addition to our existing ASC. We will try to turn the ASA into a permanent position. We will add additional instructors, faculty advisors, associate coordinator, and assessment fellow for LBST. We will also have 2 faculty members and the Associate Registrar who will help streamline the existing LBST curriculum to ensure timely graduation. The LBST will generate additional revenues through the FTEs it generates.
Provide the Liberal Studies Program with the funding and mechanism(s) to implement and sustain a consistent and cohesive **interdisciplinary Liberal Studies Committee** to evaluate processes and offer recommendations on curriculum, assessment,	The College of Arts and Letters has constituted a Liberal Studies Advisory committee with an interdisciplinary group of faculty from the departments of English, Communication Studies, and World Languages and Literatures, in

and how to shorten students' time to degree completion (GI2025), increase recruitment and retention of URM students, and otherwise more adequately serve the needs and desires of 1,000+ students across two campuses.	addition to the assistant dean of the College of Education, the associate dean of the College of Natural Sciences, the associate dean of the College of Social and Behavioral Sciences, and the Associate Registrar of Transfer Credit & Articulation Officer. The committee is tasked with supporting the Program in a multiplicity of ways, including curriculum changes, credit articulation, and student recruitment. We will also enlist the help of a faculty member to help the Program with the assessment process.
Provide human and fiscal resources to hire at least two **specialized and dedicated advisors** to adequately meet the needs of all Liberal Studies students at both campuses so that they can complete their degrees as soon as possible and with as little financial expenditure and/or debt as possible as well as make a more seamless transition from undergraduate Liberal Studies to Multiple-Subject Credentialing.	One faculty advisor has already been assigned to the Program on a part- time basis. In the future, additional faculty members will be recruited to help with advising the students and better address their needs.
Provide the framework to explore the possibility of, and hopefully begin the transition, of **elevating Liberal Studies from a program to a department**; so that students of a major that is among the largest at both campuses can equally and equitably benefit from the same cohesive and comprehensive curriculum and services that are created and thoughtfully administered by departments with tenure/tenure-track faculty for students within their majors.	Per FAM 112.5, in order to establish a department, the originator(s) must submit a proposal, seek approvals from the Dean, the Faculty Senate, the Provost, and the President. Given the fact that: 1) currently there are tenure-line faculty members hired by the Program and that we must have a certain number of TL faculty members within a program in order to qualify for this elevation (from a program to a department), and 2) the Program has only a few LBST-specific courses, (i.e., CAL 2970, CAL 5900, and independent studies), we don't believe that this proposal is justifiable at this point. LBST is an inherently interdisciplinary program, and curricular courses are most effectively taught by expert faculty, which is one of its greatest strengths. In addition, all of the suggested resources can be allocated to the program in its current state without the need to change the Program into a department. Liberal Studies will continue

	to hire more faculty, establish a network of affiliated faculty, and augment its curriculum prior to contemplating the possibility of proposing a new department.

For a detailed and complete list of the recommendations provided by the various LBST stakeholders and a comparative list of recommendations from the previous and current self-study report cycles, please see Tables 1 and 2 below.

1. **TABLE 1: 2022 Self-Study Recommendations by Liberal Studies Stakeholders**

Recommendations	Liberal Studies Internal Review	Liberal Studies External Review	College of Arts and Letters Dean's Internal Review	University Committee Internal Review	2017 Self-Study
Provide Consistent Fiscal Resources and Permanent Sources of Funding	X	X			X
Increase Permanent Human Resource Allocations	X	X	X	X	X
Interdisciplinary Liberal Studies Committee	X	X	X		
Professionalization and Co-Curricular Resources for Liberal Studies Students	X				
Curriculum Considerations			X		
Departmental Elevation	X			X	

Student Services	X			X	X
Implement a Cohort Model					X
PLO Revision	X	X		X	X
PLO Assessment		X			X
Enrollment Enhancement					X
PLO Align with ILOs					X
Assessment Plan			X		X
Assessment Classes					X
Assessment Implementation					X
Faculty Advising	X	X	X	X	
PDC Support and Services	X	X			
Centralized and Structural Support	X	X			

2. **TABLE 2: Self-Study 2017 vs. Self-Study 2022 Recommendations**

Recommendations	Self-Study 2017	Self-Study 2022
Provide Consistent Fiscal Resources and Permanent Sources of Funding	X	X
Provide Consistent Student Services	X	X

Implement a Cohort Model	X	
Revise PLOs	X	Completed via Q2S
Assess PLOs	X	X
Enhance Enrollment	X	
Align PLOs with ILOs	X	Completed via Q2S
Create an Assessment Plan	X	Completed via Q2S
Introduce Assessment Classes	X	Completed via Q2S
Implement Assessment	X	X
Increase Human Resources		X
Form Interdisciplinary Liberal Studies Advisory Committee		X
Introduce Professionalization and Co-Curricular Resources for Liberal Studies Students		X
Revise Curriculum Considerations		X
Make Liberal Studies a Department		X

II. **Timeline (and Responsibility, Cost, and Resources):** Five major themes emerge from the recommendations made by the external reviewer, the Dean of the College of Arts and Letters, the self-study report and the University Committee. Below we list the suggested action plans for addressing the recommendations, our projected timeline for implementing the action plans, the responsibilities, costs, and resources associated with each measure.:

Action Plan	Timeline	Responsibility	Cost	Resources
Improve advising and alleviate the Coordinator's workload by: a) creating an advising *team* of faculty, and b) hiring and training peer advisors.	At least two additional faculty members will be advising LBST students in collaboration with Prof. Dortch starting from Fall 2022 and Spring 2023.	Advise students, support coordinator, train peer advisors.	Depending on the workload, if the faculty advisors are not doing it as part of their regular workload, then we compensate each faculty $6100 per semester.	At least two additional faculty members will be advising LBST students in collaboration with Prof. Dortch in both Fall 2022 and Spring 2023. We will apply for internal ISA grants to fund the peer advising program. We will also apply for external grants to cover the faculty advising costs, partially or fully.
Constitute an interdisciplinary advisory committee to provide structural, recruitment, and curricular support to the	The Liberal Studies Advisory Committee was formed and met in May, 2022. The committee will continue to meet regularly	The Liberal Studies Program and the Dean Office will ensure that the Liberal Studies Advisory	There will be no cost associated with this. The Advisory Committee members are volunteering their time.	The Dean's Office will provide staff support for coordinating the Advisory Committee meetings and implementing

program. Ensure that the committee meets on a regular basis.	starting from Summer 2022.	Committee will meet regularly. The Liberal Studies and Dean's Office will be responsible for coordinating meetings.		the decisions made by the Committee.
Update and streamline the curriculum to address the Registrar's concerns and to enhance students' overall educational experiences	In progress. A faculty member from the English department has been recruited to revise and streamline the curriculum. Another faculty member will be working on the curriculum forms for the revised program, which will be submitted to the various curriculum committees in Fall 2022.	The Dean's Office recruited two faculty members and consulted with the Associate Registrar to work on the revision of the LBST curriculum. These three individuals will be responsible for revising the curriculum and Prof. Heisterkamp will be shepherding the whole curriculum review and approval process.	Both faculty will be compensated through professional development funds. Depending on the workload, one will receive $6100 and the other faculty will receive $3050.	The Dean's Office will provide staff support and the Registrar's Office will provide technical support for articulation agreement and ADT (Associate Degree Transfer).
Hire additional instructors to teach the LBST-specific courses in a move to increase the diversity of voices, perspectives,	In summer 2022, we will advertise the position, constitute a selection committee, and hire instructors for this purpose. We will also	The Dean, Associate Dean, a faculty advisor, and the LBST Coordinator will form a search committee to hire additional	Depending on the instructor's qualifications the cost of hiring each instructor varies. The standard replacement cost for each	The Dean's Office and HR will assist with the job posting and the onboarding process.

and mentorship styles to which LBST students get exposed	draw on the existing pool of CAL faculty who may be qualified for teaching these courses. Interviewing candidates and maintaining a viable pool of faculty qualified to teach the LBST-specific courses will be an ongoing process.	faculty. The LBST Coordinator and the Associate Dean will be responsible for drafting the job announcement.	faculty per 3-unit course is $6100, though some PT faculty's actual salary may be lower or higher than $6100.	
Hire an Administrative Support Assistant (ASA) to address staff needs and help reduce staff workload.	One ASA was hired in Spring 2022. The normal timeframe to turn a temporary staff into a permanent staff is 2 to 3 years, unless a new permanent line is approved by the Office of Academic Affairs.	The LBST Office had the responsibility of interviewing candidates and hiring and training the new ASA.	A permanent position would constitute an estimated $64,023 cost with a minimum of $37,440 going towards salary expenses and $26,583 covering benefits. An estimated budget of $32,000 would allow the employment of two student assistants at minimum wage for 20 hours a week each to cover the office for the 40 hours a week that we are open during the academic year.	The Dean's Office AAS and HR have provided resources for job posting, job announcement, the search process, and onboarding process.

Roughly total estimated cost will be about $175,000 for direct cost or contributed time.

III. Responsibility: See II above

IV. Cost: See II above

Roughly total estimated cost will be about $175,000 for direct expenditure or contributed time. See II above for detailed description.

V. Resources: See II above

2021-22 Self-Study Report
Program Overview:

Preamble

This self study addresses the last years of the program's implementation on the quarter system, as well as its transformation to two graduate programs under the semester system which began in Fall 2020. Both the last quarter (spring 2020) and the first two semesters (AY 2020-21) were impacted by the COVID-19 pandemic remote teaching and research requirements. Thus, while this report captures the last six years, please keep in mind that this was an anomalous period, both due to the transformation to two degree programs on semesters and due to the pandemic.

Brief history of the program

The program, initially the M.S. in Environmental Sciences with a Professional Science Master's Option and a Geology Option, accepted its first students the fall of 2010. To better reflect the breadth of the degree, the name was modified in 2011 to the M.S. in Earth and Environmental Sciences (Appendix A).

With the transition from quarters to semesters, we decided that separating the two Options into standalone degrees would better serve the students. They clearly formed two distinct groups, and both groups chafed at the requirements aimed at the other group. Moreover, we decided to remove the Professional Science Master's requirements, because our program was too small for the other departments (Public Administration and Management) to either tailor courses for our students, or to productively accommodate our students in courses aimed at those majors. While we separated the degrees (M.S. in Environmental Sciences, Appendix B, and M.S. in Geology, Appendix C), we had observed that both groups of students did benefit from interacting with one another, so we deliberately kept two core courses in both degrees (CHEM/GEOL 6000 – Advanced Environmental Chemistry and Geosciences and CHEM/GEOL 6900 – Graduate Seminar). In addition to the benefits for the students, from an FTES standpoint, it keeps enrollments robust, and from a FTEF standpoint, it makes more efficient use of faculty teaching loads.

Note on course numbering: The quarter system courses have three digits, e.g. GEOL 690, while the semester system courses have four digits, e.g. GEOL 6900. Course titles are included to help identify the links between quarter and semester versions of courses.

Response to Previous Program Review:

In response to the 2010-2015 Self Study, those External Reviewers noted the incomplete state of the Program Learning Outcomes (PLOs), with the associated lack of an assessment plan. The University Program Review Committee and the Dean echoed these issues, and all recommended finalizing the PLOs, developing an assessment plan, and implementing it.

In addition, the External Reviewers recommended that the administration make an investment in the program by increasing the WTU for the graduate coordinator. They also noted that no

teaching assistantships or fellowships were available, nor funding to support the program to allow it to grow significantly, although they did not make specific action item recommendations for this support. The University Program Review Committee and the Dean were silent on these recommendations.

In response to these recommendations, we have finalized PLOs and implemented an assessment plan (Appendix D). Our intent in the design of these PLOs is described in the Learning Outcomes & Assessment Processes section below.

One issue we consider very important, but which was only addressed by one of the three feedback reports (External Reviewers), is the lack of support for students (Self-Study Report, p. 4-5). The External Reviewers recommended greater investment on the part of the administration to allow the program to grow significantly (External Reviewers Report, p. 2). They specifically mentioned teaching assistantships, fellowships, and funding for a seminar series. We strongly encourage the administration to locate resources to support this program, to produce a more stable environment for our students that will enable them to be full-time students. We currently hire them wherever possible to teach labs, but this is not a sufficient level support to obviate the need for outside employment in addition. This has a clear negative impact on our students' ability to complete their degrees in a timely fashion, or sometimes to even remain in the program.

Students:

Demographics

The following discussion is based on data from the CSUSB Statistical Factbook (https://www.csusb.edu/institutional-research/statistical-factbook), and supplemented where needed by the MS in Earth and Environmental Sciences database, maintained by the Graduate Coordinator.

For the review period, the gender distribution overall is approximately even, with a total of 21 female and 25 male students. Given that we are a small program, this is reflected in these numbers appearing to jump year to year (Fig. 1). We have had an increase in female students through the review period, while maintaining a steady participation of male students.

The proportions of Under-Represented Minorities (URM) students and non-URM students in part reflects the distribution of students at CSUSB, and in part reflects the inclusive and welcoming culture we have built with our graduate programs (Fig. 2). Of note here is the fact that a component of our URM students includes international students. With the shift to online applications via Cal State Apply in 2018, we were able to begin tracking applications started vs. those completed. For 2018 to 2021, between 67% and 80% of applications initiated were not completed, and the overwhelming majority of the not completed applications were from international students. We think this is a potential source of growth for our graduate degrees, but it is one that requires more substantial financial support than we can currently offer, as discussed more fully below in Program Resources. Indeed, when some of the accepted students learn of

the lack of support in the form of tuition remission and an adequate stipend to be able to be a full-time student, they do not matriculate. Across the country, it is common for graduate programs to offer select students Teaching Assistantships, which typically include tuition remission (either out-of-state, or total), and a stipend, in exchange for the graduate student teaching two lab sections in courses where they are qualified. Indeed, most if not all of the readers of this report supported themselves through graduate school as Teaching Assistants or Research Assistants. Our lack of this resource has always been a hindrance to attracting top students, and in the observation of the Graduate Coordinator, is becoming a larger barrier in more recent years.

The California resident vs. non-resident data follow what would be expected, in that most of the students in the graduate programs are California residents (Fig. 3). Echoing the barrier described above for international students, out-of-state tuition is a barrier to many prospective students, and prevents us attracting top students, who have choices at other universities who are happy to provide financial support.

Student Numbers and Post-Graduation Employment

Over the period of review, we have graduated 17 students, and their current employments are listed below. This robust record of successful employment follows the pattern for graduates from earlier in our program, as reported in the 2010-2015 Self Study. Broadly speaking, these career paths include environmental consultants, water districts, and state, city, and tribal governments, among others. All of these indicate ongoing demand for these degrees in the future.

AY 20-21
Environmental Health Safety Consultant at ACTenviro
Field Geologist at Mojave Precious Metals, Inc
Instructional Lab Technician Rio Hondo College, and Lecturer CSUSB
AY 19-20
Geographic Information Systems Technician at City of Fontana
Tribal Environmental Manager, 29 Palms Band of Mission Indians
Vice President, Board of Directors at Western Municipal Water District, District 2
Water Resource Specialist Yucaipa Valley Water District
Water Resources Specialist, Mojave Water Agency
AY 18-19
Air Quality Planner I, Antelope Valley Air Quality Management District, and Lecturer CSUSB
Instructor San Bernardino Valley College, and Lecturer CSUSB
OPS Environmental Specialist I at Florida Department of Health, Orange County
Staff Scientist Geosyntec Consultants
AY 17-18
No graduates
AY 16-17
Management Analyst II at Western Municipal Water District
Water Chemist, City of Santa Monica, CA
AY 15-16

Graduate student in Biology CSUSB; formerly Chemical Hygiene Officer Environmental Health and Safety CSUSB
Management Analyst II at Western Municipal Water District
Information not available

Student Applications and Recruitment

With the advent of online applications through Cal State Apply (https://www.calstate.edu/apply), we can monitor applications initiated vs completed. Our degrees are listed on that system and can be searched to locate (https://www.calstate.edu/attend/degrees-certificates-credentials/Pages/search-degrees.aspx). Graduate Studies at CSUSB maintains a number of useful resources for prospective graduate students (https://www.csusb.edu/graduate-studies/prospective-students) to help them navigate through the application process, financial support possibilities, and a number of other issues. Graduate Studies conducts a range of recruitment activities on and off campus (recognizing the limitations COVID-19 has placed on these), which uses materials for all the graduate programs at CSUSB. We participate in these, but their focus is general, and often only produces a couple of students who have questions. At present, this constitutes the bulk of graduate student recruitment for our programs, which we realize could be far more pro-active and effective. Also, it is worth mentioning here that we removed the GRE as an application requirement. Initially, this was because of COVID-19 restrictions that made it difficult for many students to access the exam, particularly international students. During this time, discussions about the DEI issues with that exam came to the fore. We looked at the record of our students throughout the duration of our programs, and saw that the scores were not particularly good predictors of student success in our program, and hence had little benefit in the admissions process. Therefore, we decided to eliminate it from our admissions requirements.

Some of the faculty are hesitant to recruit more energetically, as they fear becoming inundated with graduate students beyond their time available. Please see the faculty workload as reported below under Program Resources, Faculty section. That being said, the faculty understand the benefits of a larger graduate student cohort active on campus. We consider faculty chairing 1-3 committees is a sustainable level. This results in approximately 15-30 students active in the program, understanding that the additional workload of serving on a student's committee carries no workload credit, but that it does involve a time commitment on the part of the faculty member. At present, our programs have 19 active students, which is within the sustainable levels for the faculty currently participating in the program. We also benefit greatly from the other faculty on campus that contribute as needed, as well as the external experts in the local area (please see p. 10-11 for details). We also note that we have some newer faculty who are likely to take on more students in the coming years, as well as the prospect of gaining new faculty members.

We see the need for and benefit of developing a recruitment plan. This could include presentations at Graduate Studies events that are prepared to highlight the strengths of our degree programs, working with the CSUSB Veteran Success Center to develop recruitment strategies for students who have GI Bill funding, and adding job placement information to our marketing information, to mention a few possibilities.

Attached Files
  Student Figures.pdf

Learning Outcomes & Assessment Processes:

The major task assigned in the feedback from the previous program review was the need to finalize and implement Program Learning Outcomes (PLO) and Program Assessment procedures. Accordingly, we did so, as described below. In the discussions about the transformation of the MS in Earth and Environmental Sciences from quarters to semesters, we decided to separate the two Options (PSM and GEOL) into standalone degrees (Environmental Sciences and Geology). However, as described in the Preamble, we decided it was beneficial to the students to maintain links between the two degrees in the form of two core courses required for both degrees (6000 and 6900). Moreover, we maintained the PLOs at a higher level of inclusiveness so that they all pertained to both degrees. This keeps the focus on the science, not the particular pathway each student may follow. This also results in more equitable evaluation of students in both degree programs, as well as continuity from the quarter degree to the semester degrees.

Program Learning Outcomes

Upon completing a Master's Degree in Earth and Environmental Sciences (quarters) or Environmental Sciences (semesters) or Geology (semesters), students will be able to:

PLO 1: Demonstrate robust understanding of geologic and environmental systems.

1.1: Apply basic chemistry to the interactions between air, water, soil, and bedrock in the natural environment.

1-2: Explain the impact of humans on the environment.

1-3: Explain the impact of geologic conditions and processes that need to be taken into account when designing human structures and infrastructure. Understand basic investigation methodologies and hazard mitigations

1-4: Explain issues associated with water sources, drinking water treatment, water pollution, and wastewater treatment.

1-5: Explain sources of air pollution, air quality monitoring, and mitigation techniques, including in relation to climate change.

PLO 2: Apply a scientific approach to generate a question, design experiments, and interpret results.

2-1: Analyze and effectively synthesize literature and other data sources relevant to the question of interest.

2-2: Ability to apply current scientific theory to geologic problems (MS in Geology) or natural, altered and/or polluted systems (MS in Env. Sci.) to design experiments or field observations as appropriate to address the question

2-3: Apply appropriate quantitative methods

2-4: Generate, critically analyze, and interpret original data

2-5: Distinguish between observations and interpretations

2.6: Articulate how the conclusions are supported by the data

PLO 3: Effectively communicate results and implications to a variety of audiences, in graphical, oral, and written forms

3-1: Effectively use communication skills to articulate the scientific basis for and implications of the results to scientists

3-2: When appropriate, effectively use communication skills to articulate the scientific basis for and implications of the results to constituents in business, law, public policy, and/or public health and safety.

3-3: Effectively use communication skills to articulate to the general public the scientific basis for and implications of the results, including impacts on any affected communities.

PLO 4: Effectively manage a research or applied project

4-1: Establish realistic milestones to gauge progress and practice effective time management to meet those milestones.

4-2: Develop effective collaborations with others who are essential to the project

Program PLOs in table form, linked to the courses used for Assessment, and alignment with Institutional Learning Objectives (ILO) are attached. Below is an expanded discussion of the courses used in the Assessment process.

1. **CHEM 610 - Advanced Environmental Chemistry and GEOL 610 - Environmental Geosciences (quarters)**

Now CHEM/GEOL 6000 (semesters): PLOs 1-1 through 1-5 will be assessed using embedded exam questions and/or assignments. The two quarter courses were offered Fall and Winter of every other year, and the single cross-listed semester course is offered every other Fall. The instructors will compile results of assessment in their course(s) and present this information to the Assessment Coordinator.

2. **CHEM/GEOL 690 - Graduate Seminar in Environmental Sciences (quarters)**

Now CHEM/GEOL 6900 – Graduate Seminar (semesters): In this course, offered bi-annually, MSEES, MSES and MSG students make an oral presentation of their work in progress on their thesis or project. The course instructor will invite all faculty involved in the program to these student presentations. If at all possible, faculty are expected to attend and evaluate the presentations of students on whose thesis/project committees they are serving, and they are welcome to attend and evaluate other student presentations as well. The scoring rubric (attached) will be used to assess as many learning outcomes as is appropriate, depending on the student's level in the program. Presentations from students in their first year may be used to assess outcomes 1.1, 2.1, 2.2, 4.3 and 4.4. Presentations from students in their second year may be used to assess almost all of the outcomes, with the exception of outcomes 4.1 and 4.2. The CHEM/GEOL 690 (now 6900) instructor will forward completed rubrics to the Assessment Coordinator for compilation and presentation at the annual assessment meeting.

3. **CHEM/GEOL 699 - Graduate thesis (quarters) or CHEM/GEOL 696D - Graduate project (quarters)**

Now CHEM/GEOL 6970 (semesters) or CHEM/GEOL 6950 – Graduate Project: The Graduate Coordinator will request (attached) for each student on whose committee they serve. Outcomes 1.1, 2.1, 2.2, 3.1, 3.2, 4.1, 4.2 and 4.3 will be assessed using the written thesis or project. Outcome 4.4 will be assessed at the oral thesis defense/project presentation. The graduate coordinator will collect these forms and forward them to the MSEES assessment compiler for compilation and presentation at the annual assessment meeting.

4. **Annual assessment meeting:** The Graduate Coordinator, who is also tasked with producing the annual assessment report, will schedule an annual assessment meeting, which all faculty active in the program should attend. The CHEM 610, GEOL 610, (now CHEM/GEOL 6000) and CHEM/GEOL 690 (now CHEM/GEOL 6900) instructors, and the Graduate Coordinator will present the assessment data they have collected and compiled since the previous meeting. These data will also be provided electronically to the participating faculty. The group will discuss avenues for program improvement. In general, the assessment meeting will be scheduled early in the fall to evaluate the previous year's data.

5. **Annual assessment report**: The Graduate Coordinator will write the annual assessment report, based on the data presented and discussions held at the annual assessment meeting. This report will be submitted to the College of Natural Sciences assessment coordinator by the end of the calendar year.

Attached Files
 PLOs and Rubrics for MS degrees.pdf
 PLOs and Rubric for MSES and MSG 6000.pdf

Program Effectiveness:

The campus Mission Statement states that "CSUSB ensures student learning and success, conducts research, scholarly and creative activities, and is actively engaged in the vitality of our region. We cultivate the professional, ethical, and intellectual development of our students, faculty and staff so they thrive and contribute to a globally connected society." (https://www.csusb.edu/about-csusb/vision-mission)

Our programs actively support this mission by requiring our students to conduct research as part of their programs. We revised our degree programs to make this flexible with respect to required coursework, strengthening the support for a student's progress through their research and intellectual development. Many research projects are focused on the local region, providing high-quality research results that benefit the region. In addition, we welcome international students in our programs. This provides networking opportunities for all the students in our programs, giving them global connections both while they are on campus, and potentially throughout their careers. Through mentoring of students by their advisors, we promote high professional and ethical standards in their progress through their graduate program, starting them on careers that will maintain these high standards.

More specifically, the M.S. in Earth and Environmental Sciences degree program (quarters) had two Options, one following the Professional Science Master's model, focused on air quality, water quality and associated issues utilizing practical management coursework, with the Geology Option focused more on geologic issues. The full program from quarters is attached as Master of Science in Earth and Environmental Sciences. We found that the PSM Option did not work well for our students because we are a small program, and it was not feasible for the Public Administration or Management Departments to tailor coursework for our students while also serving their own student populations. Where this model works well, either many PSM programs feed students to these courses, or a single program is large enough to justify coursework tailored for our students. Therefore, in our transition to semesters, we decided to remove the PSM component as a requirement, although we retained those courses as electives for students who which to pursue that avenue.

The other main change we developed in the transformation to semesters was to separate the two Options to stand-alone degree programs – the M.S. in Environmental Sciences (attached as Master of Science in Environmental Sciences) and the M.S. in Geology (attached as Master of Science in Geology). This allowed each degree program to be streamlined to follow the interests for the two groups of students in our programs. However, we retained two common core courses (CHEM/GEOL 6000 – Advanced Environmental Chemistry and Geosciences, and CHEM/GEOL 6900 – Graduate Seminar) because we saw the benefits of the interactions between the two student groups in broadening their scientific understanding and in increasing their professional networks. These courses are cross-listed between Chemistry and Geology to

allow each student to register for the more appropriate course number to make their transcripts to better reflect their interests and expertise. We manage course enrollments by offering 6000 and 6900 once per two years and by making most elective courses offered at the 5000 level, so that both graduate students and advanced undergraduate students can enroll, which increases enrollments in those courses.

Attached Files
  Master of Science in Environmental Sciences _ California State University, San Bernardino.pdf
  Master of Science in Geology _ California State University, San Bernardino.pdf
  Master of Science in Earth and Environmental Sciences _ California State University, San Bernardino.pdf

Program Resources:

We have eleven regularly participating faculty in three departments, as listed below.

Department of Chemistry and Biochemistry https://www.csusb.edu/chemistry-biochemistry

Andreas Beyersdorf https://www.csusb.edu/profile/andreas.beyersdorf

James Noblet https://www.csusb.edu/profile/jnoblet

Brett Stanley https://www.csusb.edu/profile/bstanley

Department of Geological Sciences https://www.csusb.edu/geology

Kerry Cato https://www.csusb.edu/profile/kerry.cato

Joan E. Fryxell https://www.csusb.edu/profile/jfryxell

Codi Lazar https://www.csusb.edu/profile/clazar

Erik Melchiorre https://www.csusb.edu/profile/emelch

Claire Todd https://www.csusb.edu/profile/claire.todd

Department of Geography and Environmental Studies https://www.csusb.edu/geography

Jennifer Alford https://www.csusb.edu/profile/jennifer.alford

Brett Goforth https://www.csusb.edu/profile/bgoforth

Yolonda Youngs https://www.csusb.edu/profile/yyoungs

Other faculty participate as appropriate for a student's research projects. In particular our students have benefitted from Biology faculty from time to time. In addition, when a student's research involves outside agencies (e.g. U.S. Forest Service or water agencies) the student's supervisor there can serve on a student's committee. The workload distribution is listed below.

Committee Participants	Committee Chair	Committee Member
Key: g = graduated during the review period; o = ongoing work		
Faculty who participate regularly		
Alford (Geography)	ggg, ooooooo	g
Beyersdorf (Chemistry)	o	oooo
Cato (Geology)	ooo	gggggg, oooo
Fryxell (Geology)	gg, o	g, oooo
Goforth (Geography)		ooo
Lazar (Geology)	o	gg
McGill (Geology, now Assoc. Dean)	gg, o	o
Melchiorre (Geology)	gg, o	gggg, oooo
Noblet (Chemistry)	gggg	ggg, oo
Stanley (Chemistry)	g, ooo	gggg
Todd (Geology)		o
Youngs (Geography)		o
Faculty who participate as needed:		
Ahmadi (Mathematics)		g
Kalra (Geography)		g
Leatham (Geology)		g, o
Maynard (Chemistry)		g
Meek (Geography)	g	g
Phalen (Health Science, now U. of Houston)	g	
Smith (Geology, now Emeritus)		o
Sumida (Biology)	o	
Williams (Biology)	g	
Xu (Geography)		gg, oo
Outside Committee members		
Barth (UCR)		o
Farke (Alf Museum)		o

Robins (Keck Science Department)		g
Schendel (Omya Mine)		o
Sharer (USGS)		g
Shepardson (SB Water Treatment)		g

Facilities and Equipment

Facilities and Equipment maintained by the Department of Chemistry and Biochemistry:
https://www.csusb.edu/chemistry-biochemistry/major-equipment

Facilities and Equipment maintained or shared by the Department of Geological Sciences:

https://www.csusb.edu/geology/facilities

In addition to the listing above, we have the following equipment, which is recently acquired by Dr. Kerry Cato and is still undergoing testing to ensure full functionality.

1 DJI Mavic Pro sUAV quadracopter

1 Inspired Flight IF-1200 sUAV hexicopter with Sony SLR camera; capable of Snoopy LiDAR payload

1 LIDARUSA Snoopy Mobile LiDAR scanner (backpack and sUAV scanning modes)

Panasonic ruggedized field tablets (Android OS)

2 Geoslam handheld Horizon LiDAR scanners

3 Geoslam handheld Zeb Revo LiDAR canners

Desktop based Micro-scanner

9 Puget computers (in the Geology Computer Lab)

Operating Budget

These graduate programs do not have their own operating budget, except for the 3 WTU of assigned time allotted for the Graduate Coordinator. Faculty serving as Chairs of graduate student's committees get small amounts of supervision WTU when those students register for thesis-related courses, but the committee members do not accrue any workload credit for their efforts.

The formula that exists at present in the College of Natural Sciences for allocating WTUs for the Graduate Coordinator of large programs is: 3-year average of # of applicants (10% weight) plus # of students enrolled (40% weight) plus # of degrees awarded (50% weight) https://www.csusb.edu/sites/default/files/CNSReasssignedTimeandSupervisionPolicy_2021-11-01_clean.pdf.

The most recent complete 3-year average for this/these program(s) is: applicants: 9.67(10%) + enrolled: 4(40%) + graduated: 4.33(50%) = 4.73 WTU. The policy also states that for unaccredited graduate programs, this WTU sum is to be multiplied by 0.213 semester-WTU, and this number, or 3 WTU per year, whichever is larger, is to be used. The rationale for reducing the formula by nearly 80% is not explained, nor were the Graduate Coordinators in CNS consulted in the development of this policy.

Teaching and supervision load for participating faculty must be accounted for in each of their departments, and a revision for Environmental Sciences is working its way through the Curriculum process to ensure that supervision units are appropriately assigned to the Advisors in the Department of Geography and Environmental Studies, as well as in Geology and Chemistry.

As mentioned earlier, these programs do not have any support for graduate students in the form of Teaching Assistantships or even tuition waivers. We try to hire our graduate students where they are qualified to teach lab sections of courses, but this does not give them adequate income to be full-time students, as described in more detail below. At present, one student is using the GI Bill to support themself through graduate school, and a couple have the good fortune of having Advisors with funded research.

Library Resources

The Library has successfully expanded its online subscriptions to a number of professional journals. The paper copies of reference materials are functional but relatively modest.

To explore its online holdings, please visit: https://www.csusb.edu/library

RESOURCES QUESTIONS

1. **Does the program have enough resources to adequately serve students?**

In terms of faculty numbers and expertise, we serve our graduate students well, if without much leeway, because teaching loads are high, and workload formulas for supervising students are not realistic. The graduate students have good access to their professors, and get timely and useful feedback for the most part.

In terms of facilities and equipment, as noted above, our departments have adequate, if modest, resources to serve our graduate students. We note that the Department of Chemistry and Biochemistry has technical staff to support laboratory preparation, safety, and so forth, while neither the Department of Geological Sciences nor the Department of Geography and

Environmental Studies has such support. This places a greater workload on those faculty supervising student research to work with their students.

In terms of financial support for graduate students, most of our graduate students live on loans, or are required to hold outside jobs to fund their graduate educations. Exceptions include students using the GI Bill to support their studies, students who are very pro-active in pursuing scholarship money, or those lucky few whose professors have external funds that include research assistant funding. We do our best to hire our graduate students to teach undergraduate labs where they are qualified, but the approximately $1600/lab a student earns over a semester does not cover their living expenses, much less tuition/fees, which for California residents in AY 2021-2022 amount to $5639 for 0-6 units, and $8651 for more than 6 units (https://www.csusb.edu/student-financial-services/tuition-and-fees/academic-year-2021-2022). Non-resident and International Students must pay $396 per unit in addition to the charges listed above.

The Graduate Coordinators have been advocating for many years to fund a system of Teaching Assistantships. These would include tuition waivers and a stipend while requiring students to teach two laboratory sections, and maintaining full-time student status. This is the standard procedure at many universities. It benefits the graduate students and the department(s) by allowing the students to devote themselves to their studies and providing the department(s) a steady supply of qualified TAs for undergraduate labs. A few years ago, a cost analysis was done to determine how much Teaching Assistantships and tuition waivers would cost the university, so the administration has some idea of the cost to campus. So far, this advocacy has not been fruitful, but we continue to advocate for instituting this system.

2. **Are students able to move through the program in a timely manner?**

In general, students have been able to move through the program(s) in a reasonably timely manner. For the 10 students who have graduated during the review period, it took between 2.0 and 5.0 years to graduate, with an average of 2.7 years. In theory, these are degrees that can be completed in two years, and the reasons for taking longer include technical difficulties accessing field areas, financial difficulties as noted above, family difficulties, and writer's block, for the most part. For this period, COVID-19 restrictions hampered students' progress, primarily because of restrictions accessing laboratory facilities.

3. **Do faculty have enough resources to maintain their currency in the discipline and improve their knowledge in it?**

The physical resources available to faculty in these programs has been addressed in the sections above. Maintaining currency in their disciplines mainly consists of having the time to read current results, attend professional conferences, and network with colleagues. Conceptually, supervising graduate student research is an efficient way for faculty to maintain currency in their discipline, but in practice this avenue is hampered by the high teaching load in the CSU, in combination with the fractional workload credit for the time a faculty member invests in each graduate student. A strict adherence to requiring each faculty member to teach 12 WTU per semester, with no allowance given for research time, as well as the current administrative

requirement that all supervision WTU generated cannot be rolled over even one year, makes it impractical for programs such as ours to work at the level it could otherwise achieve. A much more workable system would be to allow faculty to make the case for a teaching load reduction for a specified period of time such as 2-5 years, with specific research objectives and deliverables stated, as is the practice at the more forward-thinking CSU campuses. In addition, the prohibition against rolling over assigned time to the next year may be convenient for the timekeepers, but it is non-functional from a faculty workload perspective. Supervision WTU comes in at 0.33 or 0.5 WTU per course, which in practice cannot add up to a single class section within the same academic year. Moreover, teaching assignments must be determined in the previous academic year, before it is clear how many graduate students a faculty member will be supervising. Therefore, the only logical and equitable way to proceed is to allow a faculty member to use assigned time WTU accumulated in one academic year in the following year or two. To keep faculty answerable to this, it would be logical for them to request rolling time over to subsequent years, explaining their plan for using that time.

Summary & Recommendations:

Over the past five years, this graduate program has evolved into two degree programs, maintaining effective ties between them, fostering networking among the graduate students and making efficient use of course offerings for the two programs. We heeded the previous recommendations to develop a robust set of Program Learning Outcomes, and implemented an Outcomes Assessment plan to evaluate the effectiveness of our program(s).

Over the review period, the student numbers have increased somewhat, and maintained diverse student cohorts. The participating faculty has increased over the period of review, due to the hiring of faculty in the participating departments, which broadens the opportunities for student research, and has been welcome.

Lack of financial resources continue to be a major limiting factor, particularly in the realm of student support, but also in terms of faculty workload to supervise their students. In the previous review, we recommended additional resources be allocated, which did not occur, but which continues to be a major need.

We recognize the need for a recruitment plan, but understand that to be effective, this needs to be coupled with the ability to offer top applicants support to be able to attract them to our programs.

Providing Department:
Master of Science in Environmental Sciences

External Evaluation of the M.S. in Environmental Sciences Program

Department of Geological Sciences

and

Department of Chemistry and Biochemistry

California State University, San Bernardino

Prepared by Dr. Timothy Lyons
Distinguished Professor of Biogeochemistry
Wilber W. Mayhew Endowed Chair in Geo-Ecology
Director of the UCR Astrobiology Center

Opening Statement

Thank you for this opportunity. I enjoyed the process very much. In particular, I appreciated meeting new colleagues in the Inland Empire neighborhood, imagining possible collaborations in the process, and learning about your many successes in developing this important M.S. program. It has been successful, with many sources of pride, and there is a strong foundation for moving forward to an even higher level. Something quite special has developed over a little more than ten years, and I am confident it can be even more with some adjustments to the design and levels of support provided. **I fully endorse continuation of the program and look forward to its evolution and continued success.**

Particularly noteworthy is the strong placement of your students following graduation. They are filling diverse, challenging, high-level positions with ample room to grow professionally. The program is putting your students on first-class career trajectories, and the large number of graduates from the program working in the region is defining a network that is and will continue to help create opportunities for the next generations. Those with excellent jobs already are providing role models through their accomplishments and success stories to use during recruitment.

The achievements of your graduates reflect the excellence of the program—yielding students with strong, hands-on practical backgrounds and experiences. Their skills are developed in the classroom, field, lab, and behind the computer. Further, the diverse demographic representation of the program's student body, past and present, is laudable and stands out as providing a gateway to the environmental sciences for groups historically underrepresented in the field.

I also congratulate the team for its excellent response to the previous external evaluation, in particular by developing and presenting a rigorous, substantive set of Program Learning Outcomes. I believe all expectations in this regard have been met and encourage continued attention to this matter on a regular basis.

Similarly, the Self Study report is exceptional, providing essential information clearly and concisely. I found it to be an invaluable resource. It is obvious from the report that the process of self-evaluation was fruitful and will help steer the program going forward. I feel obliged to single out Dr. Joan Fryxell for her leadership role in preparing the Self Study and for the additional information and logistical coordination she provided throughout the process.

Dr. Fryxell is most deserving of gratitude, however, for her countless contributions in directing this program over the past years with levels of skill and commitment that will be hard to replace. The bar has been set very high for any successor. My congratulations to the faculty, staff, and administration for designing, implementing, and refining this graduate program. It is an asset to region and, more generally, to society's present and growing need for world-class environmental scientists. This is a need that sadly is not likely to go away, and those involved in training these essential experts deserve our praise and thanks.

Details of the Evaluation Process

I was given everything needed for my evaluation. I met with groups and individuals remotely (given Covid-related restrictions) over the course of three days. These were all productive conversations, including the excellent program overview by Dr. Fryxell, and in each interaction I was given important information and the opportunity to ask questions. I was also given the University's 'Expectations for the External Reviewer Report' and have worked to meet those expectations in my report.

My evaluation schedule follows:

	9-Feb	10-Feb	14-Feb
8:00 AM	Admins		
8:30 AM	Orientation Mtg.	Brett Stanley	Andreas Beyersdorf
9:00 AM			
9:30 AM	Joan Fryxell	Claire Todd	
10:00 AM	Program Presentation		
10:30 AM	to Faculty Group	Jim Noblet	Codi Lazar
11:00 AM			
11:30 AM			
12:00 PM		Yolonda Youngs	Students
12:30 PM			Group Meeting
1:00 PM			
1:30 PM			Jennifer Alford
2:00 PM			
2:30 PM		Kerry Cato	

3:00 PM			prep for exit meeting
3:30 PM			
4:00 PM			Admins
4:30 PM			Exit Meeting

Provost Designee/VP for Academic Programs - Clare Weber

Grad Dean - Dorota Huizinga

College Dean - Sastry Pantula

Dept. Chairs Claire Todd, Kim Cousins

The Philosophical Underpinnings of this Document

Messages presented substantively, specifically, and concisely are certain to be most helpful. I have worked to do so. For example, I've divided my suggestions into a series of sections with critical points presented as bullets with some supporting text. Importantly, I am reporting on what I heard and read. In some cases, information shared with me during conversations might have been unintentionally incorrect or only partially accurate. I hope the program will have an opportunity to respond to set the record straight where needed. However, information in some cases that was incorrect or confused reflects unfortunate gaps in communication on your end. This review is an opportunity to identify those gaps and to seek remedies. I'll touch on some of this below. I have avoided singling out individuals in my discussions with the exception of Dr. Fryxell, the program director.

The environmental sciences M.S. program has been successful by most metrics. I highlight things working well currently and deserving of continued support—and in many cases more support. However, there are things that could be even better, and my most important job is to draw attention to those and to offer solutions where possible.

Leadership and Implementation

Building on the successes of her predecessors, Dr. Fryxell has been a excellent program director. However, she—or anyone in the position as presently structured—shoulders too much of the burden. The associated responsibilities are a lot to ask of anyone and could instead be distributed among members of a small committee with a single chair. Leadership that is too centralized may reduce buy-in and continued commitment to the program by others. Further, broader participation in the leadership would make transitions to a new chair easier, and that job would be more attractive if less time consuming. A committee would likely simplify leadership transitions, make involvement more attractive particularly to untenured faculty, and provide valuable on-the-job training for future directors. To this end:

•Consider assembling a group of three or four as a leadership team with a single chair. This committee could include faculty already strongly involved with the program while also providing diversity in disciplinary expertise (within and among the included departments); a gateway for those not heavily involved; and demographic balance, including career level.

Although there are no fatal problems with the current structure, broader faculty involvement in decisions and full access to the process will lead to a more cooperative culture. And those feeling out of the loop, as some do now, will see this as a more transparent process. Again, Dr. Fryxell was praised consistently for all her hard work and successes. But I would nonetheless argue that this is too much work for one person. A different director with different skill sets and levels of commitment and patience might be less successful. In its present form, the WTU relief is not sufficient to offset the demands of running the program more or less alone.

I would also design a formal policy for transition, such as rotation of one member of a committee of three or four into the chair position with three-year terms that could be renewable. The present chair could rotate off or into a secondary (past-chair) role depending on the collective knowledge of the remaining committee members, the new committee member otherwise added, and the experience of the new chair. In short, these changes would be a step toward formalizing the administration of the program and increasing its sustainability, while leading to a broader and more involved group of faculty. Each committee member could have different responsibilities (funding opportunities, mentoring oversight, preparing for admissions decisions, etc.). A leadership team could provide valuable mentoring when determining a given student's deficiencies, class choices to fill those gaps, etc.

Presently, an applying student chooses a potential advisor (and presumably contacts the potential advisor beforehand). If the advisor says 'no', the director reaches out to other faculty and presents another option(s) to the student if there is interest from another potential advisor.

•Instead I would suggest a shared, online spreadsheet with student details (linking to the full application) that any faculty member can see—to facilitate pathways to alternative mentors, collaborations/co-advising, etc.

The list should include the potential primary adviser as established through previous conversations between the student and the adviser and whether the adviser is willing to take the student on. However, if they are not, a different advisor can accept a student that might otherwise fall through the cracks despite strong qualifications and research interests that mesh with others on the faculty. In other words, make this process more open and accessible, and I would do so for as many faculty partners as possible, whether or not formally listed as part of the program. If there is such a shared list already, I missed the details. Some among you expressed concern about the transparency of the process—or simply confusion—as we might expect for recent additions to the faculty or the program. Perhaps for these reasons, there is a strong asymmetry in faculty involvement.

•Only a relatively small number of faculty are substantively involved in the program. If some have chosen not to be involved, why? This is your graduate program, and having graduate students should be a goal and expectation for all. Perhaps that expectation and the associated opportunities and pathways can be better conveyed.

Moreover, several of the listed participating faculty members have no or few students, or they have limited their involvement to secondary advising roles. <u>The success of the program will ultimately lie with more faculty involvement.</u>

Faculty Benefits and Incentives

My sense is that many on the faculty are not heavily involved because there are few clear benefits and incentives. Mentoring graduate students should be everyone's goal but can be very difficult with large teaching loads.

The dominant concerns expressed are:

•Trivially small release from weighted teaching units (WTU) when mentoring a student as primary advisor and no release when serving as a committee member. I recommend elevating the level of WTU release for the primary mentor and providing some for committee members. This is essential and may require additional faculty hires, fewer classes offered, and additional use of lecturers. These will be controversial suggestions, but an even stronger graduate program will require dramatic changes.

•Mentoring graduate students should be an explicitly stated expectation or at least favorable factor in tenure and other promotion/merit decisions. For example, because of the present vagaries, it must be very difficult for external letter writers to assess the importance of graduate mentoring, and research by association, in their letters. Graduate students should be the backbone of strong research program.

•An almost complete lack of internal funding for graduate students. I came away with no sense for a logical, sustainable, systematic model for providing graduate stipends and research funds. More on this below.

<u>Student projects should be designed whenever possible with the expressed purpose of leading to a publishable paper or report of equivalent regional, national, or international impact</u>. The default option should always be working toward publishable data or, better, a first-authored paper. I would define the project write-up in terms of a format consistent with submission (length, # figures, specifics to journals, etc.) rather than a thesis that could be turned into a paper later. Conversion of a thesis to a paper is often difficult or impossible later as the student ramps up in a new job. Submission whenever possible will greatly enhance the faculty benefits—leading to positive feedbacks during merit/promotion, success in requests for external funds, and overall elevated department and college reputation.

In support of this model, the administration should make very clear that a first-authored paper by a student counts equally to a faculty first-authorship in terms of tenure, promotion, merit evaluations, and related salary advances. By some reports, no more than 25% of all projects result in publication. Faculty should be encouraged to publish with their students, and university assistance with publication costs would add motivation. I recommend setting aside a pool of money for this purpose.

Some members of the faculty affiliated with the program have research interests far from traditional environmental topics. This disconnect was noted as a disadvantage during conversations, including examples of faculty supervision of projects that were far outside their interests and expertise. The resulting projects in such cases are less likely to be successful and published—to the detriment of the student and mentor.

•**Why are faculty working outside of environmental research instead not taking on graduate students through the M.S. program in Geology or an equivalent program in Chemistry, etc.?**

My suspicion is that mentors in other departments (e.g., Chemistry) find themselves in similar positions. What are the relative advantages of the two options for students and mentors?

•**Both programs might benefit from a return to the previous model of a single M.S. program in Earth and Environmental Sciences.**

Different pathways can easily be delineated under this single umbrella through class and research choices, but a single program could be managed and pitched more straightforwardly. There are reasons for the separation, as noted in the Self Study, but I am not convinced they outweigh the complications of the present two-program alternative.

Funding/Support

•**Lack of funding was by far the single most common concern expressed by faculty and students—and this problem is not new to the program.**

•**Concerns are centered on both student support and funds for the research, although research funds for M.S.-level projects need not be substantial, and every bit helps. Providing support for tuition and a stipend is always the biggest challenge and arguably the most important.**

Despite this universal agreement and the long history of the problem within the program, I did not hear anything encouraging during related conversations with the administration. Other than seed grants, which are (1) small and limited in number, (2) do not help substantively with student stipend needs, and (3) apparently do not span the duration of the degree, there is no pathway or plan for an on-campus, sustainable funding model. The

Grants are part of the solution, but graduate programs are almost always built on five pillars: (1) university fellowship/scholarships, (2) federal agency fellowships (e.g., the NSF GRFP), (3) teaching assistantships, (4) extramural funding, and (5) internal research money. My guess is that grant dollars are not consistently high, and high teaching loads could be blamed for that. Teaching assistantships, from what I was told, are not used consistently to support this program. Internal funds are mostly small and relatively scare, and the NSF GRFP as an example is not a viable option for a program of this sort (e.g., M.S. only and possibly too applied). Further, there is no systematic internal fellowship program whereby all or most incoming students have their first year covered completely or partially (tuition and stipend), for example.

As a result, students are working outside jobs, in some cases full time and in environmental jobs following B.S. degrees in Environmental Sciences, which begs the question of why pursue the M.S.

There must be reasons in terms of improved quality of positions available with M.S., including higher pay and job satisfaction, greater diversity of opportunities, and career choice shifts from very different undergraduate training. But the cost-benefit analysis of the M.S. should be revisited if the benefits are not obvious or significant. If they aren't, they should be. Many students have high loan burdens, which they are balancing against family needs.

I strongly encourage the following:

•**Assign TA lines to this program and keep them in place from year to year.**

•**Develop a university fellowship program that provides incoming awards for all or most students.**

•**Enhance recruitment of international students willing and able to pay the full tuition without changing the fundamental nature and desired demographic balance of the program.**

•**Explore industrial sponsorships/partnerships (including assistance with tuition, stipend, funded research of interest to the given stakeholder, and summer internships focused on that project with salary compensation).**

•**Develop community partnerships that could lead to foundation money and summer and permanent job placement.**

•**Foster proposal submissions in every way possible (e.g., administrative and grant writing assistance, pathways to collaborative submissions across all divisional boundaries on campus, etc.). Explore special federal programs suited to this program and your university. Some of your faculty spoke to me about the challenges of proposal submission.**

•Explore federal funding through congressional earmarks (as linked to regional environmental issues, training for underrepresented groups, etc.). Provide campus-level guidance and facilitation in these efforts.

The program will never become all it can be without addressing this fundamental issue. I would assign a committee member or two to this specific topic. I understand the challenges of creating new money pools for this program (or any program), but more is needed, and the most important decisions are always the hardest. Create a culture of cooperation that will facilitate collaborative proposal submissions and shared efforts toward a solution more generally.

The Student Experience and Successes

The job placement of your graduates is outstanding and should be a source of pride—in terms of both initial opportunities and where they are years down the line (see appendix table).

•I recommend continuing to track your graduates, including surveys sent that seek information, as viewed from their current positions, about what the program got right and could have done better. Did they feel well prepared for their first and subsequent jobs? If not, why?

 •Query employers and potential employers, including those who have hired from the CSUSB program. Seek their perspectives on what is good about past and current student preparation and what could be better.

It is clear that the students would benefit from more cohesion among their peer group. I understand that many are busy, but regular get-togethers (perhaps a club) would allow for important exchanges about science, career choices, etc., and would place second-year students in the important position of providing advice to new additions to the program.

In the Classroom

•How do students pick from among the many electives?

Are they advised consistently toward an optimal, cohesive, logical program design, and if yes, by whom? A list of classes will not seem like a pathway to a well structure curriculum and training without careful steering. For example, a student interested in contaminant chemistry should be advised to take a specific sequence of classes. Such guidance happens now, but I suspect it is hit or miss depending on what the primary mentor is willing and able to do. Further, it puts tremendous burden on the program director.

•As many as 50% of your students are from your undergraduate programs, which leaves me wondering whether there are enough classes remaining specific to the training they desire (in terms of breath and focus).

•The 6000/6900 combination is well motivated generally but is not optimal in practice.

I was particularly surprised to see that they are not both taught each year, meaning that entering students might start with the Graduate Seminar (6900) one year and Advanced Environmental Chemistry and Geosciences (6000) the next. I'm assuming one of these is something closer to an introduction to the science and the program pre-research project. Highlights must/should include campus resources and the fundamentals of doing science at an advanced level, project selection and design, pathways to successes, career guidance (including outside speakers), and data quality and analysis—and that this is done in a way that speaks to the diversity of backgrounds among the incoming students (chemistry, engineering, geology, geography/GIS, etc.). Which class targets these goals (6000 or 6900)? And is the value muted if they don't get this information until their second year?

Otherwise, these details could be covered in both classes, but that would be redundant. I encourage 6900 for the second-year students with a focus on the literature, paper preparation, presentations of their work, etc. And 6000 would then be a grand sweeping introduction, and associated bonding of the first-year students, tailored for the diversity of incoming backgrounds. Connecting first-year students and second-year+ students could happen informally through activities, OR students could take 6900 twice (only once for credit). I can imagine great value in the entry-level students receiving exposure to the topics of 6900 before taking it for credit as active participants.

Summary

This report contains wide-ranging observations and suggestions. Many are known and addressed in more detail in the Self Study. My intent in those cases is to echo the concerns and validate them through the data I have acquired.

Highlights:

- •Work to grow the program in a logical and sustainable way. It lacks critical mass in several different categories, particularly levels of student and faculty participation.
- •Create stronger synergism within group, including more student-student interactions and student involvement in mentoring (sharing proposals, talking to prospective students, etc.)
- •Content and quality of advising/mentoring is too variable. To be expected, but some uniformity could be established, including the levels of input and assistance provided to students.
- •Set expectations high.
- •Learn from the highly successful examples of mentoring, funding, student successes, etc., within your group—past and present—and other similar programs at different universities.
- •Develop/improve funding models. Financial sustainability/optimization is missing.

- Students carry burdens through loans and by working, often many hours, during the program. This approach is obviously not ideal, particularly for students with family obligations.
- Students want community/local agency-industry partnerships. Often they want to stay in the area. Continue to foster these relationships.
- There is a lack of cohesion, which better sharing of resources would help.
- Are two M.S. programs the best option?
- Increase faculty buy-in through greater incentives such as greater WTU release and credit/reward at times of promotion and merit evaluations.
- Work in general for consistency in the student experience and the expectation on and by the students.
- Establish a program committee to share the workload, enhance the breadth of perspective, etc.
- Strongly encourage and facilitate publication of thesis results.
- Revisit model for classes taken, including the 6000/6900 combination.

Appendix:

Job placement history (initial and present). In a few cases, additional/advanced degrees were obtained following their CSUSB M.S.

Graduated	Entry Position	Current Position
May 2021	Environmental Health Safety Consultant at ACTenviro	Environmental Health Safety Consultant at ACTenviro
August 2021	Field Geologist at Mojave Precious Metals, Inc	Field Geologist at Mojave Precious Metals, Inc
August 2021	Lecturer CSUSB	Instructional Lab Technician Rio Hondo College, and Lecturer CSUSB
June 2020	Water Resource Specialist Yucaipa Valley Water District	Water Resource Specialist Yucaipa Valley Water District
June 2020	Geographic Information Systems Technician at City of Fontana	Geographic Information Systems Technician at City of Fontana
June 2020	Flood Control Planner at Riverside County Flood Control and Water Conservation District	Vice President, Board of Directors at Western Municipal Water District, District 2
December 2019	Tribal Environmental Manager, 29 Palms Band of Mission Indians	
December 2019	Water Resources Specialist, Mojave Water Agency	Water Resources Specialist, Mojave Water Agency
September 2019	Staff Scientist Geosyntec Consultants	Staff Scientist Geosyntec Consultants
September 2019	Air Quality Planner I, Antelope Valley Air Quality Management District and Lecturer CSUSB	Air Quality Planner I, Antelope Valley Air Quality Management District and Lecturer CSUSB
June 2019	Instructor, SBVC, and Lecturer, CSUSB	Instructor, SBVC, and Lecturer, CSUSB
December 2018	OPS Enviornmental Specialist I at Florida Department of Health, Orange County	Water Sciences System Technician II, Walt Disney World, Lake Buena Vista, Florida
June 2017	Laboratory Analyst, Palmdale Water District	Water Chemist, City of Santa Monica, CA
June 2016	Regulatory Analyst, City of San Bernardino Municipal Water Department	Environmental and Regulatory Compliance Manager at Western Municipal Water District
March 2016	Chemical Hygiene Officer Environmental Health and Safety CSUSB	graduate student in Biology CSUSB
December 2015	na	na
June 2015	Senior Engineer at City of Banning	Senior Engineer at City of Banning
December 2014	Engineering Geologist, California Dept. of Conservation	Associate Oil and Gas Engineer at California Department of Conservation
December 2014	na	na
September 2014	Air Quality Technician, Horizon Air Measurement Services, Camarillo CA	Environmental Health and Occupational Safety Specialist, LKQ Corporation, Boston MA
September 2014	Biological Science Technician, US Forest Service	Geospatial Analyst III, Resource Environmental Solutions, LLC, Durham NC
September 2014	na	at home with small children?

September 2014	Adjunct Professor at MSJC Environmental Science Department	Acceptable knowledge technologist for the Hazardous Waste Management group, Los Alamos National Laboratory
September 2014	na	na
June 2013	Geologist, AECOM	P.G., Engineering Geologist at Lahontan Regional Water Quality Control Board
June 2013	Air Quality Instrument Specialist I at SCAQMD	Air Quality Specialist at SCAQMD
March 2013	Waste Management Speciallist III at Southern California Edison	
March 2013	na	na
December 2012	Regulatory Analyst, City of San Bernardino Municipal Water Department	Insructor, Truckee Meadows Community College, Reno NV
December 2012	Implementation Manager, Yucaipa Valley Water District	Grants and Contracts Administrator, Burnet County TX
December 2012	Senior Water Resources Technician, Mojave Water Agency	Water Resource Senior Project Manager at San Bernardino Valley Municipal Water District
September 2012	Geologist, AECOM	P.G., Engineering Geologist at Lahontan Regional Water Quality Control Board
June 2012	High School Science Teacher, Beaumont USD	Chemistry Teacher, Redlands School District
June 2012	na	Associate Professor-in-Residence, UNLV
December 2011	Instructor, Dept. of Chemistry, CSUSB	Instructor, Dept. of Chemistry, CSUSB

2021-22 MS Environmental Sciences Committee Review Report
Reviewer:
Academic Program Review/Self-Study Review Committee

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:
It is noted that the M.S. in Environmental Science has gone through a quarter to semester conversion and has separated programs into two standalone degrees to meet the need of their diverse students. The program continues to recruit an even gender distribution, and well-diverse represented group.
Program was developed to be flexible, provide student mentorship, professional and ethical standards, and high standards.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:
Development of robust PLO's were finalized at a higher level of inclusiveness, an assessment plan (i.e.; annual assessment meeting, report) was developed and implemented.
Additionally, WTUs were increased for the Graduate Coordinator.
Increased in student numbers, two-degree programs, efficient use of course offerings, hiring of faculty, and opportunities for student research.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:
It is suggested that funding, assistantships, fellowships and funding be available to help the program grow. It is suggested that these opportunities be available to support the program and faculty in turn supporting the students served within the program. In order for the program to grow there needs to be opportunities for students to engage and a sufficient level of support needs to be provided to help the program. This would also help with recruitment of international students to your program.
Develop Teaching Assistantships to support students in maintaining full-time status. It appears that this is standard at many universities. This would help with developing and growing the program by allowing to students to be invested into the program.
Develop a recruitment plan and how to advertise your program for interested applicants.
Develop a plan of action on how WTUs can be used.

2021-22 MS Environmental Sciences College Dean Report
Reviewer:
College Dean

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:
The self-study and the reviewer comments indicate that the interdisciplinary M.S. program in Environmental Sciences is growing in the quantity, quality and diversity. Currently, there are 19 students working with 11 faculty who are either serving as a committee member or a chair of a thesis committee. Seven (37%) of the current students are supervised by a single faculty member in the Department of Geography and two faculty members, one in chemistry & biochemistry and another in geological sciences are supervising three each, respectively. Since the last review, the program worked on implementing new program learning outcomes (PLOs) and successfully transitioned from quarters to semesters. The program has been coordinated successfully by Dr. Joan Fryxell, and resides primarily in the departments of Chemistry & Biochemistry and Geological Sciences. Dr. Fryxell's leadership is much appreciated by the program faculty, the reviewer and the administration.

It is clear that the program is exceeding the learning and program outcomes as evidenced by the careers our graduates are pursuing. The program has a lot to be proud of itself and we are proud of them. In Spring 2022, there are 10 students enrolled in the MS program and typically graduating on an average of two MS degrees a year over the past five years.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:
Q2S, the self-study, and the reviewer comments suggest that the MS in Environmental Sciences is being very effective. Both departments and the program coordinator have done a very good job focusing on the PLOs and seeing the graduates placed in good careers. It's continued success depends on all faculty who are involved with the interdisciplinary program. Both the reviewer and the self-study describe the effectiveness succinctly and are not repeated here.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:
Some potential action plans based on the self-study and the reviewer to consider:

1. As recommended by the reviewer, it is worth for the program to consider a committee structure to decisions related to admissions, curriculum and placement. This is particularly important as the current program coordinator is FERPing, and the program needs to find a new program coordinator in the near future. We agree with the reviewer's comment that the program's continued success critically depends on higher involvement of the program faculty.
2. As the reviewer and self-study suggest, it will be worthwhile to recruit international students as well as students from other undergraduate programs across US to the program, with faculty's interest and commitment to supervise them. Such recruitment of

international students has provided significant additional resources to the graduate program in Computer Science, and these additional resources are used to support some of their graduate students.

3. We would encourage the department chairs to work with the program faculty and the grants office to provide adequate support for submitting grant proposals. During the past few years, our college has been very successful in submitting grant proposals with an excellent help from the research office.

4. We agree with the reviewer and encourage the program to connect with industry and community partnerships for internships and job opportunities for graduates of the program. Also, encourage the program to develop a proposal to make a pitch for state and federal congressional staff for future support for specific projects. The Office of Community Engagement, the Development Office, and the Director of Executive Affairs are good resources on our campus to make use of for these purposes.

5. WTUs to support the coordinator is determined by a formula developed in collaboration with the chairs in the college, and used for all of our programs. The formula used [0.10(applications) + 0.40(enrolled students) + 0.50(degrees awarded) is a measure used to determine the WTUs for a program coordinator, and it's units are clearly not WTUs. So, the comment in the self-study that WTUs are reduced by 80% is inaccurate. This measure is used to see that we are consistent across the programs and the allocated WTUs are not much different than what has been provided for each program across the college. MS is Environmental Sciences is a very small program in the college, and in Spring 2022, it has 10 of the 218 MS students in the college. Self-study reports 19 current students, and even with 19 current students, the formula would lead to 3 WTUs for the program coordinator. As the program grows in its application pool, current students and graduates, the WTUs will be adjusted appropriately.

6. Both the reviewer and the self-study recommend investing in teaching assistantships, fellowships, grant funded assistantships, and tuition waivers. We agree that all of these are excellent suggestions, and it will help very much with our students graduating with less loan burden and graduate within two years. We are very much in agreement for the support needed for our graduate students. Some quick observations to consider:

    0. Large classes in the college are provided teaching assistants, and the geological sciences courses with large class sizes are eligible to receive such support also. We encourage the departments to identify courses where teaching assistants would be needed.

    1. Grant supported assistantships and paid internships are very important and encourage and support faculty with their proposals to obtain them.

    2. Tuition waivers will be very helpful to all of our graduate programs. It will be interesting to have information on graduate programs that support MS students with assistantships and tuition waivers. Some of the R1 institutions with large out of state and international students are able to provide assistantships and tuition waivers primarily to doctoral students, and less so for MS students. Given we are an R2 institution with limited indirect cost funds and that the MS is our highest degree offered in the college (only the College of Education offers doctoral degrees at CSUSB), we need to identify sources and commit to invest on the MS students. As indicated in the self-study, the tuition for CA resident per year is $8,916, and a non-resident who takes 9 credit hours a semester would pay,

$16,044. To cover the tuition of 10 current students (who are all CA residents) would cost $89,160 per year. CNS has 145 CA residents and 73 non-resident graduate students, and a tuition waiver for all CNS graduate students would cost close $2.5 million a year. At CSUSB, we have 1,626 CA residents and 201 non-residents, and the tuition waiver for all of them (without counting additional tuition in some programs) would cost about $17.8 million a year. Identifying a source to fund the tuition waivers will be a challenge, and it is certainly a very worthwhile investment to support our graduate programs.

7. We have hired new faculty in both chemistry & biochemistry and in geological sciences during the past five years on tenure track lines. The Provost has been providing support for one course reassigned time for all untenured faculty on tenure track positions each year. Both the Office of Student Research and the Provost provide support faculty mini-grants and summer research for our faculty. Professional development funds are provided to support publication costs and travel to conferences. We will continue to invest in hiring new tenure track faculty and lecturers, consistent with FTES generated and faculty retirements, and continue to invest in faculty professional development.

8. We agree with the reviewer's recommendation that the chairs, DEC, CEC, UEC and administration to give appropriate credit for publications with students, and strongly encourage such publications. Currently, only 25% of MS student projects are published and encourage more publications that benefit students, faculty and the profession. Such publications directly benefit faculty in their promotion and tenure process and increase visibility and grant success.

9. Unlike UCs, CSUs have a heavier teaching load of 12 WTUs, leaving only 3 WTUs a semester toward research and service. Majority of faculty have reduced teaching loads through internal and external grant support, reassigned time provided by the Provost and CBA, and for some service. RPT decisions take these into account, and give appropriate credit to faculty who serve on thesis committees.

10. We agree supervising MS research thesis is time consuming and rewarding work. WTUs earned by faculty through supervision courses are paid as a supplement or reassigned time during the year they earned it and reduce the unfunded carryover to the following year. Also, the amount of credit is determined by the guidelines provided by CSU Chancellor's Office:

    0. The Chancellor's Office has provided codes (S-factors) for various types of supervision courses with differing workloads. Depending on the S-factor, the course provides faculty workload of 0.25, 0.33, 0.5, 0.67, or 1.0 WTU per student. These WTUs correspond to 45 minutes, 60 minutes, 90 minutes, 2 hours or 3 hours per week per student, respectively. The most commonly used S-factors across our college (and across CSUSB), are 0.33 WTU per student (1 hour per week) for supervision of undergraduate students and 0.5 WTU per student (1.5 hours per week) for supervision of graduate students.

    1. The MSES program requires three supervision courses: Graduate Research Methods and Design, Internship, and Graduate Project. On paper, each course provides 0.5 WTU per student to the instructor of record, which is enough to compensate the instructor to spend 1.5 hours per week with the student during the semester in which the student is enrolled.

2. The Graduate Research Methods and Design courses and the Graduate Project courses are not repeatable for credit, but there are other supervision courses that count as electives in the MSES program, which students may take if their project extends beyond one semester for planning and one semester for execution. The courses are currently set to provide 0.33 WTU per student (1 hour per week for the faculty member) because they are 5000-level courses, which may also be taken by undergraduate students.
3. We understand that some faculty may end up spending more than 1.5 hours per week supervising a student. The MSES program is welcome to submit revised curricular forms for their supervision courses if they think an S-factor that provides higher WTU for faculty is warranted. They would need to justify it on the C-form and the chair would need to consider the budgetary impact on the department. Increasing the WTUs for supervision courses will not increase the department's budget, which is based on the FTES.

11. We appreciate the ambitious goals and recommendations to have reduced teaching loads for tenure track faculty, fewer classes offered, and hire additional non-tenure track faculty to teach.
12. We recognize the need for a technician who can help faculty in geological sciences, and one has been requested to the university budget committee. Some of the graduate students are used currently to help with some of the lab courses.

Providing Department:
College of Natural Sciences

2021-22 MS Environmental Sciences Dean of Graduate Studies Report
Reviewer:
Dean of Graduate Studies

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:
With a transition to semesters in Fall 2022, the program elevated its two options to degree programs: M.S. in Environmental Sciences and M.S. in Geology.

While the self-study states that this curricular change was made to better serve our students, the external reviewer's comments indicate that the program may want to re-assess this decision.

The PLO's are well aligned with both programs' curricula.

The program successfully engages its students in research and intellectual development. Many research projects are focused on our local region and the results of these projects benefit the region.

The program tracks its alumni and their employment. The student employment data shows that the program prepares the students well to enter professional careers in their respective fields.

The faculty in the program collaborate well with the Office of Graduate Studies to recruit new students to the program.

One of the primary challenges is a relatively low enrollment and a low yield in prospective student applications.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:
In response to the previous reviews, the program finalized PLOs and implemented an assessment plan.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:
Recruitment of students to both degree programs.

Enhancement of the program's reputation and outreach.

Seeking external funding to support faculty research and student assistantships.

Providing Department:
Graduate Studies

2021-22 MS Environmental Sciences Plan of Action
Proposed Action:

- Establish a Leadership Team – The External Reviewer proposed establishing a Leadership Team to administer these two MS programs. The Chair of Chemistry and Biochemistry and the Chair of Geological Sciences have agreed to join the Graduate Coordinator to establish this Team. We will begin in the Fall 2022 Semester.
- Make a Shared Application Folder – The External Reviewer suggested making an online folder shared by participating faculty to house a spreadsheet listing current applicants, so that everyone can see all the prospective student information. We will set up a shared folder for the fall semester, initially listing the prospective students for admission in Spring 2023.
- Increase Faculty Involvement – This endeavor is an ongoing one with a range of activities to accomplish this goal. The shared application folder will help with this, but evolving the workload credit faculty accrue for serving on graduate students' committees, and even more for chairing them, is another ongoing conversation that we will undertake with the Administration to develop adequate space in the faculty workload to allow for proper interaction with graduate students.
- Examine the issues with core course sequencing and frequency of offerings. In particular, cross-listing a course causes confusion for the students and causes difficulties in assigning teaching workload. We plan t collaborate with participating faculty to develop course and program modifications that address these issues.
- Continue to pursue research grant funding to support graduate students.
- Continue to advocate with the Administration for full Teaching Assistantships that include a living-wage stipend, and tuition remission (in- and out-of-state) in exchange for teaching two lab sections per semester.
- Review our intended audiences for both the MS in Environmental Sciences and the MS in Geology, so that we can engage in more intentional targeting of these audiences.
- Continue to collect Outcomes Assessment data as established by our Program Learning Outcomes, and to submit Annual Assessment Reports.
- Continue to track our graduates, and initiate feedback surveys that are regularly requested. We propose an exit survey when students graduate, then feedback surveys every two to three years.

Timeline:

As outlined above in Proposed Actions, these action items are either already ongoing, or will be initiated in the 2022-2023 AY.

Responsibility:

The newly established Leadership Team will oversee these efforts. Particular tasks may be delegated as appropriate to one member, or to the wider participating faculty group, as needed.

Cost:

1. Some clerical resources in the combined departments of Chemistry & Biochemistry and of Geological Sciences as well as CNS in order to:

    a. Keep shared drive folders for application materials up to date
    b. Facilitate the collection of exit surveys, tracking graduate outcomes, and graduate surveys
    c. Other program-related paperwork

2. Some seed grant money from CNS or Grad Studies or Research & Sponsored Programs to assist (faculty assigned time and/or grant writers) with grant application submission. Additional support in the college to support the administrative grant responsibilities for funds received.

3. A space for program faculty and grad students to meet regularly outside of class.

4. Augmentation to the Departments of Chemistry & Biochemistry and Geological Sciences to enable a more generous S factor for graduate research classes.

    1. 5. Longer term: fund raising for graduate fellowships (or partial fellowships).

Resources:

1. Current research space, office space, and startup offered to faculty
2. PT faculty budgets to allow up to 6 WTU teaching for grad assistants to partially offset their costs of attendance
3. Students and student/faculty teams will continue to be encouraged to apply for student research mini-grants and culminating experience grants from OSR; travel funds from ASI; etc.
4. Additional information about Providing Department (below): The Department of Chemistry and Biochemistry is primarily responsible for the MS in Environmental Sciences, and the Department of Geological Sciences is primarily responsible for the MS in Geology. In addition, faculty in the Department of Biology and the Department of Geography and Environmental Studies in CSBS serve as committee members and committee Chairs for students in these programs. College of Natural Sciences hosts these programs and should recognize that costs do not necessarily "scale" from small graduate programs to large ones. Indirect money in particular could be used to offset needs of this valuable program (which generates more tuition/fee revenue than it costs based on a 2021 study).

Providing Department:
Master of Science in Environmental Sciences

2021-22 Self-Study Report BA and BS in Geology

Program Overview:

The Department of Geological Sciences at California State University San Bernardino is one of nine departments in the College of Natural Sciences. Our mission is *to provide geology majors with a thorough grounding in the geological sciences, which may be used to pursue a meaningful career in the earth sciences or one of many related fields, such as environmental law, teaching or government services. This background will also prepare geology majors for advanced studies in the geological sciences or related disciplines. The department also has a mission to educate non-majors to make informed decisions on matters pertaining to interactions between geology and society*.

We offer B.S. and B.A. degrees in Geology; for each degree, students select one of two concentrations. These options are designed to provide students with preparation tailored to their interests and career goals:

> For the B.S. in Geology, the General Geology Concentration is recommended for students planning to continue to graduate school or to other geoscience careers. This Concentration has more flexibility to allow the student to tailor electives to pursue a particular interest. The Environmental Geology Concentration is recommended for students planning to become professional geologists in the environmental, geotechnical, government service, petroleum, or mining areas, and to prepare for professional licensure.

> For the B.A. in Geology, the General Geology Concentration is recommended for students planning a career in public service and education (e.g. government agencies, park rangers and K-12 science teaching), non-profit or non-governmental environmental organizations, or pre-environmental law. This Concentration has maximum elective flexibility to produce an experience tailored to the needs of the student. In 2019, the department added a Field and Applied Geology Concentration, recommended for students planning to become professional geologists employed by environmental and geo-technical firms, governmental agencies, oil and mining companies, and for those students planning to pursue a graduate degree in geology. Emphasizing field and applied geology courses, and experiential learning, this program is designed to prepare students to meet requirements for professional licensing.

High-impact practices are central to our program:

- All students complete a closely-mentored independent research project guided by a three-semester course sequence: GEOL 3990 Geological Research Design, GEOL 4000 Undergraduate Geological Research, and GEOL 4900 Senior Seminar. This aspect of our curriculum was found to be highly effective in our program review.
- Students completing the B.S. or the B.A. with a Field and Applied Geology Concentration are also required to take Advanced Field Geology (GEOL 390X), which provides hands-on, experiential training in field geology techniques that are essential for employment and advancement in our field. California's Board for Professional Engineers, Land Surveyors and Geologists (BPELSG) requires these courses for students seeking a professional license.

These practices increase student learning, and are consistent with best undergraduate education practices in our discipline (Mosher and Keane, 2021).

Our department has a multi-faceted programmatic assessment program, built largely around our undergraduate research sequence. Committees of faculty review final written and oral presentations from students, students complete exit exams in senior seminar, and specific program learning outcomes are reviewed on a rotating basis. The pandemic disrupted these practices, but one of the goals of this program review is to reestablish a consistent post-pandemic assessment protocol.

Our student-centered mission, tailored degree options, and high-impact practices of faculty-mentored student research and field training aligns closely with the mission of the University to ensure student learning and success, conduct research, and cultivate the professional and intellectual development of our students.

Response to Previous Program Review:
<u>Summary of Recommendations from the last Program Review</u>
Our 2015 program review by Stephen Reynolds of Arizona State University was largely positive. Dr. Reynolds applauded our learning-objective driven curriculum, excellence in student education and post-graduation employment, and our faculty's strong commitment to student learning. He was particularly impressed with our program's required undergraduate research project, describing it as well-structured, contributing to students' scientific thinking, and producing skills most sought by employers.

Dr. Reynold's recommendations included hiring additional faculty; having regularly-scheduled, open-ended department-wide discussions; hiring additional technical/instructional support; involving industry employers in our curriculum; developing a consistent class schedule and offering required upper-division courses more often; and increasing our operating budget.

<u>Summary of the Plan of Action resulting from the last Program Review, and what the program has accomplished in response</u>:
Our 2015 Department Action Plan included:

- hire a new tenure-track faculty member:
  - The department hired Dr. Kerry Cato in 2016 to add Engineering Geology expertise to our curriculum. The Department also recruited Dr. Claire Todd as the chair of the department and a full professor in August 2021. We are conducting a tenure-track search in the 2021-22 academic year to replace the structural geology expertise of Dr. Joan Fryxell who is participating currently in the Faculty Early Retirement Program. This review reveals the need for an additional tenure-track hire in the coming years.
- address GEOL 301 and 391 (now 3100 and 390X) bottlenecks in the curriculum,
  - We have expanded our offerings of GEOL 390X Advanced Field Geology. We actively advise students to take GEOL 3100 Introduction to Geologic Mapping during the fall quarter of their year prior to graduation, but this advising does not reach all students particularly transfers. This self-study

highlights the need to improve our advising resources, particularly curricular road maps created for transfer students.

- offer courses on an annual basis,
  - We are able to offer most of our required upper-division courses on an annual basis; we have had to resort to hiring part-time faculty in some instances due to competing demands on faculty time detailed below.
- continuing to include guest lecturers from industry,
  - The ongoing pandemic has both facilitated and complicated this long-held department practice. Some faculty members incorporated Zoom-based industry presenters in their courses in recent years. One of the outcomes of this year's self-study will be a department-wide conversation and strategy for incorporating seminar speakers, particularly from industry, into our curriculum.
- adding fees to field courses,
  - Materials fees are now required for almost all of our upper-division courses.
- having regularly-scheduled, open-ended discussions as a department.
  - While progress may have been made in the years immediately following our last review and leading up to the Quarter-to-Semester (Q2S) transition, an extended leadership transition and pandemic disruptions have complicated efforts in recent years. After the hiring of a new chair in 2021, the department has met in-person regularly and plans to hold more open-ended discussions in the future.

- We also pledged to seek a sufficient operating budget, and solutions to our persistent need for additional technical and instructional support.
  - We continue to advocate for this support, and where possible provide additional evidence below as part of that advocacy.

Students:

Our enrollments have increased since our last review period. The number of majors in our department has fluctuated between 40 and 50 students between 2015 and 2021 (Figure 1), compared with a maximum of 41 majors over the previous review cycle. The majority of our students earn a BS, with most BS students completing the General Geology concentration. We cannot assume a meaningful long-term trend over the short span of this review period, but we are encouraged by a 25% increase in Geological Sciences enrollment from 2019 - 2021, especially given that University enrollment has declined over this time period from 20,311 in fall 2019 to 19,182 in fall 2021 (tableau.csusb.edu).

Our department's mission calls for us "to educate non-majors to make informed decisions on matters pertaining to interactions between geology and society," and we are proud to serve students across the University by offering General Education courses that satisfy categories B1 Physical Science, B3 Laboratory Activity, and B5 Upper Division Scientific Inquiry; the Global Perspectives designation; and the Environmental Sustainability pathway (Table 1). Figures 2 - 4 show past enrollment in selected General Education courses; it is challenging to identify meaningful enrollment trends in these courses given changes to General Education requirements, the fall 2020 transition from quarters to semesters, and enrollment shifts due to the pandemic.

We offer multiple courses that fulfill the University's Upper Division Scientific Inquiry General Education requirement (Category B5): GEOL 3020 Natural Hazards (NSCI 315 in quarters); GEOL 3030 History of Life on Earth (NSCI 360), and GEOL 3040 Energy and the Environment. These courses are staffed by part-time and tenure-track faculty. B5 courses are required of all CSUSB students including transfers; the only prerequisite for this course is junior or senior standing. Our majors often enroll in these courses, and overall enrollment is typically strong. As an example, Figure 2 shows NSCI 315 enrollments were relatively stable since our last program review; in spring 2021, we offered two sections of the semester equivalent (GEOL 3020), nearly doubling our enrollment in this upper-division general education requirement. We expect to offer multiple sections of Category B5 each year; adjusting to demand as necessary and in conversation with other departments in the college.

Table 1: General Education Courses offered by the Geological Sciences Department

Course # (quarter #)	Course Name	General Education Requirement	Frequency of Offering
GEOL 1000 (GEOL 101)	Introductory Geology	B1	every fall and spring
GEOL 1000L (included in GEOL 101)	Introductory Geology Laboratory	B3	every fall and spring
GEOL 1060	Environmental Geology and Geologic Hazards	B1; G designation	every other fall
GEOL 2040	Water in the West	B1; G designation	at least once a year; no regular schedule
GEOL 3020 (NSCI 315)	Natural Disasters	B5; Environmental Sustainability Pathway	every spring
GEOL 3090 (GEOL 398)	Geological Research Design	Writing Intensive	every spring
HSUP Program			
GEOL 1020	Plate Tectonics: Key to Understanding Earthquakes, Volcanoes and Tsunami	B1; G designation	HSUP only; every spring
Not Yet Offered in Semesters			
GEOL 1060L	Environmental Geology and Geologic Hazards Laboratory	B3; G designation	not yet offered in semesters
GEOL/BIOL 3030 (NSCI 360)	History of Life on Earth	B5	Offered as BIOL 3030 by BIOL faculty every fall

We also offer GEOL 309/3090 Earth: The Blue Planet every semester for students intending to teach Earth and Space Science (California Subject Examinations for Teachers (CSET), Domain 3) to grades K-8. This course is staffed by part-time and tenure-track faculty. In the 2018-19

academic year, we increased to three sections; enrollment peaked in the 2019-20 academic year (Figure 3). We plan to continue to offer this course in service to Education majors, and will monitor enrollment to ensure that we are offering an appropriate number of sections. Although our majors do not take this course, we include it here because it requires significant space and faculty resources.

GEOL 1000 Introductory Geology (formerly GEOL 101) satisfies the lower-division Physical Science General Education requirement (Category B1). These courses are typically taught by part-time faculty, but tenure-track faculty and graduate students have taught sections as well. The laboratory component of this course (GEOL 101L/GEOL 1000L; Category B3 General Education requirement) is taught by part-time faculty and graduate students. We offer multiple sections of GEOL 1000 and GEOL 1000L each semester. These courses or the transfer equivalent are the most commonly used option for completing the 1000-level requirement in our major, although the great majority of students enrolled are taking it to fulfill a General Education requirement. Figure 4 shows historic enrollment in these courses since 2015. Enrollments are relatively stable, except for a recent, dramatic decline in GEOL 1000L enrollments in spring 2021; this decline occurred because students are no longer required to enroll in both the lecture and laboratory component of the course. We will continue to monitor GEOL 1000L enrollments, and will adjust the number of sections we offer based on student demand. We are concerned that student success in GEOL 1000 is impacted by fewer students enrolling in GEOL 1000L; we discuss student success in GEOL 1000 in section V.

Our department also participates in CSUSB's High School University Program (HSUP). Students at Serrano High School in Phelan, CA and Etiwanda High School in Rancho Cucamonga, CA can take GEOL 1000 in fall semester and GEOL 1020 in spring semester; recent enrollments vary from 40 - 70 per high school. HSUP courses are taught by high school teachers who have been approved by our department faculty. The Department is in the process of establishing a new HSUP program at Oak Hills High School in Oak Hills, CA. These courses expand access to Earth science education for high school students, provide a potential recruitment pool for our department, and offer funding for high school laboratory activities. We look forward to enhancing these collaborations in the future through classroom visits and campus tours for participating students; these actions will support one of the outcomes of this review - to design and implement a recruitment strategy for our department.

Because our overall student population is small, it can be difficult to discern long-term trends in student demographics. However, available data suggest that we serve an increasingly diverse community of students. As of fall 2021, 58% of our majors are members of underrepresented groups (Figure 5); our previous self study reported that white students represented 56% of our graduates from 2005 - 2013. The proportion of female students has fluctuated between 31% and 48% from 2015-2021, and appears to be increasing over time. As they join the workforce, our graduates bring needed diversity to our field, which is predominantly white and male (Gonzales and Keane, 2020). Although there's year-to-year variation, about two-thirds of our majors are first-generation, and nearly half of our students are eligible for Federal Pell Grants. Most of our graduates join our department as transfer students, although the proportion of transfer students to first-time freshmen also varies (Figure 6).

Outside of our classrooms, our students are parents, employees, volunteers and caregivers; we are committed to understanding and meeting our students' needs. Programmatic activities to this end include:

- Requiring students to meet with their faculty advisor before registering. This approach ensures that students receive one-on-one attention from faculty about course registration, and allows our department to stay informed about courses and support our majors require.
- Developing a new Field and Applied Geology concentration for our BA degree which offers an applied option for students with limited background in math and science.
- Adapting our Advanced Field Geology courses (GEOL 390X) so that students can select an option that works best with their other responsibilities. In recent years, faculty have offered weeklong field courses in winter and over spring break, and summer courses that require additional time for travel. Students travel to locations from southern and central California, to Utah. Field geology coursework is required for students seeking a professional geology license, and we continue to develop a wide range of classes to meet this need.

Attached Files
  Section III Figures 1 - 6 .pdf

Learning Outcomes & Assessment Processes:
Our program learning outcomes (PLOs) and curriculum map (Appendix A) were revised by the department in 2018 in preparation for the quarter-to-semester (Q2S) transition. An "Articulation of Transformation Process for Q2S" report submitted in 2018 (Appendix B) details the transformation process which included nearly forty department faculty meetings and workshop attendance by faculty members. Our curriculum map (Appendix A) indicates the courses in which our students are introduced to, demonstrate, and master our PLOs; these courses are described in CSUSB's catalog. A significant Q2S transformation in our program was the expansion of GEOL 3990 Geological Research Design, a writing-intensive course to help students transition from knowledge consumers to knowledge creators.

Our curriculum is closely informed by institutional and professional standards. Appendix C aligns our PLOs with CSUSB's Institutional Learning Outcomes, and with the State of California's Board for Professional Engineers, Land Surveyors, and Geologists (BPELSG). California's BPELSG oversees the licensing process for graduates interested in becoming professional geologists, and maintains the professional standard in our state. Our PLOs also reflect current research about what undergraduate geoscience education should accomplish, including core concepts (PLOs 1 & 2), scientific skills (PLO 3), and competencies in critical thinking and effective communication (PLO 4; Mosher and Keane, 2021).

Our department has a history of thorough and responsive assessment strategies (Appendix D). Formal assessment activities occur primarily in our required research sequence: GEOL 3990, 4000, and 4900 in the semester system; GEOL 398, 399 and 590 in the quarter system. In addition to embedded assessment activities in upper-division courses, annual programmatic assessment activities include:

- Committees of three faculty assess each student's final research proposals and presentations using a rubric that incorporates all programmatic learning outcomes (e.g., Appendix E).

- Supplemental assessment activities, focusing on a specific PLO which rotates each year.
- Exit exams in GEOL 590/4900 (e.g., Appendix F).
- Faculty meet in June to discuss the year's programmatic assessment activities, and to "close the loop" by identifying actions or adjustments that will improve student learning.

The pandemic has interrupted our typical assessment practices, but we have a uniform set of assessment tools that we can use to evaluate student learning in our new semester-based curriculum. We will establish a cloud-based clearing house of standardized assessment data to facilitate meaningful assessment and informed curricular adjustment.

Attached Files
  Appendix A - Curriculum Map.pdf
  Appendix B - Articulation_of_Transformation_Process_for_Q2S.pdf
  Appendix C - Geology PLO Alignment Revised 2022.pdf
  Appendix D - Assessment Activities since the last program review.pdf
  Appendix E - GEOL399-final_paper_rubric.pdf
  Appendix F - Assessment Exam 2019 KEY.pdf

Program Effectiveness:
<u>Alumni Achievement</u>
Our mission calls for us to prepare students for a meaningful career in earth sciences, and the clearest evidence of the effectiveness of our program is the success of our alums. Of 72 BA/BS graduates from our department since 2015, 47 of them are employed in our field; Appendix G lists our graduates' employers. We were unable to confirm the employment fields of 18 of the remaining students, but 85% of those we could confirm are working in geosciences or a related profession.

Survey Question	n	Average Score	Representative Comments: What was most effective?
My degree provided me with a thorough grounding in Geological Sciences	12	4.1	Applied/"Real world" activities (n = 4) Accessibility of professors/small class sizes (n = 4)
CSUSB's Geological Sciences program prepared me for professional life after graduation	12	4	Faculty as models (n = 3) Geologic skills and problem solving (n = 4)
CSUSB's Geological Sciences program prepared me for getting my professional geology license	6	4.3	Core classes (n = 2) Solid foundation/basics of "geology knowledge" (n = 2)

Through CSUSB's alumni office, we distributed a survey to 102 Geological Sciences alumni and heard back from 12 who graduated between 1995 and 2021 (survey questions available in Appendix H). 10 of those respondents work in geological sciences, and all respondents are working in STEM-related fields. Table 2 shows that survey respondents agree on average that our program provided a thorough grounding, and prepared them for work in our field. Despite a low response rate, survey comments highlight the value of our high-impact practices in preparing our graduates; 11 out of 12 respondents cite field experiences as the most memorable educational experiences in our program.

Table 2: Alumni Survey Responses; n = number of respondents, scores on a scale of 1 - 5 where 5 represents "Strongly Agree"

Survey of Current Students
Six of our 55 undergraduate students responded to our survey (questions available in Appendix I). Despite a low response rate, repeated references to small class sizes, and faculty availability and advising provide evidence of an effective program (Table 3), and reflect the individualized attention our students receive. Student respondents agree that we are fulfilling our mission by providing them with a thorough grounding in our field, and career-relevant preparation. Multiple students cite applied skills as the most effective aspects of our curriculum.

Table 3: Student Survey Responses; n = number of respondents, scores on a scale of 1 - 5 where 5 represents "Strongly Agree"

Survey Question	n	Average Score	Representative Comments: What was most effective?
My degree is providing me with a thorough grounding in Geological Sciences	6	4.5	Faculty expertise (n=3) Accessibility of professors/small class sizes (n = 3) Hands-on/"Real world" activities (n = 2)
My degree is preparing me for a meaningful career in earth sciences	6	4.5	Faculty advising/sharing opportunities (n = 5) Practical, geologic skills (n = 3)
I am confident that I will be able to finish my Geological Sciences degree following a timeline that works for me	6	4.5	Faculty advising, help from faculty (n = 5)

Assessment findings
We summarize key assessment activities findings in Appendix D which shows how our annual assessment activities led to substantial curricular change, including the creation of a writing-intensive course GEOL 3990 as part of a new, three-semester course sequence to guide students through their research projects. Our ability to provide definitive quantitative evidence of long-term trends in student learning is limited by (a) curricular changes associated with the Q2S transition, (b) pandemic-related disruptions in departmental assessment practices, and (c) decentralized assessment data collection. One of the recommendations of this self-study is to establish a cloud-based database of our annual assessment activities so we can assess long-term trends in student success. Examination of assessment data collected through 2019 (all on the quarter system) supports the following findings.

Our program is successful at providing students with a strong background in Geological Sciences. Faculty assess student oral, poster, and paper presentations of their research project using a scale of 1 - 5; the department has defined a score of 5 as an A for a "strong" research project, and a score of 4 as a B for a "satisfactory" research project. Most students score a 4 or higher on their final research products; 2019 class-averaged scores for demonstrating a strong background in Geological Sciences were 4.5 ± 0.5 for the written report, 4.4 ± 0.3 for the poster presentation, and 4.4 ± 0.5 for the oral presentation.

Using student performance on our practical exit exam, we adapted our curriculum to improve retention of fundamental geologic knowledge, including rock and mineral identification; Figures 7 and 8 show that an increasing number of students score above department-defined success thresholds.

Our students have experience using the geologic lab and field equipment and software central to undergraduate geology curriculum. Rubric-based assessment of final research projects and more detailed data collected in 2017 and 2018 reveal that the majority of our students can use fundamental geologic tools such as Brunton compasses and petrographic microscopes (See Appendix J for graphical results). Student experiences are more limited with complex instrumentation such as our scanning electron microscope. In order for our students to benefit from the more advanced instrumentation in our department, we need additional technical support to facilitate student training and safety, and equipment maintenance.

Our students achieve effective communication skills and scientific research competence, but only with time-intensive, closely-mentored instruction and scaffolded assignments throughout their research sequence. Over the review period, we implemented scaffolded assignments such as additional practice for oral presentations, and grammatical and short writing exercises. Our primary achievement in the last review cycle was the design of a new writing-intensive course (GEOL 3990) which we hope will provide students with the additional time, practice, mentorship and confidence needed to design feasible research projects and achieve effective scientific communication skills. We will use the upcoming review period to measure the impact of this new course.

Student Retention and Graduation Initiative 2025 (GI 2025):
We are committed to helping our students graduate. Survey responses from our current students show that they will be able to complete their degree on their preferred timeline (Table 3). Departmental efforts in support of timely student graduation include:

- Requiring one-on-one faculty advising for students before they register, and reaching out to individual students who are reluctant to make appointments
- Improving advising materials such as road maps for transfer students for whom it is essential to register for GEOL 3100 and 3990 in their first year
- Adjusting course offerings based on student PAWS reports and graduation timelines
- Increasing enrollment caps so all students who need a course can take it
- Proactively monitoring each student's PAWS report, reaching out to students as needed

Tables 4 - 5 show our graduation and retention rates since GI 2025 began in 2015. Given the small cohorts, particularly of first time freshmen, data are sensitive to the decisions of individual students and difficult to attribute to a specific programmatic cause. Few first-time freshmen

express interest in our program, due in part to limited K-12 exposure to earth science. Nevertheless, these data show that we retain students, but can employ more strategies to achieve higher 2-year and 4-year graduation rates, particularly for transfer students. Our departmental goals over the next review cycle are:

- improve transfer advising materials such as road maps,
- work more closely with professional advisors on campus to ensure that transfer students register for the correct courses in their first semester,
- investigate prerequisites that may slow student progress, and
- investigate offering departmental prerequisite courses such as GEOL 3100 more frequently, (which would require more faculty) to ensure efficient completion of our degree.

We are eager to reach more students to maximize the utility of our high-impact curriculum, and our ability to prepare students for employment in our field. As a department we will explore additional on- and off-campus recruitment strategies to attract more students to our major. Possible approaches include (a) developing closer relationships with and giving presentations to our HSUP classrooms at Serrano and Etiwanda High Schools, (b) working with first-time freshmen advisors to advertise our curriculum to students who have not yet declared a major, and (c) reconnecting with community colleges in our region to recruit and to ensure a smooth transition for transfer students in our major.

As a part of our commitment to student retention, we also look forward to continuing and reenergizing community-building efforts for our students. Our department maintains a student lounge (BI-011) as a work area and gathering place for students. When on-campus instruction resumed in fall 2021, our department initiated a "Geology Drop-In"-session every other week. We used these gathering times for informal conversations about advising, student research interests, and Geolloween and Geoliday celebrations. Survey responses show that our current students value these gatherings. Student survey responses also indicate an interest in reestablishing Geology Club, which waxes and wanes as enthusiastic students come and go. Over the next program review period, we will explore ways to promote continuity in Geology Club activities and leadership.

Table 4. Retention and Graduation Rates for First Time Freshmen in Geological Sciences; CNS = College of Natural Sciences. **Bolded values = meeting CSUSB's goals.**

First Time Freshmen	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
Cohort Count	3	2	4	1	1	2
2nd year retention	100%	100%	100%	100%	100%	100%

3rd year retention	100%	50%	100%	100%	0%	
4th year retention	100%	50%	100%	100%		
4 year graduation	**100%** (CNS = 14%)	0% (CNS = 19%)	25% (CNS = 19%)		**CSUSB Goal = 30%**	
5 year graduation	100%	0%				
6 year graduation	100%					

Table 5.Retention and Graduation Rates for Transfer Students in Geological Sciences; CNS = College of Natural Sciences. **Bolded values = meeting CSUSB's goals.**

Transfer Students	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
Cohort Count	3	5	7	4	6	11
2nd year retention	66.7%	100%	100%	100%	100%	90.9%
2 year graduation	0% (CNS = 16%)	20% (CNS = 19%)	28.6% (CNS = 19%)	**50%** (CNS = 34%)	16.7% (CNS = 26%)	**CSUSB Goal = 45%**
3 year graduation	0%	80%	71.4%	100%		
4 year graduation	66.7% (CNS = 71%)	**100%** (CNS = 77%)	**85.7%** (CNS = 75%)			**CSUSB Goal = 83%**

Equity Gaps:
Our department is fully committed to the success of all of our students. We support the University's efforts to close equity and achievement gaps for students from communities

underserved and historically underrepresented in higher education and in STEM fields. Table 6 shows equity gaps at the University, college and department level for underrepresented minorities (URM), Pell grant recipients, first generation college students, and women; these data are calculated from the total student population from 2015-2021, and compare the success of subgroups of students to the success of the overall student population. Although our equity gaps are smaller than those of the college, we agree with the University that all equity gaps should be eliminated. In the coming years, we look forward to working with our College to identify and implement strategies to improve the success of our students, particularly those from underrepresented and underserved communities.

Course-specific equity gap data point to potential strategies for our department. For example, GEOL 1000L, our Introductory Geology Laboratory course, has our department's highest DFW equity gaps for first-generation students (16%) and underrepresented minorities (13%), and has the third highest equity gap for our students who are Pell grant eligible. GEOL 1000L also has the highest DFW% of any course in our department (21%). Fall 2021 equity gap data reveal that GEOL 1000 has the 26th highest DFW% in the College, and our department has among the highest equity gaps for underrepresented minorities, Pell grant eligible and first-generation students.

Our department has initiated discussions about these equity gap data, and we plan to review the GEOL 1000/1000L curriculum in the coming year as part of our response. Questions addressed by this investigation will include:

- Which students enroll in GEOL 1000 and 1000L and why? What advising information do students receive about the course? Traditionally, introductory geology courses are recommended for students with limited background in STEM fields, who are majoring in non-STEM fields.
- What is the impact of the Q2S transition on our GEOL 1000 and 1000L curriculum, and how are these changes affecting students?
- What is the impact of the removal of the GEOL 1000/1000L co-registration requirement on course content, and how are these changes affecting students?

We will investigate these questions through additional data collection and department discussions, and recommend curricular adjustments if and as needed. The next review period will offer an excellent opportunity for us to complete this work, and assess the impact of any changes we make.

Table 6. DWF Equity Gaps calculated from 2015-2021 student population. Red, yellow, and green shading refer to largest, intermediate, and smallest gaps respectively. Source: tableau.csusb.edu

DFW Equity Gaps, 2015-2021	CSUSB	CNS	Geological Sciences
Underrepresented Minorities	4.2%	4.7%	3.4%
Pell Grant Recipients	3.2%	2.8%	2.4%
First-Generation	3.2%	3.6%	3.5%
Women	1.4%	1.8%	0.1%

All students, 2015-2021	CSUSB	CNS	Geological Sciences
Enrollment	1,224,338	353,658	17,635
GPA	3.09	3.05	2.94
DFW%	10.2%	12.2%	12.7%
Fail%	6.3%	7.7%	6.4%

Faculty Achievement:
Our faculty are productive scholars who expand knowledge in our field, engage with our community, serve our professional organizations, and involve our students in their work. Appendix K catalogs these accomplishments. Our faculty in the department have authored over 30 scientific articles since our last self-study; the majority of these articles included student authors. Since 2015, we've secured over seven million dollars in external funding to support our students and research, and we are frequent presenters and conveners at regional and national conferences. Geological Sciences faculty have been recognized on campus and by professional organizations for our accomplishments.

Curricular Innovations:

Many curriculum innovations emerge from our faculty's active scholarship programs. Dr. Melchiorre and Dr. Cato secured external funding from the Keck Foundation and from donor Caroline Amplatz (Amplatz Foundation). These funds have supported the incorporation of state-of-the-art mapping technology into courses such as GEOL 3750 Field Methods in Hydrology, GEOL 390X Advanced Field Geology, GEOL 4100 Engineering Geology, and GEOL 5620 Site Investigations. Students collect their own field data using tablet-based mapping applications and portable Light Detection and Ranging (LIDAR) scanners to study the geomorphology of regional field sites. Students process field data in a state-of-the-art computer lab (BI-009). Undergraduate researchers in GEOL 3990, 4000, and 4900 use hand-held and benchtop X-ray Fluorescence (XRF) spectrometers, a scanning electron microscope purchased with a Vital and Expanded Technologies Initiative (VETI) grant secured by Dr. Lazar, and a three-dimensional digital microscope purchased with a VETI grant secured by Dr. Leatham.

Attached Files
  Appendix G - Selected List of Alumni Employers.pdf
  Appendix H - Alumni Survey Questions.pdf
  Appendix I - Student Survey Questions.pdf
  Appendix J - 2017 and 2018 Focus on PLO 4.pdf
  Appendix K - Faculty Engagement and Achievement - 2015 - 2021.pdf
  Section V Figures 7 & 8.pdf

Program Resources:

Faculty and Staff

We have six tenure-track faculty members (Table 7). In response to the last program review, we hired Dr. Kerry Cato in 2016 to bring expertise in Engineering Geology. Dr. Sally McGill transitioned to a full-time Associate Dean position in 2018. In 2021, the department hired Dr. Claire Todd to serve as department chair, and provide expertise in Quaternary Geology. Dr. Joan Fryxell is participating in the faculty early retirement program; we are in the midst of a tenure-track search to replace her expertise in Structural Geology. The number of part-time faculty has fluctuated over the years, but we currently employ four lecturers and two graduate teaching assistants. One of our lecturers, Fred Winkler, has taught part-time at CSUSB since 2001, and participates in our High School University Program. Debbie Kunath-Leatham and Sadie Kingsbury have taught in our program since the 2015-16 academic year, and Bryan Castillo joined our faculty as a lecturer in fall 2019.

Table 7: Tenure-track faculty

Faculty	Year Hired	Expertise	Comments
Britt Leatham	1987	Paleostratigraphy	
Joan Fryxell	1989	Structural Geology	Participating in the FERP; currently doing a tenure-track search for a new structural geologist
Sally McGill	1991	Neotectonics	Currently Associate Dean
Erik Melchiorre	2002	Mining/Hydrology	
Codi Lazar	2015	Petrology	
Kerry Cato	2016	Engineering Geology	
Claire Todd	2021	Quaternary Geology	Hired as chair

Table 8 and Figures 9 - 13 show an increase in our Faculty's workload in recent years. The number of our full-time equivalent faculty (FTEF) has declined slightly since spring 2020, although we have more FTEF than we did at the beginning of this review cycle in fall 2015. The number of full-time equivalent students (FTES) has increased over the same time period, as have our classroom weighted teaching units (WTU) and our student-faculty ratio (SFR). In recent years, these increases have occurred in concert with decreases at the college level. Our supervisory WTUs, associated with mentoring undergraduate research, are at the highest level since 2015. Increased sections of our Upper-Division Scientific Inquiry General Education courses likely drive the recent increase in FTES and SFR. Longer term fluctuations in declared majors are reflected in variations in FTES and SFR over the entire review period. Comparing

spring 2021 metrics against average and fall 2015 values reveals a long-term increase in faculty workload.

Table 8: Faculty workload metrics 2015-2021. +/- values denote standard deviation. Source: dashboard.csusb.edu. FTEF/S = full-time equivalent faculty/students, WTU = weighted teaching units.

Faculty Workload Metrics	Fall 2015	2015 - 2021 Average	Spring 2021
FTEF	6.9	8.7 +/- 1.1	8.3
FTES	243	279 +/- 41	299
Supervision WTU	6.2	5.4 +/- 2.4	10
Classroom WTU	91	102 +/- 13	104
Student-Faculty Ratio	35	32 +/- 5	36

We are supported by a departmental Administrative Support Coordinator (ASC) whose role is essential in maintaining the day-to-day operations of the department. Our departmental ASC coordinates the use and maintenance of our vehicles, manages departmental purchases and budgets, provides advising support to students, processes documentation required for field trips, executes administrative tasks associated with faculty travel, and performs innumerable support functions for the department. Our long-time ASC has just announced her retirement; we are eager to fill this position.

For technical support, we rely on two College of Natural Sciences staff: equipment technician James Pelley, and information technology consultant Birdy Wang. James and Birdy provide support to all departments in the College; our use of their time varies widely throughout the year, ranging from zero to several to tens of hours/week. In recent years, we have relied on a graduate student to serve as an introductory lab coordinator; this position sets up weekly labs, maintains introductory lab equipment and supplies, coordinates the updating and ordering of the lab manual, ensures safe storage of chemicals, and holds orientations and organizational meetings for lab instructors. We require more technical and instructional support to sustain our high-impact curriculum. Additional support would allow for expanded and more consistent training for our students to use departmental instruments and equipment, improved safety for students and faculty, more efficient use of our teaching and storage spaces, and more thorough integration of state-of-the-art technology into our courses.

Professional development funding and opportunities
Our faculty have benefitted from the wide range of compensated professional development activities available on campus, including the Next Generation Smart Classroom training, Academic Technologies and Innovation collaborations, and Affordable Learning Solutions grants. These opportunities translate to improved learning opportunities for our students. Faculty also rely on professional development funds provided by the University, although use of professional development funds was impacted by the pandemic. These funds are essential for conference attendance, processing a small number of samples in support of a grant proposal or undergraduate research project, and other costs associated with maintaining an active scholarship program. As research and in-person activities resume, we will track our professional

development funding needs to ensure that we are maximizing the support provided by the University, and can advocate for additional funds in a timely manner as necessary.

Funding for program operations and activities
The pandemic and a prolonged leadership transition in our department makes it difficult to assess the adequacy of programmatic funding over the review period; it has been challenging to acquire historical budget information. We will create a shared cloud-based record of our department budget to ensure a more effective assessment in our next review.

Through support from our outgoing Administrative Support Coordinator, Christina Palmer, we know that our operating budget has fluctuated over the review period, with initial deposits ranging from ~ $4000 to over $10,000. We rely on laboratory fees to fund instructional supplies. This account fluctuates with enrollment; it was over $12,000 for the 2021-2022 academic year. Both funding sources are absolutely essential for maintaining our high-impact, lab- and field-based curriculum. Funding from the College of Natural Sciences, the Vital and Expanded Technologies Initiative, and external grants have supported the acquisition of high-cost instrumentation and equipment that is employed in our upper-division courses, and in student-faculty research.

Faculty confusion and concern about our budget arise for a variety of reasons including: (a) lack of transparency or understanding of budget availability; (b) changing policies regarding which funds roll over to the next academic year; (c) extremely long processing times for purchasing and accounts payable; and (d) delayed charges and uncertain costs associated with support provided by facilities. Over the next review period, our department will work toward full transparency, improved documentation, and clear communication about departmental budget decisions. These changes will help us more clearly identify and advocate for our funding needs.

Operating, maintenance, and repair costs are hard to predict and to plan for, and therefore they can be more challenging to cover. Low initial operating budgets of $4000 - $5000 has the effect of disincentivizing preventative maintenance and other spending because faculty are aware of the possibility of unexpected costs. Our three department Suburbans require periodic service (Table 9); these department vehicles are self-insured, so any repairs are expected to be covered from our operating budget. In the past month, we've approved $1400 on Suburban repairs such as tire replacement and a cracked windshield. We understand that the college will try to support what we need - and this support is greatlyappreciated - but faculty still operate from a mode of scarcity and with a do-it-yourself mentality; this mentality is exacerbated by the lack of department-specific technical and instructional support. Reluctance to spend leads to a reluctance to articulate funding needs until it is too late. In the next review period, our department will develop a departmental budget strategy that identifies our regular expenses and estimates annual funding required for unexpected repairs. Concerns about our budget are often met with the generous statement, "tell us what you need," but identifying and agreeing on needs and completing requests takes time. We will allocate more time to this task over the next review period.

Grants and other external sources of funding
Our department has a strong record of securing internal and external funding to support our program, as described in Appendix K and Section V. We rely on these resources to purchase state-of-the-art equipment and instrumentation for our research and classes. In some cases, we rely on external funding to cover travel associated with field-based classes, in addition to travel associated with the funded research. The effectiveness and productivity of these externally-

funded activities is constrained by limited support for externally-funded activities on campus. Faculty experience delays in purchasing, billing, and accounting - all of which make it difficult to execute grant-funded activities efficiently and to complete the proposed research. We are in conversation with our College about strategies for improving administrative support for grant-based activities in our department.

The department has seven [externally-funded student scholarships](#). These scholarships are administered by offices outside of our department. In 2021, five separate scholarships were awarded in amounts ranging from $260 - $876.

<u>Facilities, Equipment and Instrumentation</u>:
We detail our facilities, equipment, and instrument [on this webpage](#). Our teaching spaces are located in the Biological Sciences building (BI), although our General Education lecture classes (GEOL 1000, 1060, 3020 and 3040) and teacher preparation lecture sections (GEOL 3090) are taught in large lecture halls across campus. In the Biological Sciences building, we have four dedicated classrooms:

- BI-112 is a 30-seat lab classroom used for GEOL 1000L and laboratory sections of GEOL 3090; this room is occupied up to nine hours per day. Careful scheduling is required to ensure faculty can access the classroom for laboratory preparation.
- BI-116 is a 24-seat classroom used primarily for 2000- and 3000-level classes. BI-116 has three fume hoods and sinks at each student workstation. The utility of this room is limited due to insufficient storage space for teaching samples, and outdated plumbing and electrical which requires periodic flushing of sink drains and repair of electrical outlets.
- BI-117 is an 18-seat classroom used for upper-division classes.
- BI-009 a new computer lab made possible by external funding. This classroom contains high-powered computer workstations capable of processing large geospatial datasets such as those collected by drones. This room also houses a high-resolution, three-dimensional, digital microscope used in student and faculty research.

BI-116, BI-117, and BI-009 also serve as work spaces for students completing laboratory-related assignments or research outside of scheduled class periods. Most of our classrooms are in use all day, either by a class; by students completing course assignments that require samples, microscopes or maps; or by faculty preparing for their next class session.

Each tenure-track faculty member has a laboratory to support their research and student research projects; these facilities range from updated and operational, to suffering from significant issues such as periodic flooding. We are enthusiastic about the proposed Interdisciplinary Science Laboratory Building (ISLAB); the current plans for this building include three updated faculty research labs for our department. These facilities are critical for recruiting new hires, and maintaining safe and current research spaces for students and faculty.

We also manage a copy room, a student lounge, a teaching specimens storage room, and a geologic preparation facility, known as "the rock shed." The rock shed houses equipment for rock crushing and thin section preparation, a room for some geochemical processing such as mineral assays, and storage space for field equipment and samples. The rock shed lacks critical

infrastructure such as dust mitigation equipment; in the upcoming review period, we hope to refurbish this facility to ensure the health and safety of students and faculty.

The department relies on three vehicles to support our field-based program (Table 9). Field-based pedagogy is central to our curriculum, and required by California's state licensing board. Almost all of our upper-division courses and some of our lower-division courses provide field-based learning opportunities for students. These trips typically require at least one Suburban; some trips necessitate the use of all three. Faculty also use Suburbans to support graduate and undergraduate research. We fund vehicle usage from our operations and lab fees budget, and all vehicle usage and maintenance is coordinated by our ASC. Our ASC documented over 18,000 miles of Suburban usage since May 2019 (Table 10); this value underrepresents our typical vehicle usage due to limited travel during the pandemic. We hope to seek funding for an electric utility vehicle in the near future to reduce fuel expenses; we also hope to implement a regular preventative maintenance program for these vehicles.

Table 9: Departmental Suburbans

Vehicle #	Mileage	Year	Mileage/year
88	84,482	2007	6034
243	49,921	2012	5547
246	25,002	2015	4167

Table 10: Departmental Suburban Usage Statistics for all three Suburbans since May 2019; values impacted by severely limited use during the pandemic, beginning March 2020

Total Miles Traveled	18,124
Number of trips	85
Maximum trip length	970 miles
Median trip length	135 miles
Average trip length (+/- standard deviation)	213 +/- 220 miles

Library Resources
Faculty and students rely on our library to access scientific journals and other scholarly materials; these resources are essential to our classes and student-faculty research. CSUSB Librarian Xiwen Zhang is developing a report of library resources specific to our department. This report is available in Appendix L.

Specimen Collections
Donors have given the department two valuable specimen collections that are typically stored in our rock preparation facility. CSUSB emeritus faculty member Stuart Ellins donated a museum-quality mineral and gem collection to the department in 2004. Dr. Joan Fryxell set up a temporary display of a subset of this collection in Pfau Library in 2021 (Appendix K). CSUSB Chemistry Faculty member Dr. David Maynard also donated a substantial mineral specimen

collection to the department. The Maynard Mineral Collection comprises several hundred specimens, it includes samples from historical sites across the western USA with specialization in local sites, many of which are now inaccessible. These specimens are used in the mineralogy course and have been used in senior projects. We hope to establish permanent displays of these specimen collections over the next review period, which would facilitate increased integration into our curriculum, align with donor wishes, and inspire interest in our program.

Attached Files
  Section VI - Figures 9 - 13.pdf
  Appendix L - Geology Library Resources Report.pdf

Summary & Recommendations:
Summary of Departmental Strengths
We are fulfilling our mission to provide our majors with a thorough grounding in geological sciences, as evidenced by assessment data and survey responses. The success of our alumni demonstrates that we fulfill our mission to prepare students for meaningful careers; our graduates are hired and retained in our region. Our general education enrollments demonstrate our commitment to our mission to educate non majors about geology and society; we reach about 1500 students with general education courses each year.

Graduation and retention rates show that we support, retain, and graduate our majors. We provide individual attention to our majors through one-on-one advising, closely-mentored undergraduate research, and field-based classes. These practices are labor-intensive, but highly effective.

We are a highly productive faculty, with an established record of raising external funds and publications. Our students benefit from these activities by training on externally-funded state of the art technology and by authoring papers with faculty.

We are an efficient department, balancing large general education classes with small, upper division courses for our major. Our student-faculty ratio is typically higher than the college average. Our full-time equivalent students and enrollments are increasing slightly in recent years despite declines in college and University enrollments.

Summary of Recommended Improvements for the Department
Building on slow growth in the number of majors over the last review cycle, **we hope to expand the number of majors in our program in the coming years**. The US Bureau of Labor Statistics predicts a 7% growth in our field between 2020 and 2030 (this number excludes hydrologists; estimates have not been released for employment in hydrology, a field that employs our graduates (Appendix G). Southern California has the third highest employment level in our field of any metropolitan area in the country. Geological training is increasingly critical in the face of societal challenges such as climate change and availability of metals for electric cars. We are eager to train the next generation of geoscientists in our region. As part of a departmental strategic plan, we would like to research and define an enrollment target for the next review period, and to establish a coherent recruitment strategy, including intentional outreach in our introductory courses, and more formal coordination with local community colleges and our HSUP classrooms. We also hope to increase our visibility on campus by building permanent displays of our mineral collections.

Our history of consistent assessment practices was interrupted by the Q2S transition and the pandemic. **We would like to reestablish our annual assessment practices, and create a cloud-based clearing house for annual assessment data** so we can identify and respond to long-term trends in student learning.

Given student performance and equity gaps in our introductory courses, **we would like to review GEOL 1000, GEOL 1000L, GEOL 1060, and GEOL 1060L to identify why students enroll in our courses, how our curriculum has evolved in the wake of the Q2S transition, and how we can continue to support all students in these courses**.

We would like to improve our advising resources, offer some classes more frequently as staffing allows, and establish a more consistent class schedule that reduces conflicts between classes in and outside of our department (some supporting coursework such as Physics courses have lectures on Friday that conflict with our field-based courses). These changes would support long-term planning for students and faculty, help students complete their degree on their preferred timeline, and thus support the CSU's GI2025.

The department chair and ASC will work toward transparency and improved documentation of funding needs and availability, budget structure, and departmental spending. These practices will allow for more efficient resource allocation within our department, and more effective advocacy for increasing support for our work.

We want to rebuild a post-pandemic CSUSB Geological Sciences community with current students and alumni, and re-energize our activities in regional geologic organizations. This initiative could include: (a) the continuation of virtual and in-person speakers in our classes; (b) reestablishing pre-pandemic practices such as the integration of seminar speakers into courses and department events; (c) hosting networking events for students; (d) the reestablishment of an alumni advisory and support group, and/or (e) supporting the reestablishment of the Geology Club. Our department has a history of hosting events on campus, and participating in regional geologic conferences. We would like to resume these activities as the pandemic wanes.

Recommendations for Improved Support from the College and University
We request an additional tenure-track faculty position in support of recent and future growth in our program. We are currently conducting a tenure-track faculty search to replace a retiring faculty member, but we also need to fill a vacancy created by the promotion of a faculty member to an administrative position. Currently, we do not have sufficient faculty to meet the needs of our majors and fulfill our responsibility to the University:

- Faculty time is over-committed to assigned time associated with external funding, administrative responsibilities, and providing the courses our students need.
- We cannot offer upper-division courses as frequently as our students need. These courses are required by our licensing authority, CA BPELSG, and by our major; more frequent offerings would align with the University's GI2025 goals. In spring 2022, we had to hire an additional part-time faculty member to teach a course required for our majors due to limited tenure-track faculty availability.
- Additional faculty are required to balance the needs of our majors with our General Education courses.

- Our majors have diverse needs and interests, and we do not have sufficient faculty to provide a wide range of course options for our students. It is difficult to offer existing electives and new specialty courses.
- We have insufficient faculty to supervise high-impact practices such as our undergraduate research sequence which was cited as a highly effective aspect of our program in our last review.

We request an increased operating budget. The operating budgets granted to the department in the beginning of the year do not have sufficient funding to maintain our high-impact practices and CA BPELSG-required curriculum, particularly funding for renewing software, and maintaining and repairing equipment and vehicles. We currently support some of our advanced field courses through external funding, but this is not sustainable. Our own commitment to more clearly document our spending and identify our needs will help us define a sufficient operating budget for our department.

We request a department technician and lab coordinator, roles that could be filled by one full-time position. Our last two program reviews have called for additional technical and instructional support, but these requests have not been fulfilled. We do not have sufficient staffing to maintain safe and consistent operation of instrumentation and equipment required for our field research and high-impact curriculum.

We request improved administrative support, particularly for grant administration. We struggle at times to find sufficient administrative support around campus to perform our research, particularly regarding purchasing items with grant funding. Long delays in purchasing and accounts payable make it difficult to effectively manage grant budgets.

Attached Files
Lists of Tables and Figures, and References.pdf

Providing Department:
Bachelor of Arts in Geology

External Review, California State University, San Bernadino, Geology BA and BS in Geology

By: John Wakabayashi, Professor of Geology, California State University, Fresno, Department of Earth and Environmental Sciences, 2576 E. San Ramon Avenue, Mail Stop ST-24, Fresno, CA 93740. jwakabayashi@csufresno.edu

To: Dr. Clare Weber, Deputy Provost and Vice Provost, Academic Programs

Cc.   Dr. Sastry Pantula, Dean, College of Natural Sciences

        Dr. Claire Todd, Chair, Department of Geological Sciences

Summary Comments.

    This external review of the California State University, San Bernadino (CSUSB) Geology BA and BS programs is based on reading the 2021-2022 Self-Study Report on those programs, as well as Zoom meetings with department faculty, students, Dean Pantula, and Vice Provost Weber, conducted on February 28 and March 2, 2022. In addition to addressing specific questions on Learning Outcomes, Faculty Engagement, and Program Resources, it is my goal to assess this program in the context of other comparable geology programs, including those in the CSU system, as well as assessing the success and value of the program from the reference frame of the professional geologic community that employs most graduates of the program. This context is a product of my 17 years as a geology professor at California State University, Fresno, in addition to my 16 years of experience as a professional geologist that preceded my academic career, and continuing association with the professional and academic geology communities.

    In summary, I find the Geology program to be vibrant and strong, with large strides made since the last review and evidence of a continuing upward trajectory. Compared to many geology programs nationwide, the CSUSB Geology program weathered the pandemic well, even showing some growth, whereas other programs, such as my own at CSU Fresno, have seen declines in enrollment. In addition, during the same period, the program made a nearly seamless transition from a quarter to semester system of instruction. To have successfully steered the program through potential disruption is alone commendable, let alone to have engineered improvements to an already robust program under such challenging circumstances. This positive trend is no accident, and a significant contribution to the success and bright future of the program has come from leadership of the new Chair of the Geology Department, Claire Todd. At the time of the last program review, the department lacked an internal chair, with leadership provided by a faculty member in a different department in the college. Dr. Todd's dedication, vision, and leadership ability are exceptional among chairs I know of in comparable geoscience departments. Her presence in the department promises a high probability of department and

program success moving forward and help the department and program to be greater than the sum of its parts.

The high impact and success of the geology program is a consequence of the effectiveness of the instruction, curricular design, and the expertise and experience of the department faculty. The high employment rate of CSUSB geology graduates in professional geology (see Program Effectiveness of Self-Study) speaks to the quality of instruction, as well as faculty strengths. Geology is a field that has developed a yawning gulf between "academic" and "professional" geology, primarily because the vast majority of geology faculty have never worked in the field that will employ most of their graduates. R1 schools have developed programs that teach their undergraduates as if every one of them will go on to receive a PhD and become faculty at R1 institutions. As a result, few graduates of R1 programs are able to find employment in professional geology, so the professional workforce is dominated by graduates from teaching-oriented programs, such as those of the CSU schools; the regional dominance of CSUSB graduates in professional geology ranks is an example.

CSUSB, however, stands out even among teaching-oriented geology programs, including those of the CSU, because it is one of the rare departments that has a faculty member who has extensive experience in professional geology, Dr. Kerry Cato, who was hired after the last review. That program learning objectives (PLOs) align with the California Board for Professional Engineers, Land Surveyors, and Geologists (BPELSG) educational requirements reflects this integration of professional experience (Appendix C of Self-Study). The CSUSB program has done this better than my program, for example, even though my department is another rare department that has faculty members with professional geology experience; my department is currently undergoing some course redesign/redesignation in order to meet BPELSG upper division field unit requirements.

Although, graduates of the geology program have been very successful in gaining professional employment, the program is far more than a vocational program. This is attested to by the fact that, as of the writing of the Self-Study, five graduates were enrolled in various graduate programs in other universities, the exemplary publication rate of the faculty and students in top ranked peer-reviewed geoscience journals, and the success of faculty in securing extramural research funding. This high-quality geology program provides students with a strong technical foundation that allows students to choose between graduate school and professional employment, whereas graduates of R1 programs lack the sufficient training to become professional geologists.

Another noteworthy strength of the program is its diversity. Nationwide, geology is the least diverse of all of the STEM fields and the diversity of among students in geology programs typically lags far behind that of the host university and college. My own program at CSU Fresno is typical of this national pattern. In contrast, the CSUSB geology student population diversity is comparable to the university population. Some of the success in attracting a diverse student body may be a product of outreach efforts, both organized and informal, with local high schools and community colleges. These programs include the participation in CSUSB's High School University program as well as participation of faculty in the URGE (Unlearning Racism in Geoscience) program.

Whereas the geology program is successful and has a bright future, it faces some challenges, particularly in terms of work load of the faculty and these challenges are reflected in the recommendations for improved support in the Self-Study, including the request for an additional tenure track faculty position, and a department technician /lab coordinator, an increased department operating budget, and improved administrative support across campus.

In the specific sections that follow, I will outline specific strengths and achievements of the program and its faculty as well as department weaknesses and needs.

Specific Comments.

I. <u>Learning Outcomes and Program Effectiveness</u>

As shown in Appendix C of the Self Study PLO's align nicely with both CSUSB learning objectives and BPELSG educational requirements. In addition, the series of three classes focused on student research (GEOL 3990, 4000, 4900), as well as the high rate of faculty research activity (see Appendix K of Self Study), help keep instruction up to date with cutting edge knowledge in the discipline.

The effectiveness of the program is best measured by the high rate of professional employment of students as well as the unusual number of student-authored papers published in highly ranked peer-reviewed geoscience journals. For students of the department to excel in obtaining professional employment as well as academic research puts the program in rare company. In addition to such "broad scale" indicators of student learning, the department has also used multiple assessment tools that have been used to make adjustments and changes to the program (Appendix D of Self Study) that have resulted in progressively better student outcomes (examples in Figs. 7 and 8 of Self Study).

The strong field component has long been considered a strength of the geology program by alumni, professionals, as well as faculty and students, as has the involvement of students in research. Noteworthy and commendable is the fact that the department was able to continue field instruction through the pandemic when nearly all geology departments in country resorted to virtual field exercises. Virtual field projects are a very weak substitute for actual operations in the field. The sequencing of classes within a geology program also has an important impact on student success. For example, during my 16 years of industry experience, I observed that in the northern California professional geological community that the geology programs that produced the most successful professionals (all CSU programs) were those that had an introductory field class as is the case for the CSUSB program. A number of CSU geology programs lack an early field experience like this, and I have found fewer successful professional graduates from such programs. The CSUSB geology program has a solid "architecture" of course sequencing and coordination that is the mark of a strong geology program.

Students during my interview had a very positive view of the program and department and they mentioned that they viewed what they saw as weaknesses to be minor. Some comments concerned a better communication of deadlines, milestones, and expectations to students at different stages of the student research project (GEOL 3990, 4000, 4900). Other comments concerned the desire to have some required classes taught both terms.

II. <u>Faculty Engagement and Achievements</u>

The faculty of the department have an excellent span of technical scholarly expertise in the addition to the rare (as mentioned in summary comments) professional experience that facilitates the effective teaching the full range of core geology classes. As noted in the summary comments, the high level of research activity of the faculty includes involvement of students in research. Whereas student research is required in the geology program, student authors of papers published in major geoscience journals is rare among similar departments. Accordingly, the CSUSB geology department faculty stand out as student research mentors. The faculty have been very successful at securing extramural funding. This success rate is comparable to that of the faculty in my own CSU geoscience department (Fresno) where we are among the leaders in our college and across the campus in fund acquisition and research productivity (as

measured by publications). I expect that the CSUSB department has a similar high relative ranking to other

As noted in the summary comment, the faculty and the program face some challenges, much of which is connected to a high work load for faculty, which has been increasing (see Table 8). For example, there have been examples of faculty unable to take externally-funded release time because of the need to teach required geology majors courses. These are not the type of courses that can be taught by local professionals or students. In addition, the lack of a department technician and laboratory coordinator requires faculty to devote time to research and teaching equipment maintenance, laboratory specimen curation/acquisition, field trip logistical activities, and other operations. The inability to take release time to do external-grant-funded research, as well as the lack of technical support (technician/lab coordinator) lowers the success rate for extramural grants in addition to imposing a heavy workload on faculty.

Whereas a search is ongoing for a new structural geologist, at least one additional faculty member will be required to be able to optimally run the program, given that the work load issues noted above took place before structural geologist Dr. Joan Fryxell joined the Faculty Early Retirement Program. Whereas a new structural geologist and an additional faculty would result in optimal division of teaching and other responsibilities of department faculty, further increase in student enrollment may require additional faculty. Depending on the classroom size for core geology laboratory classes, an increase in enrollment to about 25 students for such classes (threshold appears dictated by 18 or 24-student seating capacity of laboratory classrooms noted in the Self Study) may require the teaching of more than one section, which may require additional faculty. Accordingly, whereas a goal of the program is to grow (increase enrollment), there are some practical limits to this growth.

III. Program Resources

The inventory of teaching and research tools and instruments available to the program is impressive and ranks favorably compared to comparable programs in the CSU system. Our department, for example, has a somewhat smaller array of instruments and tools. The department's teaching and research equipment has been nicely integrated into teaching and research activities.   The lack of a technician/lab coordinator, however, precludes optimal maintenance of this infrastructure, in addition to saddling the faculty with tasks outside of their normal assignments. Geology departments, including other departments in the CSU system, such as my own, typically have such an individual. In my own department, our technician maintains all teaching and research equipment, manages and curates all laboratory sample collections, works with faculty to set up all labs, oversees field trip logistics (vehicles, camping arrangements, educational fee waivers, property/park access, etc) and serves as the department's safety officer. These duties are similar to those in other CSU departments (our former technician left to take an equivalent position for the geology department of CSU East Bay for example).

The Self Study and interviews both indicate problems with university-level purchasing, billing, accounting, and facilities, which make it difficult to expend and use funds from external grants as well, as making it difficult to predict and define the department operating budget. Such administrative issues connected to extramural fund expenditure, along with the high faculty workload and lack of a department technician/lab coordinator are seen unfavorably by funding agencies, so these problems reduce the success rate for external grant proposals.

IV. Overall Comments and Recommendations.

The CSUSB geology program is a high quality and high impact program. The success of students attests to this quality. The high impact of the program is demonstrated by the impressive rate of professional employment of graduates of the program and research productivity of students in faculty. These accomplishments contribute to the prestige of the department and university and they materially contribute by facilitating donations from successful professional alumni and success in securing extramural research funding. Accordingly, the value of the program is much greater than that recorded by the relatively small number of geology majors. The demand for professional geologists continues to grow and this has not been matched by a corresponding increase in geology graduates nationwide. This bodes well for the future of high-quality geology programs, such as CSUSB's.

Whereas the program has demonstrated its strength and has a bright future, it faces some challenges as noted in the summary and various specific sections of this review. Meeting these challenges will assure that this program will continue its success with an upward trajectory. These challenges can be met by hiring of additional faculty and a department technician/lab coordinator, and improving/refining university-wide communications and procedures.   Given the demonstrated high value of this program, out of proportion to its size, investment in the program has a high probability of reaping substantial benefits for the university and its students.
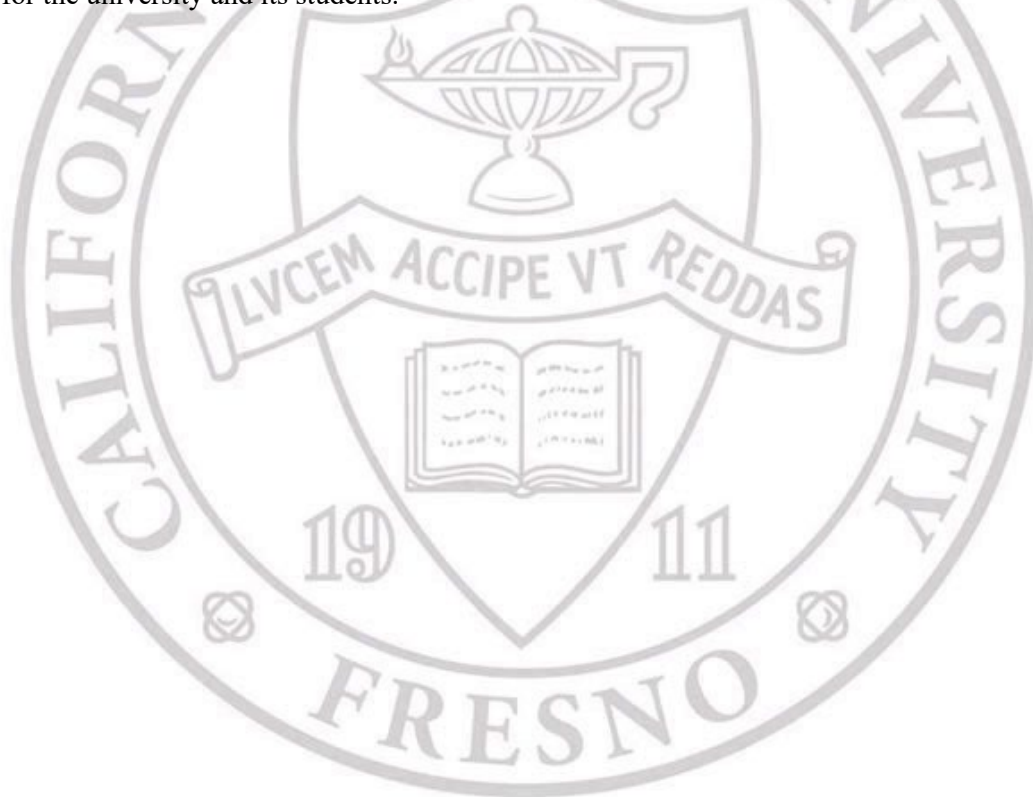
2021-22 BA/BS Geology Committee Review Report
Reviewer:
Academic Program Review/Self-Study Review Committee

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:
The CSUSB Geology BA and BS program provides meaningful opportunities preparing candidates for a life-long career. The program allows for students to continue to pursue a graduate degree in geology and helps students get a professional license. Despite the COVID-19 Pandemic and according to the self and external report the program has made many strives. The CSUSB Geology program will continue to establish assessment protocols that had to be on pause due to the pandemic. It is suggested during the previous review that the program hire additional faculty. One new faculty member was hired, Dr. Kerry Cato. The self-review report stated that they will hire additional faculty in the coming years. It is recommended to balance out the faculty work load that additional faculty lines be created.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:
Since the last review the CSUSB program, in 2019 the program, has added a Field and Geology Concentration that allows for career opportunities. Courses are offered on an annual basis, monthly fees have been added to upper division courses, and opportunities to meet speakers from the industry via ZOOM.

An additional faculty member was hired. Faculty have been meeting on a regularly basis.

The program is to be commended on their active scholarship, curriculum innovations within their program, and external funding to support their students. Over 30 scientific articles have been published by faculty.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:
It is suggested that additional faculty lines be developed to help support the faculty workload and continue the growth of the CSUSB Geology program**.**

The program is to be commended on their program growth during the pandemic, regularly meeting with faculty to discuss concerns and moving forward, and using the assessment data to look at the effectiveness of their program.

Continue to expand majors within your program. According to program data, it is important for the program to review student performance and equity gaps, establish clear assessment practices and measures again, and continue to push forward ways to recruit candidates building a meaningful since of community.

Full transparency regarding budget requiring more equipment (i.e., technical, instructional support, state of the art technology, etc.).

2021-22 BA & BS Geology College Dean Report
Reviewer:
College Dean

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:
The self-study and the reviewer comments indicate that the department continues to thrive since its last review, and poised to be even more successful under the newly hired chair this year. It is particularly commending that the department did very well under the leadership of Dr. Maynard as the interim chair during the Q2S transition, lingering pandemic and recruiting a new chair after one failed search. Of course, the department had a strong foundation prior to Dr. Maynard under the leadership of Dr. McGill. I am very optimistic that the department has even brighter future under the leadership of Dr. Todd who joined us in August 2021.

It is clear that the programs are exceeding the learning and program outcomes as evidenced by the careers our graduates are pursuing and the graduate programs they are attending. The department has a lot to be proud of itself and we are proud of them.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:
Q2S, the self-study, and the reviewer comments suggest that both the undergraduate programs are being very effective. As we have more data from semesters, we need to continue to assess and consider improvements for the future as appropriate.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:
Some potential action plans based on the self-study and the reviewer to consider:

1. As recommended by the reviewer, we have hired two additional tenure track faculty members in the structural geology and neotectonics search this year. We are very grateful to the Provost for recognizing the need and investing in the department preemptively this year.
2. In addition to recruiting Dr. Cato with an extensive experience outside academia and promoting him in a timely fashion, the university recognized recently Dr. Melchiorre with the 2021-22 Outstanding Scholarship, Research and Creativity Award. The department, CNS and CSUSB are committed to our faculty success, and we continue to provide resources to the department in terms of equipment, staff and appropriate reassigned time.
3. We are currently recruiting a staff member for the department who can help faculty with some of the logistics with field trips and purchases. Also, we have requested the Provost for permanent funding for a technician for the department and for a grant support personnel at the college level. We acknowledge some of the changes in our development office staff and support that impacts the administration of philanthropic funds.
4. Pay attention to enrollments to rebound from the enrollment and FTES loss due to Q2S and the pandemic. We appreciate department's commitment to recruit students

proactively and provide appropriate learning experiences for preparing for productive careers and graduate programs.

5. Consider maintaining a pool of qualified lecturers in fields in which tenure-line faculty have been unable to take grant reassigned time because there is no one to teach their upper-division courses.

Providing Department:

College of Natural Sciences

2021-22 BA/BS Geology Plan of Action

Proposed Action:

- **Increase the number of majors in our program in the coming years**. As part of a departmental strategic plan, we would like to
    - research and define an enrollment target for the next review period,
    - establish a coherent recruitment strategy, including
        - intentional outreach in our introductory courses,
        - more formal coordination with local community colleges
        - outreach in our HSUP classrooms.
    - increase our visibility on campus by building permanent displays of our mineral collections.

- **Reestablish our annual assessment practices, and create a cloud-based clearing house for annual assessment data** so we can identify and respond to long-term trends in student learning.

- **Review GEOL 1000, GEOL 1000L, GEOL 1060, and GEOL 1060L to identify why students enroll in our courses, how our curriculum has evolved in the wake of the Q2S transition, and how we can continue to support all students in these courses**.

- **We would like to improve our advising resources, offer some classes more frequently as staffing allows, and establish a more consistent class schedule that reduced scheduling conflicts including with supporting coursework in CHEM and PHYS.**

- **Work toward transparency and improved documentation of funding needs and availability, budget structure, and departmental spending**. These practices will allow for more efficient resource allocation within our department, and more effective advocacy for increasing support for our work.

- **Rebuild a post-pandemic CSUSB Geological Sciences community with current students and alumni, and re-energize our activities in regional geologic organizations**. This initiative could include:
    - the continuation of virtual and in-person speakers in our classes;
    - reestablishing pre-pandemic practices such as the integration of seminar speakers into courses and department events;
    - hosting networking events for students;
    - the reestablishment of an alumni advisory and support group,
    - supporting the reestablishment of the Geology Club.
    - hosting regional geology events on campus, and participating in regional geologic conferences.

Timeline:

Each of the actions described above will be multi-year projects, with activity beginning in the 2022-23 academic year.

Responsibility:
The chair of the department will be responsible for coordinating these activities, but all faculty and staff in the department will plan a role.

Cost:
Some costs may be associated with community building events and faculty workshops to address curricular changes.

Resources:
We will continue to rely on resources from across campus including staff support in our Dean's office, and support from institutional research, academic advising, and other offices.

Providing Department:
Bachelor of Arts in Geology

2021-22 BA/BS & MA Mathematics Self-Study Report
Program Overview:

Description
The Department of Mathematics offers two Bachelor's degrees, the BA and the BS. The BS degree offers three concentrations, the Applied Mathematics Concentration, the General Mathematics Concentration, and the Teaching Mathematics Concentration. The Department offers an MA in Mathematics; an MA in Teaching Mathematics (MAT) has been in suspended status since 2015. The Department also offers a minor, and two certificate programs (Introductory Actuarial Science, Introductory Mathematics).

The department has maintained close to 400 undergraduate majors for the last 10 years. Historically, the majority of our students are interested in careers in teaching, either at the secondary level or, after further study, at the college level. The department has recently hired faculty and created courses for students interested in statistics and data analysis.

The MA program in Mathematics has existed since the early 1990's and has maintained about 32 students during the period of this review. Many MA graduates go on to teaching positions at community colleges, careers in industry, or further study at a PhD-granting institution. The curriculum leans decidedly toward pure mathematics, with flexibility to explore more applied mathematics as well, either through topics courses or a thesis project. The program is envisioned to pick up where our bachelor's degree in mathematics leaves off.

This report does not explicitly review courses that the department offers primarily for students in other majors, general education courses, and developmental math courses. However, most of these students take general education courses the Math Department, contributing to the university's vision of "preparing leaders for the 21st century with a global outlook and the skills needed for educational, social, economic, political, environmental and cultural advancement."

Curriculum: Undergraduate Programs
The department curriculum was extensively revised for the university change from quarters to semesters (Q2S) effective in the 2020-2021 academic year. The revision of the undergraduate curriculum was guided by

- the university ILOs,
- Recommendation of Mathematical Association of America (MAA) Committee on the Undergraduate Program in Mathematics (CUPM) ,
- coordination with community college programs,
- California Commission on Teacher Credentialing (CCTC) requirements,
- The Guidelines for Assessment and Instruction in Statistics Education (GAISE) College Report (2016) from the American Statistical Association (ASA).

In particular, the core junior level course structure was revised. The previous structure consisted of five quarter courses (linear algebra, geometry, combinatorics, number theory, and intro to analysis) which the students could take in any order. The linear algebra course was changed to a sophomore level course to better coordinate with community colleges. A new course, MATH

3100, Mathematical Thinking: Communication and Proof was introduced as a prerequisite to other upper-division courses so that a progression in proof skills can be expected as students move through the upper-division courses. The Math 3100 course is designed to satisfy the University's General Education Writing Intensive Course requirement.

Curriculum: Graduate Program
This section describes the curriculum of the MA program both before and after Q2S, and highlights the significant changes made in the transition from quarters to semesters.

MA Curriculum in the quarter system. Up until the change to semesters (beginning Fall 2020), there were four required (core) courses, seven electives, and a thesis requirement. All of the courses (except thesis courses) were 4 quarter units. The core courses were Math 618: Analysis, Math 604: Problem Solving, Math 614: Geometry, and Math 616: Algebra. These four courses are a central component in many graduate programs.

Of the seven elective courses, four were required to be at the 600-level or above. The other three could be any reasonable (300-level or above, and not prerequisite to the MA program) mathematics course not specifically in the teaching track program, but most students chose 500-level electives that were prerequisites for the 600-level core courses.

The thesis requirement was a four (quarter) unit requirement spread out in two courses: Math 696 and Math 697. For Math 697, one needed to have assembled their committee and submit a detailed thesis description to the graduate coordinator. The graduate coordinator would then gather input from the department concerning the quality and viability of these proposals. Usually, if any proposals were found to be unfit, they were returned to the student with a description of how to remedy the proposal. It was extremely rare that any proposals needed any changes, likely because our faculty care deeply about the quality of our theses. One drawback of this system which was addressed in the Q2S change is the need for a student to have such a developed idea about what their thesis was about in a detailed Math 696 proposal before ostensibly beginning any work on it. Generally, students enrolled in an independent study course as one of their 600-level electives, which seems to have been a curricular confusion.

MA Curriculum in the semester system. Beginning Fall 2020, the MA program was transformed in several ways, which we highlight after describing the current curriculum of the program under semesters. There are three required courses, an elective requirement similar to that in the quarter system, and a culminating experience that could either be a thesis or a set of comprehensive exams.

The three core courses are Math 6018: Analysis (4 semester units), Math 6016: Algebra (4 semester units), and Math 6000: Communicating Mathematics (2 semester units). Math 6000 satisfies the Graduate Writing Requirement; it is an entirely new course with no previous equivalent.

To satisfy the elective requirement, a student must complete 5 elective courses for at least 15 units, and 6 of those units must be at the 6000 level. This requirement was formulated both to ensure some flexibility in meeting this requirement, but also so that students could not avoid

taking some number of 6000-level units. There are other safeguards to ensure that this requirement cannot be met through an abuse of Independent Study courses.

Unlike the quarter system, students now have a choice for how they complete their culminating experience: either to complete a thesis, or to pass a set of three comprehensive exams. The thesis requirement is very much as it was before: there are two thesis courses, Math 6972 and Math 6974, where these courses function similarly to the Math 696 and 697 from the quarter system. Unlike the quarter versions of these courses, they (a) carry more of a unit load that more accurately depicts how much work a thesis really is, and (b) a short proposal is required for enrollment in Math 6972 where a student can begin working on their thesis, and the longer proposal for Math 6974 is an expected product of Math 6972.

The choice to take a set of comprehensive exams are a new addition to the curriculum. Briefly, if the student chooses this culminating experience, then they must take written exams in Algebra and Analysis (the two mathematics core courses), and another Elective Comprehensive exam, in addition to another three-unit elective at the 5000-level (that may or may not be covered in the elective comprehensive exam). As stated in the bulletin, the format of the Elective Comprehensive exam must *not* be predominantly written (for example, oral). In both the thesis and comprehensive exam culminating experience, the student forms a committee with a committee chair who performs certain tasks: a thesis advisor in the event of a thesis, and more of an administrative organizational aide in the comprehensive exam situation (or perhaps more if the chair of this committee is responsible for certain content in the exam).

<u>Substantial Changes to the MA Curriculum.</u> The major changes to the curriculum are only related to the Q2S transformation:

- o Geometry was removed as a core course.
- o A graduate writing course (Math 6000) was added.
- o A comprehensive exam was added as an option for the student's culminating experience.
- o The credit structure associated to the culminating experience has been retooled, so that it is no longer expected that a student should need to take an independent study course as part of their thesis work.
- o We have resurrected our Teaching Practicum course as a 2-unit 6000-level elective. The quarter version of this course was not taught any time recently, and it made sense to again offer it after the Q2S transformation.

High-Impact Practices
High-Impact Practices (HIPS) are implemented in both the undergraduate and graduate program. These include writing intensive courses (Math 3100 and Math 6000), collaborative projects, some opportunities for undergraduate research, and ePortfolios in certain courses. These are detailed in section V of the report.

Overview of Assessment Process: Undergraduate Programs
The Undergraduate Program Learning Outcomes (PLOs) consist of 10 outcomes listed under five general goals, with a sixth goal and two additional outcomes specific to the Teaching

Concentration. This list was streamlined as a part of the Q2S process. We administer common performance tasks in multiple classes to assess all undergraduate PLOs on a four-year cycle.

Overview of Assessment Process: Graduate Programs
The assessment for the MA program changed dramatically in anticipation of the change to semesters. Previously during the quarter curriculum, our students were required to compile a "Portfolio" of work samples that were reviewed, and the faculty assessments were noted and reported upon—see below for more information about this. This became increasingly difficult, as students found obscure and increasingly creative ways to defeat this requirement (in particular, it did not make sense to keep a student from graduating if they could not (or would not) complete a portfolio entry), faculty had very little interest in taking an increasing role in evaluation and participation in the requirement (that is, actually producing assignments for inclusion into the portfolio), and because of the varying participation in both students and faculty, these results were really not very comparable and the data set simply did not seem to tell an accurate story. This seemed to come to a head in the final phases of planning the MA Q2S transformation of the program. So, a new assessment scheme was constructed as part of that transformation and intended to begin in Fall 2020 when semesters began.

The new MA assessment plan includes two forms of measurement: (1) a survey given to each student at the time they advance to candidacy, and (2) a survey given to the student's committee after they complete their culminating experience. Combined, these two forms of data collection are meant to measure all of the program's PLOs. We should note, however, that the COVID pandemic complicated the roll-out of these measures, as we will detail below.

Please see Section IV for more detailed information about assessment processes and data.

Response to Previous Program Review:
Summary of recommendations from the last program review
In the 2015 program review, the external reviewers recommended that the department increase its hiring of tenure-track faculty (particularly in the areas of applied math including statistics, and mathematics education) and full-time lecturers; improve the alignment of our curriculum with national standards such as CUPM; improve course coordination; improve support for graduate Teaching Associates; continue support for our Center for the Enhancement of Mathematics Education (CEME); and address issues related to classroom space. The university program review committee recommended that the department implement a fully developed assessment plan, including "closing the loop" activities.

Summary of the Plan of Action resulting from the last program review
The department Action Plan addressed the areas of curriculum, assessment, and hiring. Because of the timing of our last self-study (2014-15), the department Plan of Action anticipated that the Q2S transition would provide the opportunity for revisions to curriculum and assessment. We also planned to continue hiring to replace retiring faculty and attempt to fill the needs indicated in the report, including statistics and mathematics education.

Description of what the Program has accomplished on that Plan of Action
In the time since our last review, we have transformed our curriculum in response to
CSU Executive Orders prompting changes to General Education mathematics and the
elimination of remedial mathematics (EO 1100 and 1110, respectively).The campus transition
from the quarter to semester academic calendar provided further impetus for changes guided by
the CUPM curriculum guide. We made the following changes to the major programs, some of
which were already mentioned above:

- Streamlined the BS program, reducing the number of available concentrations from 6 to
  three (General Mathematics, Applied Mathematics, and Teaching Mathematics)
- Increased course offerings in statistics by adding a 2000-level statistics course as a
  requirement in all BS Concentrations and introducing a new upper division
  elective course in Linear Statistical Models
- Updated the introduction to proof, introducing Math 3100 (Mathematical Thinking:
  Communication and Proof) discussed above
- Adopted new curriculum and placement methods for Calculus and Preparation for
  Calculus (formerly known as College Algebra/Precalculus)
- Updated the second year of the Calculus sequence, introducing Applied Linear Algebra
  in the third semester

Although General Education courses are not a focus of this self-study, we made significant
changes there, consistent with the recommendations from the last program review. The changes
were again guided by the CUPM Curriculum Guide, CSU Executive orders and the transition to
semesters. In consultation with client departments, we introduced additional GE pathways,
including a GE Statistics course (Math 1201) and a non-STEM College Algebra course (Math
1301). Students requiring support to succeed in their GE course may enroll in a one-unit support
lab, or complete a two-semester stretch version of any non-STEM General Education course.
Each of the GE Quantitative Reasoning courses has a coordinator compensated with reassigned
time. The calculus coordinator has adopted the recommendations of the AMS report *Seven
Characteristics of Successful Calculus Programs* (Bressoud and Rasmussen 2015), including the
implementation of common final exams.

In the area of assessment, the undergraduate Program Learning Outcomes (PLOs) were
somewhat simplified to facilitate assessment on a four-year cycle. Our interpretation
of undergraduate assessment data led us to reorganize and clarify the introduction
to mathematical proof by introducing Math 3100 as a prerequisite for most other upper-division
coursework in the undergraduate curriculum.

In the area of tenure track hiring, we hired nine new tenure track faculty since the last
review. Two of these hold PhDs in statistics (with a third who has significant experience and
interest in statistics), and two specialize in mathematics education.

Students:
Description of Student Enrollments: Undergraduate Programs
Overall enrollments peaked in Fall 2019 with 423 undergraduate majors and have dropped to 345 in Fall 2021. We believe the recent drop is due to the combination of semester conversion and pandemic issues. The department substantially revised the undergraduate major in the semester conversion. For example, five applied BS concentrations were replaced by a single concentration. For this reason, tracking by individual concentration is not meaningful. A table displaying enrollments from Fall 2014 through Fall 2021 is attached below.

Teaching track majors (including both quarter and semester versions), are now at a peak enrollment of 185, up from 155 in the Fall of 2016. The BS Teaching Concentration (formerly the BA Teaching Track) is a CTC approved subject-matter program in Mathematics. However, AB 130 allows holders of any Mathematics degree to meet the Subject Matter Requirement for single-subject teaching credentials in Mathematics, so this enrollment may decrease.

The BA degree has dropped from a peak of 179 in Fall 2016 to 104 in Fall 2021. Since the BA requires fewer units than the BS teaching concentration, we expect BA enrollment to rebound some as students take advantage of AB 130.

The enrollment in non-teaching BS tracks has declined a bit, beginning with 81 in the fall of 2016, peaking at 119 in Fall 2019, and now at 56.

Discussion of Student Population, Demographics and Interests: Undergraduate Programs
Student demographics for the undergraduate Mathematics Major generally track those of the campus. The biggest exception is gender, with a 55%/45% male/female split as opposed to the campus 37%/63% split. Math majors are 70% Hispanic or Latino, slightly above the campus 66%. The upper-division/lower-division split is 69%/31% and 79% of our students are first-generation college students, numbers which very closely match those of the campus as a whole. We do notice a considerably greater number of senior level students (148) to junior level students (90) but do not have a ready explanation.

Historically, a large majority of our students have been interested in secondary teaching. This is reflected in our current enrollment where about half (185) of the undergraduate majors are in the Teaching Track of the BS degree. It is likely that a fair proportion of the BA students (74) are also considering secondary teaching.

The Department has been encouraged in previous Self Study reports to increase offerings suitable for majors with interests other than teaching. The Department hired two statistics faculty in 2020 and a third with strong interests in that area in 2019. These faculty are now in the process of developing a Statistics minor and are participating in an interdisciplinary effort to create a Data Science program. Courses relevant to these efforts have been added in the semester conversion process, and others are in the curricular process.

The Department worked in conjunction with the Career Center to host a Career Fair for mathematics and statistics in September 2021.

Description of student enrollments: Graduate Program
The following is a chart showing annual Fall enrollment in the MA program in Mathematics since Fall 2016:

Term (Fall)	2016	2017	2018	2019	2020
MA students Enrolled	29	32	35	34	32

There are no concentrations in the MA program, and, it appears that the enrollment has remained more or less steady at roughly 32 enrolled students.

Discussion of Student Population, Demographics and Interests: Graduate Programs
According to CSUSB's Institutional Research, in Fall 2020 there were 32 students enrolled in the program: 20 were male, and 12 were female. In Fall 2020, 17 of those 32 students came from under-represented minorities, and 15 did not. Only two of those 32 were not California residents.

Perhaps the most telling demographic statistic is that only 6 of our students were full-time, and 26 were part time. The average age of the MA student in Fall 2020 is 29, and while we do not have data on this, it seems that very many of our graduate students have some sort of job, or perhaps, simply prefer working toward their degree at a slower pace. Some of the students classified as part time have completed the core and elective coursework and are working on the thesis.

The pandemic highlighted the reality that our graduate students generally work at least one job (or perhaps more) and are involved in the care of family. (As an example: one of our faculty came to understand last year that a student was joining class via zoom on her phone while she was making pizzas, since she could not afford to give up the hours.) Some sort of additional financial support would immensely help our graduate students.

Student Interests. According to the department webpage where faculty self-report their research interests, our 29 tenure-track faculty members have expertise in the broad fields of Algebra, Analysis, Combinatorics, Geometry and Topology, Logic, Statistics, and Mathematics Education. There does not appear to be a major field of mathematics left out, and (aside from Logic), there are several faculty members to choose from in each of these areas. In this way, the department can and does offer a broad range of MA courses across the spectrum of graduate mathematics in the form of the core of the program (Algebra and Analysis), and in regularly offered topics courses. These topics are different each semester, exposing our student body to a number of interesting mathematical fields not otherwise found in the core of the program.

Student Survey
Three mathematics faculty (Meyer, Marsh and Nazzal) worked with Institutional Research to survey student opinions of departmental climate during the Fall 2021 term. The survey was sent in an email link to all undergraduate and graduate math majors, and there were 52 responses. Students broadly agreed with statements such as "I feel proud of belonging to the math department" and "students in the math department help each other to succeed." The full survey report is included as an attachment.

Attached Files
 EnrollmentTable.pdf
 MathClimateSurveyReport.pdf

Learning Outcomes & Assessment Processes:
Development and Revision of Program Learning Outcomes: Undergraduate and Graduate
The Undergraduate Program Learning Outcomes (PLOs) consist of 10 outcomes listed under five general goals, with a sixth goal and two additional outcomes specific to the Teaching Concentration. The Department was influenced by the Standards for Mathematical Practice set forth in the Common Core State Standards and the "strands of mathematical proficiency" defined in *Adding It Up* in adopting Goals 1 through 5 in the 2012-13 academic year. Goal 6 was added the following year to address learning activities specific to the Teaching Track/Teaching Concentration. As a result of Q2S transformation activities, the department transformation teams streamlined the program learning outcomes within these same general goals. The 15 outcomes formerly listed under Goals 1-5 have been reduced down to 10 essential outcomes, which will be more manageable for future assessment.

The MA program experienced a transformation in its goals and (to some extent) its learning objectives in the Q2S change. The goals of the new PLOs in the semester curriculum were to reassess the alignment of the PLOs with the quarter system curriculum, and to reassess the direction of the curriculum of the MA program. In other words: does our curriculum match our learning objectives, and vice versa? The new semester PLOs were developed with this in mind.

BA/BS Program Learning Outcomes
Goal 1. Students will demonstrate a conceptual understanding of mathematics

1. Students will demonstrate an understanding of fundamental concepts, algorithms, operations, and relations
2. Students will make connections between mathematical ideas verbally, numerically, analytically, visually, and graphically

Goal 2. Students will attain procedural fluency in mathematics

1. Students will correctly apply mathematical theorems, properties and definitions
2. Students will calculate efficiently, flexibly, and with appropriate accuracy

Goal 3. Students will demonstrate adaptive reasoning and problem-solving skills in mathematics

1. Students will justify solutions using a variety of strategies and representations
2. Students will be able to evaluate reasonableness of proposed results using estimation and context
3. Students will be able to critique mathematical reasoning, both correct and flawed

Goal 4. Students will demonstrate mathematical communication skills

1. Students will demonstrate mathematical communication skills using appropriate mathematical vocabulary and references

Goal 5. Students will understand and produce correct mathematical proofs
1. Students will understand valid mathematical proofs
2. Students will produce valid mathematical proofs

Goal 6. Students will reflect on their mathematical experiences (PLOs for BS Teaching Concentration only)

1. Students will be able to analyze mathematical content of the secondary classroom, including content and practice standards
2. Students will connect mathematical concepts within and between secondary and undergraduate levels

MA Program Learning Outcomes
Goal 1.1: Students will have a graduate level understanding of Algebra, Analysis, and how to effectively communicate mathematical concepts.

Goal 1.2: Students will be able to problem solve in a variety of mathematical areas.

Goal 2.1: Students will be able to precisely communicate mathematical knowledge in written form.

Goal 2.2: Students will be able to precisely communicate mathematical knowledge in oral form.

Goal 3.1: Students will be able to identify and analyze the mathematical structure of a problem.

Goal 3.2: Students will be able to solve mathematical problems using advanced problem solving techniques.

Goal 4.1: Students will be able to formulate valid mathematical arguments.

Goal 4.2: Students will be able to critique mathematical reasoning.

The attached documents *Math Undergraduate Program Outcome to ILO Matrix* and *Math Graduate PLO to ILO Matrix* provide mappings of PLOs to Institutional Learning Outcomes (ILOs).

The attached documents *Undergraduate PLO Semester Course Assessment Matrix* and *Graduate PLO Assessment Matrix* provide curriculum maps showing how PLOs are addressed in program courses.

Undergraduate Program Assessment Procedures

Three to four PLOs are assessed each academic year, rotating through all PLOs on a four year cycle. PLOs under goals 1 through 5 are assessed primarily through performance tasks administered in lower and upper division courses. Written work samples from Math 3100, Math 5300, 5600 and 5529 are also collected to assess PLO 3.1, 3.3, 4.1, 5.1, and 5.2. Performance tasks are developed and scored by the Mathematics Department Assessment Committee under the leadership of Dr. Laura Wallace. Data from all assessment activities are shared and discussed with Department faculty at least annually.

Graduate Program Assessment Procedures

Since 2016, the assessment effort in the MA program undertook a major change. We describe the assessment procedures before the Q2S change, during the transition, and after the transition.

Assessment procedures from 2016 until 2018. Our assessment of the program was through the collection of certain student artifacts: each graduating student needed to produce a portfolio. In each of the four core courses, each student was to produce one sample of their work. These samples were collected into a portfolio, and faculty volunteered to review these portfolios. Data was collected indicating the correctness and general level of their work.

This approach for assessment became increasingly untenable for two reasons, as mentioned above: first, students found obscure and increasingly creative ways to defeat this requirement (in particular, it did not make sense to keep a student from graduating if they could not (or would not) complete a portfolio entry), and second, faculty had very little interest in taking an increasing role in evaluation and participation in the requirement. Indeed, in some cases portfolio entries were turned in very close to a student's graduation, and it was unreasonable for a faculty member to drop whatever they were doing—especially near the end of a term—and review a portfolio. It made even less sense to force the student to redo an unacceptable portfolio and prevent them from graduating for this reason. Thus, a new assessment procedure was developed, although, given the proximity to the Q2S change, the new procedure was a "trial run" of the assessment procedures proposed in the Q2S change.

Assessment procedures from 2018-2020. The removal of the portfolio assignment gave way to a survey given to the students at the time of advancement to candidacy. Roughly 30 responses were received (we attempted to give the survey to some students before Fall, 2018). This survey asks the student to assess their own understanding of the curriculum through the PLOs.

Assessment procedures from 2020-present. With the beginning of the semester curriculum, we continued the survey given to students at the time of candidacy. Notably, the PLOs we were never really able to assess very well were those relating to the completion of a thesis (or culminating experience of some sort, namely, the thesis or comprehensive exams). The reason for this is that after the students are finished with their culminating experience and are in a position to provide assessment data, they typically are not interested in providing it as graduation is imminent. Thus, we developed another survey to be given to the members of each student's committee after the culminating experience is complete. Note that those students taking the comprehensive exams also have a committee, and the survey is meant to assess those graduating students as well. It is worth pointing out that COVID-19 severely complicated the roll-out of

these assessment measures: as students advanced to candidacy electronically instead of via a paper form, the candidacy survey was sometimes overlooked. In addition, as students graduated the typical communication of their thesis defense was hampered as we hastily adjusted to our new electronic environment. Still, we were able to get data for all but two students advancing to candidacy, and every one of the graduating students' committees were polled.

Attached Files
Graduate PLO Assessment Matrix (1).pdf
Math Graduate Program PLO to ILO matrix (2).pdf
Math Undergraduate Program Outcome to ILO matrix (3).pdf
Undergraduate PLO Semester Course Assessment Matrix.pdf

Program Effectiveness:

Key findings from annual assessments: Undergraduate Programs

In this section, we provide the main assessment findings since the last self-study organized by PLO. In many cases, the available data comes from the old quarter programs.

Goal 1. Students will demonstrate a conceptual understanding of mathematics

1. **Students will demonstrate an understanding of fundamental concepts, algorithms, operations, and relations** (2018-2019) A performance task was administered in a wide range of courses assessing student understanding of the concept of a function. Students were asked to explain why a given diagram represents a function (or not) and why a function is one-to-one (or not). It is clear from the data that students need to continue to learn to make sense of definitions of mathematical terms and conceptualize these ideas using multiple representations, including being able to identify examples and non-examples of such ideas. The data shows/suggests the following:
    o Students generally scored higher on the one-to-one tasks than the function/not function tasks.
    o Students generally have an easier time explaining when a certain diagram does not represent a function rather than when a diagram does represent a function. This is consistent with the idea that students usually find it easier to disprove a statement with one counterexample rather than prove that a statement is always true.
    o There is an increase in the number of students who demonstrate an understanding of the fundamental concepts of a function and a one-to-one in upper-level courses such as Math 545, Math 546, Math 553, and Math 554, indicating that students are on a path toward developing mastery of these ideas.
2. **Students will make connections between mathematical ideas verbally, numerically, analytically, visually, and graphically**
    (2017-2018) Anecdotal evidence by many mathematics faculty, both at CSUSB and

elsewhere, suggests that students try to memorize procedures rather than conceptualize mathematical ideas. The data from this year's survey seems consistent with this claim. This common habit of mind for doing mathematics develops well before students enter their undergraduate programs. It's clear that students need to continue to learn conceptually and to develop their ability to use and read graphs and other visual representations as a way of making sense of mathematical ideas.

Goal 2. Students will attain procedural fluency in mathematics

1. **Students will correctly apply mathematical theorems, properties, and definitions** (see comment for 1.1 above)
2. **Students will calculate efficiently, flexibly, and with appropriate accuracy**

(2015-16) Data for SLO 2.2 in Winter 2016 indicates that approximately 64% of students completing the survey are able to calculate with appropriate accuracy (without a calculator) at least two out of three questions on the survey. However, only approximately 19% of students completing the survey show flexibility in the strategy they use to solve the problems. There is a moderate increase in this area for students in Math 480, 499, and 570 courses with approximately 34% of Students showing flexibility. Regardless of the complexity of the numbers in the problem, most of the students utilized a standard procedure: they found the length of the leg of a given right triangle by calculating the square of each side, finding the difference, and then finding the resulting square root. Alternate strategies used by some students included using scaling and a difference of squares. The ability to do computations flexibly is related to Standard for Mathematical Practice 2 (Reason abstractly and quantitatively) and Standard for Mathematical Practice 7 (Look for and make use of structure)

(2020-21) 34% of respondents in Spring 2021 used a flexible (relational) solution style in an equation-solving task, suggesting possible improvement relative to the previous assessment. Additionally, there was an increase from 61% to 67% in accuracy for the task.

Goal 3. Students will demonstrate adaptive reasoning and problem-solving skills in mathematics

1. **Students will justify solutions using a variety of strategies and representations.**
   (2017-2018) Anecdotal evidence by many mathematics faculty, both at CSUSB and elsewhere, suggests that students try to memorize procedures rather than conceptualize mathematical ideas. The data from this survey seems consistent with this claim. This common habit of mind for doing mathematics develops well before students enter their undergraduate programs. It's clear that students need to continue to learn conceptually and to develop their ability to use and read graphs and other visual representations as a way of making sense of mathematical ideas. Data for SLO 1.2, 3.1, and 4.1 show that many students in a broad range of courses can find limits using at least one representation (either graphical or symbolic) and that scores improve for higher level courses which is a good indication that students develop their reasoning skills regarding limits over time in the program. In general, students seem to need more practice in linking procedures and concepts and using appropriate academic language when explaining their ideas. Many

students were not able to explain both solutions in the context of the problem which indicates that students need more experience in developing and communicating explanations of their reasoning in writing. However, the data shows an increase in the number of students who can make connections between mathematical ideas and justify solutions using multiple representations and appropriate mathematics vocabulary in upper-level courses such as Math 465, Math 480, Math 499, and Math 529, which is a good indication that student communication skills develop while in the program.

2. **Students will be able to evaluate reasonableness of proposed results using estimation and context**
(2020-21) 77% of respondents correctly answered a multiple-choice task asking them to identify the balance in an account subject to compound interest. The scores were highest for Math 2265 and Math 4320. However, with the exception of Math 3320, there was very little evidence that students attempted to estimate the solution.

3. **Students will be able to critique mathematical reasoning, both correct and flawed**
(2019-2020) At least half of the respondents in all courses (except Math 331) were able to determine that the given "proof" of a statement was in fact invalid and were able to pinpoint the flaw in the argument (i.e. critique reasoning, both correct and flawed, and understand valid mathematical proofs). The scores were highest for Math 529 and Math 557 and lowest for Math 331. This is to be expected since 529 and 557 are elective courses that students tend to take after their required proof courses. Also, many students who take Math 331 are not math majors, and those who are math majors tend to take Math 331 prior to their first introduction to proof course (either Math 345 or Math 355).

Goal 4. Students will demonstrate mathematical communication skills

1. **Students will demonstrate mathematical communication skills using appropriate mathematical vocabulary and references.** (See comment for ILO 3.1 above)

Goal 5. Students will understand and produce correct mathematical proofs

1. **Students will understand valid mathematical proofs**
2. **Students will produce valid mathematical proofs**

(2019-2020 for both 5.1 and 5.2) Scores for the task (write a valid proof of a given statement) tended to be highest for the 500 level courses with the highest scores in Math 557 and Math 545. At least half of the students in Math 557, Math 553, Math 546, and Math 355 who were able to identify that the given proof was in invalid were also able to fix the flaw to write a valid proof of the given.

Goal 6. Students will reflect on their mathematical experiences

1. **Students will be able to analyze mathematical content of the secondary classroom, including content and practice standards**
(2016-2017) Students' reflections on their mathematical experiences were assessed in four areas: Technology, Number Theory & Proof, Analysis & Proof, and Geometry. As BATT students reflect on their mathematical experiences, they showed the highest scores

on their written reflections in connecting to the mathematical content of the secondary classroom in the area of Geometry. Students showed the highest scores in connecting to practice standards in both Geometry and Technology. (The four areas assessed were Technology, Number Theory & Proof, Analysis & Proof, and Geometry.)

(2017-2018) Consistent with data from the previous years, students showed high scores on their written reflections in connecting to the mathematical content standards of the secondary classroom in the area of Geometry. This is not surprising considering that much of the content that students learn in Math 329 is directly related to and explicitly stated in the Geometry standards in the CA Mathematics Framework (http://www.cde.ca.gov/ci/ma/cf/mathfwchapters.asp). Students showed modest gains in connecting to practice standards in Geometry, Number Theory, and Analysis.

2. **Students will connect mathematical concepts within and between secondary and undergraduate levels**
(2018-2019)Students' ability to make connections between mathematical ideas was assessed by reviewing written reflections in four content areas: Technology, Number Theory & Proof, Analysis & Proof, and Geometry. Students showed high scores in connecting to the secondary school content standards in the area of Technology. Consistent with data from the previous years, students also showed high scores on their written reflections in explaining mathematical concepts and connecting these concepts to the mathematical content standards of the secondary classroom in the area of Geometry. This is not surprising considering that much of the content that students learn in Math 329 is directly related to and explicitly stated in the Geometry standards in the CA Mathematics Framework www.cde.ca.gov/ci/ma/cf/mathfwchapters.asp.

Summary analysis and interpretation of these key assessment findings in terms of strengths and weaknesses of the program: Undergraduate Programs

The Department was particularly concerned with the outcomes of the PLOs under Goal 1 (Conceptual Understanding) and Goal 5 (Mathematical Proofs). The department regarded the structure of junior-level courses under the quarter system as a key weakness. This structure consisted of five 300-level courses for the math major which could be taken in any order. The Department used the semester conversion as an opportunity to provide a more orderly structure to the semester courses. The Linear Algebra course was moved to the 2000 level to articulate with community colleges. Math 3100 was introduced as a first 3000-level course to set a uniform foundation for upper-division courses.

Data from previous years' assessments were used in the transformation of the Mathematics major and design of the semester-based programs. Data collected was used to design the details of specific courses as they relate to the PLOs involved; in particular, the design of Math 3100, Mathematical Thinking: Communication and Proof, leaned heavily on these data as well as research on teaching mathematical thinking.

Faculty continue to discuss and look for opportunities in their courses to help build students' ability to make sense of definitions of mathematical terms in a variety of contexts using multiple representations (including graphs and other visual representations, symbolic representations,

verbal representations, and numerical representations). Students are also given opportunities to identify both examples and non-examples of such ideas. For example, in Math 3100 faculty designed and used activities to engage students in conceptualizing fundamental concepts such as the concept of a function.

The assessment data indicate that the Teaching Track courses have done well in allowing the students to connect the mathematical content of the Mathematics major with the material taught in the secondary classroom.

Key findings from annual assessments: Graduate Program

Since the portfolio requirement phased out in 2018 and really did not seem to be a fair assessment of the program due to the low number of data points, it is appropriate to provide data from 2018-2020, and then to provide the data we have collected since the beginning of our semester curriculum, starting in Fall 2020.

Assessment findings from 2018-2020. We received roughly 30 responses to our survey given at the time the student advances to candidacy. Here is the data we received in each of the questions we asked to the students, with the responses on a Likert scale of 1 = poorly to 5 = exceptionally:

1. How well do you feel you can critique the mathematical reasoning of yourself and others? (Measures (old) PLO 4.2.) Average response = 4.03
2. How do you rate your understanding of Graduate Analysis? (Measures (old) PLO 1.1.) Average response = 3.92.
3. How do you rate your understanding of Graduate Algebra? (Measures (old) PLO 1.1.) Average response = 3.95.
4. How do you rate your understanding of Graduate Geometry? (Measures (old) PLO 1.1.) Average response = 4.1.
5. How do you rate your understanding of Problem Solving? (Measures (old) PLO 1.1.) Average response = 4.55.
6. How well do you feel you can problem solve in a variety of areas? (Measures (old) PLO 1.2.) Average response = 4.16.

Students were also given the opportunity to provide feedback about an area where they experienced the most growth, and where they experienced the least growth. In these, they are prompted to also measure the magnitude of that growth, or lack thereof.

These free responses were quite varied in what they believed they experienced the most growth in. A small majority of the students mentioned some subject (generally a core course) as the topic that they experienced the most growth, and that they generally felt their growth was either moderate or large in these areas. Other responses featured student comments about their thesis project, critical thinking, or communication. Again, students felt their growth was either moderate or large.

In a similar way, there were varied responses when it came to what sorts of things the students feel in terms of experiencing the least growth. The responses fairly evenly represented a number

of topics: some mentioned a particular course (such as Math 618: Graduate Analysis, Math 616: Graduate Algebra, Math 614: Graduate Geometry, or some elective). Others mentioned some skill they lament not experiencing some growth in, for instance, critical thinking, or even typesetting in LaTeX. However, all responses that specifically mention it indicate that this lack of growth was either small or moderate. In addition, there does not seem to be any one subject or skill that is particularly more common than any other in these responses, and, only a handful of responses mention the same source of least growth.

Assessment findings from 2020 to present. In our student surveys, we received 7 responses of 8 total students advancing to candidacy during this time. The choices for responses are all on a Likert scale of 1 to 5, with 1 being "poor", and 5 being "exceptional". The results for the (lightly edited for brevity) questions are as follows:

1. How do you rate your understanding of Graduate Analysis?

Response:	1	2	3	4	5
Number of responses:	0	0	3	2	2

2. How do you rate your understanding of Graduate Algebra?

Response:	1	2	3	4	5
Number of responses:	0	0	1	4	2

3. How well do you believe you can problem solve in a variety of areas?

Response:	1	2	3	4	5
Number of responses:	0	0	1	3	3

4. How well do you think you have been taught to solve problems using advanced techniques?

Response:	1	2	3	4	5
Number of responses:	0	0	0	0	1

5. How well do you believe you can critique mathematical reasoning?

Response:	1	2	3	4	5
Number of responses:	0	0	0	5	2

6. This question asks the students to freely respond to the question: Name one area where you experienced the most growth? And, what was the magnitude of that growth? The responses describe a growth in communicating mathematics, followed by growth in their thesis, group theory, geometry, or research, and most responded by adding that their growth was large in these areas.

We also surveyed faculty serving on thesis or exam committees for graduating students. According to the department records, there were only two students who have graduated since Fall 2020, and we received 5 responses (of 6 possible committee members for those students). Again, the responses have the same Likert scale as above (it was instructed to each member that the term "thesis" could refer to the content in the elective comprehensive exam):

1. Were the definitions and theorems in the thesis communicated with precision and clarity?

Response:	1	2	3	4	5
Number of responses:	0	0	0	4	1

2. Are the main concepts of the thesis presented in a sensible and well thought out order?

Response:	1	2	3	4	5
Number of responses:	0	0	0	4	1

3. How well was the presentation structured?

Response:	1	2	3	4	5
Number of responses:	0	0	1	4	0

4. How well did the presentation get across the information in the thesis?

Response:	1	2	3	4	5
Number of responses:	0	1	0	4	0

5. How well does the structure of the thesis and/or presentation indicate a well thought out approach to the study?

Response:	1	2	3	4	5
Number of responses:	0	0	0	2	3

6. How well did the student present the proofs in their thesis in terms of accuracy and validity?

Response:	1	2	3	4	5
Number of responses:	0	1	0	2	2

7. How well did the student write their proofs at an appropriate level?

Response:	1	2	3	4	5
Number of responses:	0	0	1	0	4

8. The final question for the faculty committee is a free response question to elaborate of anything else of note. There were three such responses: one mentions zoom not being an ideal medium for the elective comprehensive exam, another mentions the mindset of the student and the struggles of helping such a student through the program (presumably written by a thesis advisor), and one comment praising the quality of a thesis.

Summary analysis and interpretation of these key assessment findings in terms of strengths and weaknesses of the graduate program. These findings suggest several realities about our effectiveness in the MA program:

- Our students seem to feel that they are learning the graduate content very well. This statement is evidenced by the numerical responses to the questions that directly ask the student this. There seems to be a slightly lower response in the area of Algebra and Analysis, although these are quite possibly our most difficult courses that are (a) very deep mathematically, and (b) leave much in the field not discussed (indeed, subsequent material could be the foundation of a graduate course at the post-MA Ph.D. level, beyond the scope of our program), and (c) these are probably the most difficult mathematics courses we offer here at CSUSB. In this way, it makes sense that students feel perhaps as if they don't know "everything" about a subject, and in fact, indicates quality instruction, although we do not have data supporting these comments, it is simply a possible explanation for this phenomenon.
- Students seem to feel strongly that they are growing in this program, broadly speaking. The comparison of conviction of the most growth versus least growth question demonstrates this: most responses in the "most growth" question featured students who felt this growth was moderate or high, while the responses in the "least growth" question were small or moderate. In recent assessment data, there is a predominant feeling that their growth is large in whatever area they mentioned. In addition, it is reassuring to see that the new Math 6000: Communicating Mathematics is something the students seem to appreciate and get a lot out of.
- Thesis projects seem to be very successful, from the student point of view. There were no responses indicating a lack of growth in the specific area of one's thesis. To be fair, at the time of advancement to candidacy when the student takes the survey, very many are not in a position to measure their thesis growth.
- Regarding question 4 in the semester student survey, students may have had difficulty interpreting the question. It is possible students are confusing this question with one that asks specifically about our problem solving course (either under semesters or quarters). Thus, it is possible some students would elect not to answer the question if they have not taken the problem solving course. This could explain the low number of responses because the problem solving course is only offered once every two years. The question has since been changed to emphasize that the student should consider their problem solving abilities regardless of whether or not they have taken any problem solving course.
- There does not appear to be one negative issue regularly mentioned in any of our data collection. While there are some less than ideal responses, which is to be expected, these seem to be rare and do not point to any one area where we are failing our students.

Other aspects and measures of Program effectiveness.

Faculty Areas of Expertise: Please see the attachment under Section VI (Resources) for a table summarizing areas of faculty expertise.

Numbers of tenure-line and lecturer faculty in key teaching areas: See the discussion in Section VI.

High-Impact Practices in the Program: Please see the attachment below.

Advising and Mentoring: Please see the attachment below.

Attached Files
  Math Advising and Mentoring.pdf
  Mathematics HIPS.pdf

Program Resources:
Numbers of tenure-line and lecturer faculty and staff
As of Fall 2021, the department had 23 full-time tenure-track faculty members. Six faculty are participating in the Faculty Early Retirement Program (FERP) at a reduced time base; these represent an additional 2.33 full-time equivalent faculty. This adds up to a bit less than the 25.55 full-time equivalent tenure-track faculty we had in Fall of 2016, and after providing for leaves and other reassigned time it can be difficult to fully staff courses in Calculus II and higher with tenure track faculty. For example, we created a GE new course in Systems Modeling for the semester curriculum but could not run it in Spring 2022 due to a lack of available tenure-track faculty. We have 28 lecturer faculty, two of which have full-time entitlements. These faculty teach our 1000 level courses, as well as several sections of Calculus I and courses in the Mathematics sequence for Liberal Studies majors (Math 3011, 3012 and 3013 and associated support labs). We have 12 graduate Teaching Associates (TAs) who also teach 1000 level courses, primarily the Preparation for Calculus AB sequence. Between lecturer and TA instructors we have been able to provide good coverage for 1000 level courses including the B4 quantitative reasoning courses. See the attachment below for a list of all tenure track faculty and their research areas.

The Math department office employs three full-time staff. The lead ASC II, Leeanne Richardson supports scheduling, budgeting and purchasing, and timekeeping as well as part time faculty contract entry and files. ASC Allison Torres assists with issues and requests related to student enrollment, supports the MA program, and manages the hiring and timesheet process for student employees. We recently hired Debbie Solis to staff the department front desk, serve as the department point of contact with the campus bookstore, and also support the regional Mathematics Diagnostic Testing Project at 25% effort. The department houses the Center for Enhancement of Mathematics Education, which employs one full-time staff member (employed through the campus auxiliary) and a part-time student employee. The CEME director, Kelli Wasserman, receives 9 units reassigned time from the university to support Center activities.
Professional development funding and opportunities for faculty and staff, in the program
Mathematics faculty are active participants in professional development offered by the campus Teaching Resource Center, most recently to prepare for virtual teaching due to the COVID-19 pandemic. Mathematics faculty have also been active participants in faculty learning communities implementing evidence-based teaching practices; these are funded by an NSF IUSE

grant awarded to the College of Natural Sciences. Within the department, two faculty (Jeff Meyer, Dalton Marsh) have led a faculty learning community since Fall 2020 on issues of diversity, equity and inclusion. Course coordinators incorporate professional development activities into regular course instructor meetings to varying degrees, although some coordinators face challenges in eliciting participation from all instructors. Professional development offerings for staff are not as fully developed compared to faculty, but our college supports department ASCs' attendance at the annual ARC conference which our staff find valuable. New staff members engage in significant informal learning as they work alongside more experienced staff.

In the 2018-19 and 19-10 academic years, the Provost provided $1000 annually to support faculty conference travel, equipment purchases, and other professional development expenses. In the current academic year, the College has committed to splitting costs with departments to cover up to $1000 in professional development expenses. Newer faculty receive additional professional development funding through their startup packages. Based on faculty use of the funds, the amount offered seems to be sufficient for most faculty.

Funding for program operations and activities
The department receives a budget allocation for part time faculty and TA salaries based on a formula taking into account the estimated difference between WTUs needed to teach in a given year and the full-time equivalent faculty available to teach them, with some expectation of a target student-faculty ratio of 26.5. We have had difficulty staying within this budget in the last two years, though we have been able to supplement this funding with grants supporting faculty reassigned time. We receive a budget allocation for operating expenses that has been sufficient for department needs.

Related to the question of funding, there is a general sense among faculty that workloads are too high. First, the change to semesters required all of us to redevelop all of our courses, and in some cases, start from scratch. While there were some grants available for some course development during the Q2S preparation, the vast majority of courses did not really qualify for this support since not every course needed to be drastically changed, in particular, in an effort to include some high impact practices (such as active learning). While Q2S funding has ended, there continue to be simple, modest, or sometimes drastic changes to each course preparation, and the extra effort across all courses adds up. In the MA program, while faculty are compensated with fractional amounts of WTU for supervision courses (such as thesis and comprehensive exam courses), students who do not finish on time enroll in zero unit Continuous Enrollment, for which the faculty member contributes roughly the same amount of work but receives no WTU.

Grants and other external sources of funding
Mathematics faculty have had good success in obtaining external grants and subawards. Several of these have been managed by the department's Center for Enhancement of Math Education (CEME), which houses the Inland Counties Math Project (ICMP, the regional site for the California Math Project). ICMP receives about $55,000 in annual funding through the California Math Project to support teacher professional development. CEME's most significant current grant is a long-running NSF Noyce grant currently in Phase 3 of funding under the direction of PI Jeremy Aikin.

Corey Dunn (PI) and Rollie Trapp are the organizers of anNSF REU that has run on the campus for many years and typically includes at least one CSUSB student among each summer's participants. Susan Addington is the PI on grants from California Learning Lab grant and Growing Inland Achievement. Lynn Scow and Shawn McMurran are co-directors for CSUSB's subaward under the CSU systemwide NSF LSAMP program. Our department houses this region's site for the Mathematics Diagnostic Testing Project, which provides significant reassigned time for the site director, Giovanna Llosent and provides 25% support for one department staff member.The Mathematics department chair is the co-director of the campus Math Science Teacher Initiative which has been receiving $200,000 each of the last three years from the Chancellor's Office. Some of this funding has supported peer tutors in this and other departments, and graders in the mathematics department.

There is one funding opportunity specifically for graduate students known as the Graduate Equity Fellowship. This is a roughly $2000 fund to be divided in some appropriate way between eligible candidates. This appears to be the only source of funding for the mathematics graduate students aside from the competitive TA program and other standard forms of financial aid. Considering that most of our students work and have family care responsibilities in addition to school, additional financial support for graduate students would be welcome.

Space and Equipment
The department is housed on the third and fifth floors of Jack Brown Hall on the San Bernardino campus, with CEME occupying an office on the second floor. Classroom space available to the department is adequate, though some rooms are small for 30-student classes and aging HVAC systems have caused some concern in the midst of the continuing COVID-19 pandemic. We are currently repurposing some small lab spaces to create two new 24-seat active learning classrooms that will accommodate our Math 3100 writing intensive course and graduate courses. Another 35-seat lab is currently an open lab; prior to the transition to semesters it was sparsely used for classes. A large room serves as a combination colloquium space and tutoring room. While we have a handful of tables set up in public areas for student study, we would like to see more and better spaces particularly for student collaboration. Office space is tight, especially on the 5th floor where offices are shared among 3 or 4 lecturer faculty or TAs.

Attached Files
 Math Faculty 2021.pdf

Summary & Recommendations:

Summary of strengths, areas of improvement and weaknesses of the program, in light of the findings described in sections V and VI

Overall, we were successful in implementing the Chancellor's office Executive Orders calling for changes to general education and the elimination of remedial mathematics, as well as adding 9 faculty and navigating the change to a semester academic calendar amid the COVID-19 pandemic.

While it is a bit early to judge strengths and weaknesses of the new Semester programs, data from the undergraduate programs suggests that the Teaching Concentration has done a good job supporting students in connecting the learning in their undergraduate coursework with the content of the secondary classroom. Future data on undergraduate PLO 3.3, Goal 4 and Goal 5 will provide valuable information on the impact of Math 3100.

In the MA program, students have provided very positive feedback about their learning in the program. There does not appear to be one area where the assessment data suggests improvement, although our assessment routine is very new and has undergone significant changes in the last five years. It would be helpful to study the assessment data in another five years to see if any patterns emerge, whether positive or negative. As discussed in section III, additional financial support would immensely help our graduate students.

Recommendations for the program over the next five years

- Stabilize the funding to maintain the peer tutoring program in future years. Currently, this funding comes from unspent funds in the Math Science Teacher Initiative (MSTI), but new MSTI funds cannot be spent on tutor salaries.
- Increase tenure-track hiring and hire at least one serialized full-time lecturer.
- Improve the public spaces available to students for study and collaboration. If possible, increase office space for lecturer and TA faculty.
- Align expectations and activities associated with course coordination, so that instructors regard coordination activities as expected, accessible and worthwhile.This may involve compensation for instructors participating in coordination activities and some creativity to accommodate part time instructors.This recommendation pertains to non-major GE courses as well as Calculus, and affects graduate TAs teaching coordinated courses.
- Seek ways to improve faculty compensation for additional work performed as a result of Q2S and Masters' student supervision, to the extent allowed in university and college policy.
- Seek ways to improve financial support for graduate students, which may include grants and scholarships, additional employment opportunities, and funding for professional development (which could include support for students preparing for further graduate study).
- Continue to monitor and act on assessment data for the new semester curriculum.

Providing Department:
Bachelor of Arts, Bachelor of Science, Master of Arts in Mathematics

California State University, San Bernardino Mathematics Department External Review

By Matthew G. Jones

Conducted based on a virtual visit on February 25, 2022 and accompanying materials, primarily the department self-report. The virtual visit consisted of meetings with Deputy Provost Clare Weber, CNS Dean Sastry Pantula, Dean of Graduate Studies Dorota Huizinga, and Department Chair Madeleine Jetter, individual meetings with Dean Pantula and with Dean Huizinga, a meeting with four undergraduate students, a meeting with eight graduate students, and two meetings with Math Department faculty, one focused on the undergraduate major, and the other focused on the graduate program.

 The external reviewer report should contain a summary of the reviewer's activities during the site visit, and offer the reviewer's observations, insights, and feedback on program quality in the following areas:.

I.   Learning Outcomes and Program Effectiveness

Program Learning Outcomes and Curriculum

a.   How well do the program's PLOs represent a scope and depth of student learning appropriate for the degree type/level?

Program PLOs are appropriate to the program and compare well with those at similar programs on other campuses.

b.   How well are the PLOs aligned with CSUSB's ILOs?

The self-report demonstrates alignment of program PLOs with CSUSB ILOs.

c.   To what extent does the program's curriculum exhibit the breadth and depth commensurate with the expectations for student learning?

The program, redesigned during the quarter to semester transition, appears to have a solid foundational core and an appropriate set of options for students with particular areas of interest.

d.   Is the program advancing the field(s) of study or state of the profession? Is the program teaching the right content for the field(s)? Does it respond to the profession's needs?

The program appears to be well-positioned for the current state of the profession, with its development of courses in statistics, statistics minor, and is collaborating with Computer Science and Engineering on a certificate and a planned master's program in data science.

Evidence of Student Learning

a.   How effective is the program's assessment plan for evaluating student learning in the program?

The program's assessment plan appears to be quite functional. In particular, the data were used to make modifications to the program, including the launch of a new course, Math 3100, that establishes a foundation for later course work and assists students in developing writing skills in the discipline.

b. Does the program collect, maintain, and use summative evidence of student learning on a regular basis?

The undergraduate program uses performance assessment tasks developed specifically for each LO by the department assessment committee and those items are used across multiple upper division courses aligned with each LO. Graduate program assessment is done via surveys of graduating students and thesis/comprehensive exam committee. These are used to inform the program.

c. To what extent are students achieving the learning outcomes? What evidence have you examined that indicates student learning? What do you see as avenues for improvement of student learning?

The self-report indicates the extent of achievement of the learning outcomes. The department used the quarter-to-semester (Q2S) conversion to improve the structure of the undergraduate major. The department continues to seek ways to improve outcomes concerning Goal 1 (conceptual understanding) and Goal 5 (mathematical proof). Semester data has yet to be collected with regard to these items.

d. To what extent has systematic evaluation of student work been used to improve the program?

Student work appears to have been used to formulate a plan for improving the structure of the program, and continues to inform conversations in the department about how to further the achievement of program outcomes.

Stakeholder Views of Program Effectiveness

a. What do students and other stakeholders (e.g., faculty, staff, alumni, advisory groups, professionals in the field; employers; etc.) view as the strengths of the program?

Undergraduate students appreciated the fact that faculty use high-impact practices and active learning strategies, provide opportunities to learn collaboratively, and that faculty are available and supportive of students. Students also appreciated the math gym provided by the department to augment learning support. At least one student found the flowchart of courses in the major to be a helpful guide.

Graduate students endorse the program as one they would recommend to other potential students. The process of finding a thesis area, advisor, and thesis topic seems to be working well. Nearly all graduate students who participated in the external review were pursuing the thesis option, and seemed satisfied with their choice. In one case in which a student shifted from a thesis to exams, the student felt that the advisor had been helpful in setting up the transition to a different plan. Graduate students, like undergraduates, had positive comments about the availability and support of program faculty. In their experience as teaching assistants (TAs), graduate students appreciated the level of curricular support for courses, which they found neither too open nor too constrained. At least one graduate student cited the value of the teaching practicum.

Department faculty appeared to be pleased with the work in which they were engaged, and proud of their accomplishments in the Q2S transition and the support they provided to students. Faculty reported being engaged in a number of initiatives and programs to assist students, including LSAMP, an REU

program, ETEMS, and initiatives to support diversity, equity, and inclusion (DEI) as well as to support using effective pedagogies. The self-report indicated adequate support for faculty professional growth. Department harmony appeared to be solid, and work appeared to be shared amongst many faculty members, rather than overly burdensome to a few faculty. Support for faculty assigned time (e.g., for the chair, graduate coordinator, and course coordination) appeared adequate.

b. What do they view as components of the program that could be improved?

Undergraduate students had positive comments about department advisors, while also recognizing some inconsistency in the messages they received from different faculty. Undergraduates also commented on the value of the math gym, and would appreciate an expansion of the support available there. Some commented on the difficulty of building a schedule, though they did not have an issue with finding available space to enroll in courses.

Graduate students found the process of choosing electives to be less than optimal, with many choosing electives based only on what was available, and some being uncertain about which undergraduate courses were acceptable options. Graduate students also expressed a desire for more support for their growth as TAs, particularly since many are interested in teaching at the community college as a career. They were also interested in learning more about community college teaching, whether through a job fair or by engaging with community college speakers as guest experts to share their perspectives on the nature of the job and how to be an outstanding job candidate.

Faculty showed signs of mild fatigue. One source of fatigue was research and thesis supervision. While faculty reported enjoying working with students on these projects, they also noted that the support was limited and not always able to accommodate unusual circumstances, such as students who do not finish theses in the allotted two semesters, students who may be capable of doing more significant research projects but lack the structures to support such extended applications, or the difficulties of securing appropriate workload for undergraduates. Faculty reported some dissatisfaction with the unit loads assigned to some courses. In particular, given the size of the major, the chair is challenged to provide workload assignments that do not require faculty to teach 4 different courses in a semester. Faculty expressed interest enhancing student success by developing 1-unit co-requisites specific to each course (as opposed to generic 1-unit labs), and by making these co-requisites mandatory for students in GE QR placement levels 3 and 4.

II. Faculty Engagement

a. Do the program faculty have an appropriate distribution of academic expertise and professional experience to deliver the degree program?

Faculty expertise is distributed across most key areas. The department may wish to revive its pursuit of a faculty member with expertise in applied mathematics.

b. Does the program have an appropriate balance of tenure-line and lecturer faculty?

A recent spurt of hiring has helped to maintain a level of tenure-line faculty that is similar to comparable institutions. However, recent and pending retirements have prevented the department from advancing significantly in this area.

c. If applicable, to what extent does the program effectively integrate non-faculty specialists (e.g. technologists, advisors, field coordinators, assessors, etc.) into the professional team?

No significant efforts to use such specialists were apparent.

III. Program Resources

a. Has the program been adequately resourced relative to the size and scope of the program or the stated mission and goals of the program?

Program resources appear adequate, though not robust. As noted above, coordinators and the chair seem to be compensated fairly, and the math gym has been funded to date. Yet faculty expressed a need for further resources to support students, particularly students engaged in research. In addition, inadequate financial support for students (which is likely endemic to the campus, not specific to the program) means that undergraduates may not engage in opportunities such as research, and graduate students combine their studies with work as a TA and additional employment. Faculty workload is also a challenge for the program, given the lack of availability of multi-course sections or large-unit-load (e.g. 4-unit and 5-unit) courses.

b. Are the resources requested by the program appropriate to meet program goals?

Resources requested appear just barely appropriate. Ongoing attention to faculty hiring and to funding for the math gym will be critical to continuing the success of the program. The department has been strained in maintaining its budget while also staffing all courses.

c. Assess the effectiveness of program actions given the resources the program has had available for executing its Plan of Action during this program review cycle.

The program has taken appropriate steps to further its goals within the scope of resources available.

d. If the program is under-enrolled, what would you suggest to recruit more students?

The program enrollment has suffered somewhat as a result of the Covid-19 pandemic. The department appears to be using effective pedagogical techniques to retain students in the program. There may be opportunities to recruit additional students to the program, but this was not discussed in detail, and is not a significant concern at this time. The department appears to be doing well in matching its race and ethnicity demographics to the rest of the campus.

e. If the program is impacted (over-capacity), what would you suggest to address the issue?

This is not an issue for the program.

IV. Overall Comments and Recommendations

a. What overall comments do you have about strengths, areas of improvement, and weaknesses of the program?

The department is serving students in both the undergraduate and graduate programs quite well given its resources.

- Undergraduates and graduates were uniform in their praise for faculty attention to students as individual learners.

- The department is to be commended for its redesign of the core program during Q2S, as well as its launch of a statistics minor and participation in work on developing courses in data science.
- Faculty members are using best practices in teaching and believe strongly in DEI.
- Faculty members are actively recruiting underrepresented minorities as participants in special programs such as LSAMP and the REU.
- The math gym is providing valued support to undergrads, and even greater support would be welcomed by students.
- Graduate students are navigating the thesis process successfully.
- Graduate student TAs appreciate the level of curricular support as neither too restrictive nor too open-ended.
- Department harmony is high and the workload appears to be shared amongst many faculty.
- The department assessment process is providing useful feedback (e.g., assessment led to the creation of a new course in response to diagnosed need).
- The undergrad program structure appears to be working.

b. What recommendations do you have for the program over the next five year period?

Recommendations:

- Ongoing attention to faculty hiring is necessary, as the department continues to experience retirements.
- The math gym funding appears uncertain, and the department will need to find ways to continue to operate this service. Possible avenues might include a lab fee or student success fee monies.
- Attention is needed in exploring further means of supporting student research for undergraduates as well as extended thesis work by graduate students.
- The graduate students would benefit from more systematic efforts to connect with community college faculty as a resource for learning about their chosen career and how to enter the profession.

Considerations:

- The department may wish to consider the messaging and support for graduate students in choosing elective courses.
- The department may wish to explore additional professional growth opportunities for TAs, whether optional or required.
- Given budgetary restrictions and the department interest in co-requisite courses, the program may wish to consider sacrificing current course section enrollment capacities slightly in exchange for creating courses with larger unit loads or co-requisite support. While the nature of the external visit prevented an extended conversation about this topic, the reviewer's experience suggests that enrollment capacities of up to 35 in lower-division courses, *when supported by additional features such as co-requisites or expanded unit loads*, can maintain or enhance student success without undue burden on faculty. Any such changes should be carefully monitored to ensure the continued success of students and a satisfactory experience for faculty.
- The department may benefit from close examination of its undergraduate advising practices, which appear to be adequate, and yet may not be optimal.

2021-22 BA/BS/MA Mathematics Committee Review Report
Reviewer:
Academic Program Review/Self-Study Review Committee

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:

Strength

1. Faculty pay individual attention to students and use best practices in teaching.
2. The math gym is valued by undergrads.
3. The department assessment process is providing useful feedback.
4. The undergrad program structure is working well.
5. Faculty expertise is distributed across most key areas in math.
6. Faculty implemented High-Impact Practices (HIPS) in both the undergraduate and graduate program including writing intensive courses (Math 3100 and Math 6000), collaborative projects, some opportunities for undergraduate research, and ePortfolios in certain courses.

Potential Improvement

1. Both undergraduate and graduate students found it difficult to build a schedule and choose elective courses and they have to select courses based on availability.
2. More TA opportunities should be provided to graduate students.
3. Faculty require more resources and support for research and thesis supervision.
4. Faculty are dissatisfied with the unit loads assigned to some courses.
5. Further resources are needed to support student research.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:

1. The department streamlined the BS program by reducing the number of available concentrations from 6 to 3 (General Mathematics, Applied Mathematics, and Teaching Mathematics).
2. The department increased course offerings in statistics by adding a 2000-level statistics course as a requirement in all BS Concentrations and introducing a new upper division elective course in Linear Statistical Models.
3. The department adopted new curriculum and placement methods for Calculus and Preparation for Calculus (formerly known as College Algebra/Precalculus).
4. The department updated the second year of the Calculus sequence, introducing Applied Linear Algebra in the third semester.
5. In the area of tenure track hiring, the department hired nine new tenure track faculty since the last review. Two of these hold PhDs in statistics (with a third who has significant experience and interest in statistics), and two specialize in mathematics education.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:

1. The department should provide more flexible schedules for undergraduate and graduate students, so that they can select electives based on their interests rather than course availability.
2. The department should find ways to continue to fund and operate math gym and to fund more TAs.
3. The department should explore ways to enhance enrollment.
4. The department should continue to support undergraduate student research and graduate thesis.

2021-22 BA, BS & MA Mathematics College Dean Report
Reviewer:
College Dean

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:
Both the undergraduate and graduate programs seem to be meeting the student learning and program objectives appropriately, and transitioned to the semesters very well. Faculty have a lot to be proud of themselves in their teaching, research and advising of our students, especially with Q2S and the lingering pandemic. I agree with the reviewer that the department is very "well-positioned for the current state of profession with its development of courses in statistics, statistics minor, and is collaborating with Computer Science and Engineering on a certificate and a planned master's program in data science." I appreciate the department's use of various assessment methods to regularly monitor their performance with regards to the learning outcomes, and look forward to seeing data from semesters in this year's annual assessment report.

I am very pleased to hear the positive comments from our undergraduate and graduate students, and from our faculty about the curriculum and advising. The review is very positive and I really appreciate the work the department has put in its self-study and the time the reviewer to cover the various aspects that are going well and providing some constructive suggestions for future.

As the reviewer suggested, it is important to find resources to support the math gym, improve consistency in advising, and provide support for graduate students who are interested in pursuing teaching opportunities with community colleges. Also, as we continue to increase the tenure track faculty in the department, consider recruiting faculty with expertise in applied mathematics.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:
Q2S, the self-study, and the reviewer comments suggest that both the undergraduate and graduate programs are being very effective. As we have more data from semesters, we need to continue to assess and consider improvements for the future as appropriate.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:
Some potential action plans based on the self-study and the reviewer to consider:

1. Assess the consistency in advising undergraduate students and provide appropriate training if needed.
2. Include community college faculty in math career panels to help those who are interested in pursuing faculty positions at community colleges. The Department does an excellent job with career training in K-12 teaching profession.

3. Finding resources to support the math gym as MSTI funds come to an end for this purpose. Explore lab fees as some of the other departments in CNS make use of to support students with additional help.
4. Make use of OSR, PATHS and other resources on campus to support undergraduate research, and seek external funds for research experiences.
5. Continue to recruit tenure track and full-time faculty, including in applied mathematics. We need to stay ahead of the retirements. We were able to recruit one new tenure track faculty member who will start in Fall 2022. CNS will continue to invest in the departments in increasing the tenure track density. The Provost has been extremely supportive to CNS in investing in our tenure track recruiting. The department has recruited 8 new tenure track faculty since 2018. During the past three years:

Year	2018-19	2019-20	2020-21
TT head count	23	24	29
TT FTEF	19	18	22
Fac head count	60	60	67
Fac FTEF	38	38	39
LD FTES	2030	2020	1776 (In quarter units)
UD FTES	716	810	675 (In quarter units)
BS degrees	82	86	66
MS degrees	10	12	6

1. Continue to review the opportunity to offer 4-credit courses and/or adding one-credit co-requisites while keeping an eye over total credit hours required for graduation. This may significantly benefit student and faculty success and reduce course failure and repetition rates.
2. Consider the reviewer's suggestion regarding class sizes to help fund the co-requisite courses proposed in #6, which will help both with faculty workloads and with student success.
3. Find some solutions to students who take more than two semesters to complete their MS thesis. Discuss how this is done in CSE, HSCI and Biology departments in the college.
4. Review the part-time faculty funding, operating funds, and CERF funds are adequately provided, invested and not left at the end of the year to carry over.
5. Pay attention to enrollments to rebound from the enrollment and FTES loss due to Q2S and the pandemic.

Providing Department:
College of Natural Sciences

2021-22 MA Mathematics Dean of Graduate Studies Report
Reviewer:
Dean of Graduate Studies

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:
The MA in Mathematics program prepares students for careers in teaching, the industry and to pursue PhDs. The curriculum was successfully revised during the quarter to semester conversion in 2020. The program curriculum meets student learning outcomes. Additionally, the new semester-based curriculum offers the students a choice to complete their culminating experience via a thesis or a set of three comprehensive exams. The choice to take comprehensive exams is a new option in the curriculum.

The program offers a writing-intensive course Math 6000 which also meets the CSU GWAR requirement.

According to the external reviewer, who met with students, graduate students are satisfied with the program and willing to recommend it to prospective students. Faculty are engaged and students praise faculty availability and support.

Some students stated that choosing course electives to be included in the plan of study can be challenging. Students are enrolling in electives based on course availability more than based on their interests. Also, some students said that they are not certain which undergraduate courses are acceptable for a graduate plan of study credit.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:
The program seems to be effective. Changes made during the Q2S conversion structure allow students to complete the program in 4 semesters.

The program developed a creative method for assessing PLOs. Graduate program assessment is informed by the data collected through two surveys: (1) a survey given to each student at the time they advance to candidacy, and (2) a survey given to the student's committee after they complete their culminating experience. Since the beginning of the implementation of this process in 2020, the department was able to collect assessment data from all but two students advancing to candidacy and all graduating students as committee members.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:

- The program curriculum currently requires 31-semester units. Since CSU tuitions are structured based on the enrollment load of 0-6 units and 6.1+ units, part-time students taking 6 units/semester would have to pay full tuition for one semester during which they

will have to take more than 6 and at least 7 units. Thus, the program should consider, if possible, revising the curriculum to reduce the program units to 30.

- The department should consider reviewing the offering of the program elective courses and the student advising about the plan of study electives.
- In a long term, the department should consider the development of a 4+1 program curriculum leading to a BA/BS and MA in Mathematics degrees that can be completed in five years.

Providing Department:
Graduate Studies

Mathematics Department Action Plan

1. Continue to recruit tenure track faculty, particularly in high-demand areas such as Applied Mathematics, as permitted by campus administration
   a. Timeline: Annual recruiting timeline (July-March).
   b. Responsible persons: Department chair, search committees, Dean, Provost
   c. Anticipated cost: dependent on number of searches approved, negotiated salaries and startup packages
   d. Resources needed: tenure track faculty lines, search committee time, recruiting budgets, administration approval for searches

2. Work with the Dean of Natural Sciences to seek new funding for Math Gym tutoring
   a. Timeline
      i. Fall 2022 term: assess availability of funding sources, possibly to include lab fees, student success fees, VETI, and other internal and external funding
      ii. Spring 2023 until complete: develop funding proposals or other actions dependent on findings
   b. Responsible persons: Department chair, Math Gym Coordinator, department faculty, University Advancement
   c. Anticipated cost: Approximately $30,000/year (ISA salaries and Coordinator reassigned time).
   d. Resources needed: 3 WTU for a faculty member to lead the search for funding. Support from University Advancement and/or an external agency such as Hanover Research to assist in approaches to external funding sources

3. Continue to monitor and adjust general education mathematics courses and corequisite supports
   a. Timeline:
      i. August 2022: Retreat for coordinators and instructors, budgets permitting
      ii. 2022-2023 AY: complete and begin implementation of an evaluation plan for GE Quantitative Reasoning
      iii. 2022-2023 AY: revisit feasibility of developing 4-unit GE courses with integrated EO 1110 support
      iv. 2022-2023 AY: retool the Math 1101/2/3 course sequence
      v. 2022-2024 AY: participate in Courses and Curriculum in Urban Ecosystems (CCUE) project with a focus on continuous improvement of the Math 1301/1302/1303 course sequence
      vi. 2023-2026: Further outcomes dependent on outcomes of previous steps
   b. Responsible persons: Department chair, Coordinator of first year mathematics, GE course coordinators
   c. Anticipated cost: Equivalent to 3 WTU reassigned time for two faculty to team-teach Math 1101. Approximately $18,000 in funding for instructor professional

development. Approximately $12,500 for instructor stipends to take part in course coordination activities.

    d. Resources needed: Instructor time, in addition to financial resources listed above

4. Examine MA curriculum and supports for students
    a. Timeline
        i. Summer 2022: Conduct and assess an orientation for new and continuing TAs
        ii. 2022-2023 and ongoing: Conduct TA professional development, including Math 6178 course and non-evaluative TA observations
        iii. 2022-2023 AY: Develop or update advising documents
        iv. 2023-2024 AY: Examine the need and possibilities for a 4+1 BS/MA program
        v. 2023-2026: Further actions dependent on outcomes of previous steps
    b. Responsible persons: Department chair, MA Coordinator, TA Coordinator, department faculty
    c. Anticipated cost: TA salaries for participation in orientation activities, reassigned time for MA Coordinator and TA Coordinator
    d. Resources needed: Support (from an agency such as CSUSB's Institute of Applied Research, Gray Associates, or similar) is requested to assist with a needs assessment for a potential 4+1 BS/MA program

2021-22 Self-Study Report
Program Overview:

Brief description

The National Security Studies M.A. program began in 1986. It continues to evolve and change, adapting to the needs of students for careers in national security. It is the only such program in the California State University system, the only one west of the Mississippi and one of the few in the country. In 2006, it was recognized as an "Intelligence Community Center of Academic Excellence (IC CAE)" by the Office of the Director of National Intelligence (ODNI) by a multi-year, multi-million-dollar grant with a second grant in 2012. The ODNI developed the grant to help increase the diversity of the workforce in the intelligence community. The designation as an IC CAE program affords our students extraordinary opportunities to interact with federal agencies of the United States government. As well, it gives program faculty ample feedback from career professionals on how our students fair in their careers and with job prospects. Repeatedly, the feedback we receive is very encouraging for our students as we've heard that our students tend to be 3-5 years ahead of their peers from other universities. (This was reported by members of the program staff of the ODNI to the primary investigator of the grant.)

Description of Curriculum

The last Self Study was finished Fall 2014 and the intervening years have witnessed a number of significant changes. Of course, the first large change was moving from quarters to semesters, which occurred in Fall 2020. For the conversion, the NSS faculty committee considered a number of minor changes to the curriculum. In order to provide students under the semester system the opportunity to finish their degree in two years, the committee decided to reduce the course load from 46 units (11 ½ courses) to 30 units (10 courses). In doing so, it also made one quarter-system prerequisite (PSCI 4840) a semester-system "core" course, and increased the core curriculum from 5 to 6 courses and decreasing the electives from 5 to 4 courses. This also allowed the department to plan for more consistent offerings of courses for students.

The second large change, of course, has been the pandemic which posed exceptional challenges to program faculty and students. The pandemic hit as the program was moving from Quarters to Semesters, and as the program worked on improving ways to recruit students for graduate study while also eliminating the GRE requirement. Thus, while we began matriculating more students we also began moving classes to hybrid/online formats, so it will be difficult to tell for a few more years whether the changes we've made are going to be effective.

Thus, while there will be general discussion of trends from 2014-2021, the results of the recent move to semesters will likely not be evident until the next Self Study.

Overview of Assessment Process

The NSS program primarily uses the comprehensive examination to assess student learning. Each semester, students who take their Comprehensive Examination will have questions embedded in the written portion of their exams. Three faculty will evaluate exams and agree on

the "score" for the written portion as it pertains to different student learning outcomes every year. The program has four primary learning outcomes, with more detail to be discussed in a separate section later:

Goal 1: Graduate students will be able to evaluate the major *institutions* that develop national security.

Goal 2: Graduate students will be able to evaluate the *theories and concepts* of national security.

Goal 3: Graduate students will be able to evaluate the major *policies and strategies* of national security.

Goal 4: Graduate students will be able to communicate effectively in writing, leading to lifelong learning.

The Scoring Rubric is as follows:

6 - Superior. Well -organized, vivid examples, mastery of details.

5 - Strong. Well-organized, less vivid, but still detailed.

4 - Competent. Clear, but less organized, basic details.

3 - Weak. Description but no analysis, muddled details.

2 - Inadequate. Superficial evaluation, patterns of serious error.

1 - Incompetent. Ineptness, inability to answer the question, or no attempt made.

Program faculty have a goal that at least 80% of students will pass with a 4 or better each semester. Students have one opportunity to repeat their comprehensive examination should they fail on the first try.

Response to Previous Program Review:

As indicated above, the last program review was Fall 2014. The previous recommendations included the hiring of more faculty for the NSS program. The department has hired several more faculty while two senior faculty have opted for the Faculty Early Retirement Program (FERP).

New curriculum was developed for 2014 along with newer processes for assessing student outcomes. The program converted from quarters to semesters for Fall 2020 while making minor adjustments for the conversion to Semesters. Faculty advised that we make sure students could get through the M.A. program in two years. To that end, we changed the number of courses students would take from Quarters, 46 units (11 ½) courses to Semesters, 30 units (10 courses).

Students could take 3 courses per semester and have only one left during their final semester while taking their comprehensive examinations.

We increased the core curriculum from 5 Quarter courses to 6 Semester courses to facilitate an easier plan for students to finish in the requisite two-year time-frame. As well, we moved one prerequisite (PSCI 4840: National Security Policy) to become part of the core course of study.

Students:

The trend line for the number of M.A. graduate students is as follows:

2014	2015	2016	2017	2018	2019	2020	2021
47	30	33	41	24	13	21	33

Some of the downward trend line reflects the fact that we also began an M.S. in National Cyber Security Studies in 2015. In addition, grant funding for our university from the Office of the Director of National Intelligence ended in 2017.

For the last several years overall, graduate applications were down university-wide. However, for AY 2020-21, there has been some university-wide improvement in graduate enrollment.

We believe two things helped increase the number of applications for the NSS program in particular:

1) During Winter and Spring 2020 we built a database of departments and contact people across the CSU and UC systems, as well as in key colleges and universities in the western U.S., and notified them of our MA degree. We had our largest pool of successful candidates for Fall 2020 with minimal advertising.

2) The Chancellor's Office in Winter 2020 recommended dropping external testing service for the duration of COVID because it could unfairly disadvantage a significant number of potential students. As a result, we dropped the GRE requirement for Fall 2020, Spring 2021, Fall 2021, Spring 2022 and likely for Fall 2022. Anecdotally, students report that dropping the GRE made it easier and less expensive for them to apply.

Our current (as of Fall 2021) student population is about 33 active students. We had 22 active students from the previous year with the addition of 11 new admissions for Fall 2021.

The student population is currently 57% Underrepresented Minority (Fall 2021), an increase over the previous year of 44% (Fall 2020). This continued trend towards increasing the diversity of our student body is in keeping with the original impetus for our two grants from the Office of the Director of National Intelligence, which seeks to increase the diversity of the federal workforce.

While we are increasing the number of our international students, U.S. domestic students overwhelmingly favor a career in federal service, of some kind. Such federal service can include

careers in the various agencies of the intelligence community, federal, state and local law enforcement, a military career or other agencies of the government. Most international students prefer to return to their home country to serve in similar services.

Technically, we cannot "track" students who enter federal service where the career requires a security clearance. Most agencies of the federal government require students who need a clearance are required to avoid mentioning what service they are entering, except to their closest family members. However, we have a fairly large, diverse and active "alumni" community of students who work in the many agencies of the federal government and we regularly direct our students to that network when they are looking for advice about where to live, etc. Thus, some of our faculty are likely to know where quite a few will end up than we officially can track. A couple of faculty stay in active contact with the alumni network.

On the other hand, many of our alumni who work in a variety of agencies make it a habit to return to our annual events to recruit for their respective agencies, departments or corporations. When current students apply for positions of trust in these agencies, the alumnus or alumna can "recommend" the applicant, further increasing their chances for being considered for a position of trust.

In the last 5 or more years, we've routinely had alumni return for our annual Colloquium, representing the following agencies and corporations: Central Intelligence Agency, the Defense Intelligence Agency, the Director of National Intelligence: Counterterrorism Center, Disney Worldwide Threat Center, ESRI, the Federal Bureau of Investigation, the Government Accountability Office, the Los Angeles Police Department, the National Security Agency, and so forth. At one event several years ago, out of 20 different agencies and corporations, fully of the representatives were alumni of the NSS program. Over the course of the pandemic we've had to move many of our activities to virtual formats, but alumni still return for these events.

Learning Outcomes & Assessment Processes:

Because of formatting issues, please see attached document.

Attached Files
  NSS MA Learning Outcomes and Assessement Process.pdf

Program Effectiveness:

As we are in the very early stages after the conversion from Quarters to Semesters and still navigating the pandemic, we are unable to say with any confidence in what our strengths or weaknesses are at present.

Having said that, we believe we remain on track for equipping our students for success in this profession. Our students regularly get hired into important and highly sought-after careers in federal service, ensuring our regional university has national impact.

In fact, as of this writing (September 2021), an alumna just contacted program faculty to "recommend" five new applicants to an agency of the intelligence community. As well, another student attending a summer session on national security sponsored by the Office of National Intelligence, reported being "recommended" by one of our grant program managers with whom the Primary Investigator had a working relationship.

Faculty areas of expertise

We have faculty who are well-equipped to educate and train students for careers in national security. We have experts in research methods and national security bureaucracy, foreign policy, intelligence analysis, terrorism and counterterrorism, nuclear deterrence theory and practice, arms control, international law and regional areas of expertise, including East Asia, the Middle East and Africa. Some part time faculty may supplement with Europe and Eurasia.

High-impact practices

Since 2014 through the end of the grant, we regularly hosted career professionals from a variety of different federal agencies to conduct office hours, host seminars and workshops on resume writing, interviewing, and writing for professionals and job fairs. Regularly during the Spring quarter or semester (usually April) we host an annual Colloquium for about 200 people, including students and faculty from across the campus and from affiliated universities in southern California, and representatives from 14-16 agencies and corporations.

Since the end of the last grant from the Office of the Director of National Intelligence (2017), we have continued some of the high-impact practices that made our program so successful. Part of our second grant as an Intelligence Community Center of Academic Excellence required that we develop a sustainable way to maintain that designation as a "legacy" institution. To that end, faculty and students developed a student-led club, NatSec, that acts as a host for all of these events. Professors Steve Childs and Mark Clark are faculty advisors to NatSec, though for continuity's sake, Professor Childs does most of the day-to-day management (as Clark will end his time with FERP soon).

Since April 2017 NatSec has consistently hosted **three** major events per year:

1. An **Intelligence Analysis Simulation Exercise** in the Fall (3 Nov 2017 based on the Kurds in Syria and Iraq with 90 attendees; 26 Oct 2018 based on the Korean Peninsula with 91 attendees; 25 Oct 2019 based on narco-traffickers and the Central/South American drug trade with 70 attendees; 16 Oct 2020 based on the Korean Peninsula and held virtually with 54 attendees). All simulations except the first one in 2017 involved representatives from the Intelligence Community participating. NatSec is hosting the next one virtually on 29 Oct 2021 and it is set around Iran.
2. A **Professional Development Workshop** in the Winter that covers resumes, cover letters, an overview of the background investigation process, and a 'Policymaker Daily Brief' writing exercise (22 Jan 2018 with 11 attendees; 28 Jan 2019 with 7 attendees; 10 Jan 2020 with 14 attendees; and 5 Feb 2021 held virtually with 48 attendees).

Representatives from the Intelligence Community participated in the 2020 and 2021 events, and NatSec is planning to hold the next one in person on 4 Feb 2022.

3. A **Colloquium** in the Spring that features presentations by our National Security Studies graduate students and allows participants to hear about career opportunities from federal and local government intelligence and security agencies, law enforcement, and private sector employers (13 Apr 2018 with ~125 attendees and 9 agencies/organizations represented; 12 Apr 2019 with 150 attendees and 14 agencies/organizations represented; and 19 March 2021 held virtually with 50 attendees and 17 agencies/organizations represented).

In addition to these main events, NatSec hosts additional events and info sessions as opportunities arise. These include:

NatSec members participated in a Leadership Challenge Center (LCC) event on 8 March 2018 (10 students) and 12 Feb 2019 (8 students). The LCC offers team-building exercises via obstacle course elements.

A guest lecture by Dr. Moeed Yusuf of the United States Institute of Peace (USIP) that was co-sponsored with CSUSB Chapter of Pi Sigma Alpha, the National Political Science Honor Society, held on 27 Sept. 2018 and saw 60 attendees. Dr. Yusuf based his lecture on his book *Brokering Peace in Nuclear Environments* and he is presently the National Security Advisor of Pakistan.

An invited virtual talk by Mr. Stevan Bernard about the 2014 Sony Picture Studios hack (sponsored jointly with the Cyber Intelligence and Security Organization club) held on 9 Oct 2020 and attended by 40 students. Mr. Bernard was the Security Chief at Sony Pictures at the time of the hack and spoke about "Surviving a Nation-State Cyber Attack."

An invited virtual talk by a representative from the Department of Defense titled "Tales from the Crypt(ographers)" held on 16 April 2021 and attended by 30 students. The talk discussed the various contributions of cryptographic innovations during wars that altered the outcomes of these major events.

Office hours and info sessions held throughout the year by representatives from different security organizations, including the Office of the Director of National Intelligence, the National Counterterrorism Center, the National Nuclear Security Administration, the Department of Defense, and the Central Intelligence Agency.

Students actively participating in NatSec activities are eligible to participate in "Summer Seminars" sponsored by the Director of National Intelligence, offered twice each summer. Since 2014 the NSS program has seen approximately forty (40) students attend these seminars which were normally held in Washington, D.C., for two weeks. During the pandemic, of course, these seminars were switched to virtual format and lasted a week each time.

Finally, during AY 2020-2021, Professors Childs and Clark worked with academic outreach programs with Strategic Command (StratCom) to become a member of its Academic Alliance.

This will afford us the opportunity to have specialists present work in virtual formats for our students and for our students to present their research to academic conferences.

Advising and mentoring

During the period 2014-2017, the grant Primary Investigator, Mark Clark, was able to fund up to six graduate assistants from the grant and two from stateside funding for about 10-20 hours per week each year. The grant in particular afforded the program to not only help students financially but mentor students more closely. Stateside funding also helped as well. In fact, with stateside funding, Clark worked with graduate assistants to help him in advising potential applicants to the program and their input, from active graduate students, clearly helped recruiting new students. Stateside funding for graduate assistants dried up with the beginning of the pandemic.

The Director of the National Security Studies program remains the primary academic advisor for students in the program. However, other faculty in the program actively advise students on their program of study and in the area of future careers.

Alumni achievement

Very little data exists from Institutional Research on alumni surveys and satisfaction. For 2019, 11 students graduated and participated in the survey. Survey results reveal that about 50% worked part- to full-time and 67% reported wanting classes offered more frequently. However, the program offers primarily night classes because so many of our students work part- or full-time and are therefore obliged to offer the courses in one-night-per-week format, while offering six to seven courses a quarter and now per semester. We avoid putting "core" classes up against one another on the same evening. We do not have faculty resources or the student population to offer more classes to meet this request.

We have no data from 2020 and 2021, likely because of the pandemic.

We will encourage graduating students to actively participate in their graduation survey in the future and hope to have more detail in the next review.

For alumni, however, program faculty maintain on ongoing personal relationships with a number of alumni who wish to remain in contact. They maintain contact with alumni in several fora.

Professor Clark is President of the Association for the Study of the Middle East and Africa (ASMEA) and so routinely travels to Washington, D.C. for its annual conference. Professor Childs is an active member of ASMEA as well, presenting papers and acting as moderator for various panels. Both have routinely used stateside travel funds and couple their professional travel with meetings of alumni in the area.

In November 2018, some alumni in the Washington, D.C. area sponsored a "retirement" party for Professor Clark upon beginning his FERP status. The event was attended by approximately 30 alumni who work in various federal agencies along with Professor Childs and Dean of the College of Social and Behavioral Sciences, Rafik Mohamed. As mentioned earlier, the alumni

network also helps students new to the D.C. area to find living accommodations and "first friends" for their new careers. Students at this event came from graduating classes from the early 1990s through 2017.

A second event occurred in November 2019, where Clark and Childs met a number of more recent graduates from 2018 and 2019 as well as some previous graduates.

Clark and Childs are planning on another alumni meeting November 2021. However, this trip will be self-funded because of CSUSB's limited professional development funds for such travel.

Other program faculty interact with alumni who visit campus representing their respective agencies at our annual Colloquia and other sponsored events for the student club, NatSec.

Program Resources:

Faculty for Self Study

Seven tenure-line faculty from the Political Science Department that teach in the NSS program include, two of whom are participating in the Faculty Early Retirement Program (FERP):

Luba Levin-Banchik

Fabian Borges

Steven Childs

Mark Clark, FERP

Antony Field

Brian Janiskee

Al Mariam, FERP

Faculty activities

Luba Levin-Banchik (Assistant Professor, Ph.D. Bar-Ilan University).

Professor Levin-Banchik was hired in 2020 as a scholar that specializes in international relations and national security. Her areas of research interest include international and national security, international relations theory, foreign policy, simulations and active learning, conflict escalation and recurrence, Russian politics and foreign policy, and research methods. Prior to joining our program, Dr. Levin-Banchik taught for two years as a visiting professor at San Diego

StateUniversity. Prior to that, she held post-doctoral positions at the University of Toronto and the University of California, Davis. She has extensive teaching experience in international relations theory, politics and conflict, Middle East politics, and research methods. She has an impressive research background. For AY 2021-22 she is the Conference Chair for International Studies Association-West and president-elect of ISA-West for next year.

Her book, *World Politics Simulations in a Global Information Age*, was published by the University of Michigan Press. In addition, she has several articles published in the top journals in her field. Much of her research focuses on how democratic countries respond to crises, the role of the media, and the risk of military escalation during crises. Her work with students on world politics simulations is most impressive. In addition to her already substantial research background, she has incorporated her innovative work with students on world politics simulations into her research agenda. Her incorporation of these high-impact practices into our classrooms is a vital contribution to both our undergraduate and graduate programs and enhances and expands our department's strong record of student engagement and success. Furthermore, prior to joining California State University, San Bernardino, she has received over $200,000 in grants and fellowships. Professor Levin-Banchik will teach a variety of courses in our program including National Security Policy (PSCI 4840), Seminar in International Relations (PSCI 5900), and American Foreign Policy (PSCI 6250).

Fabian Borges (Associate Professor, Ph.D., University of Southern California).

Professor Borges joined the department of Political Science in 2015, where he teaches primarily in the undergraduate program but also offers an elective course on Latin American Politics (PSCI 5400) in the National Security Studies M.A. program and the National Cyber Security Studies M.S. program. His scholarship focuses on comparative politics, international political economy and Latin American politics. He has published steadily in a variety of journals and books and is the Internship Coordinator for the Department of Political Science.

Steven Childs (Associate Professor, Ph.D., Claremont Graduate University).

Professor Childs joined the department in 2016, where he teaches in the National Security Studies M.A. program and the National Cyber Security StudiesM.S. program. His scholarship focuses on national security policy, conventional arms proliferation, nuclear deterrence, the security politics of the Middle East, Africa and Asia regions, and unconventional conflict. His work has appeared in publications including Defense & Security Analysis, Comparative Strategy, the Journal of Advanced Military Studies, the Journal of the Middle East and Africa, and Studies in Conflict & Terrorism. He is a member of the Association for the Study of the Middle East and Africa (ASMEA) and regularly participates in its conferences.

Professor Childs teaches both undergraduate and graduate courses. He has taught Government of the U.S. (2030), American Foreign Policy (3250), National Security Policy (4840), the Comparative Politics of East Asia and the Middle East (5400 special topics), Terrorism in Africa (5900), International Security (6020), International Relations Theory (6090), African Security (6120), Middle East Security (6130), and the Regional Security of East Asia (6140). He regularly supervises independent studies and serves on most comprehensive examination committees in

the M.A. program. Dr. Childs also served as the lead in designing and creating the mock intelligence analysis simulations that comprise the comprehensive exam for the National Cyber Security Studies M.S. degree, and he presently manages the distribution of these exam materials.

In addition to his research and teaching, Professor Childs serves as the National Security Studies Club (NatSec) faculty advisor, which continues the university's post-grant activities as a legacy Intelligence Community Center of Academic Excellence. In this capacity, he works with NatSec Club officers to host professional development activities, including but not limited to original analytical simulation exercises, resume workshops, and the annual Colloquium on national security career opportunities.

Mark T. Clark (Professor, Ph.D., University of Southern California).

Professor Clark was hired in 1990 and is a scholar specializing in national security policy and serves as Director of the National Security Studies M.A. program and the National Cyber Security Studies M.S. program. His scholarship focuses upon defense and strategic studies, intelligence analysis, Russian foreign policy, and international relations theory. He has published widely on ballistic missile defense policy, nuclear strategy and strategic deterrence, strategic theory, conflict and peace theories, proliferation and arms control policy, and most recently, on terrorism networks. He opted for FERP in Fall 2018 while remaining active in the graduate program through summer 2023. He and his wife, Mara, established an endowed scholarship for students in the National Security Studies program (MA and MS degrees) that made its first award in Fall 2021.

In addition to previous grants with the Office of the Director of National Intelligence, the Defense Intelligence Agency and the National Science Foundation, he also received a grant as Lead Analyst, "Crowdsourcing Evidence, Argumentation, Thinking and Evaluation (CREATE)," awarded as a subcontract to George Mason University, with Intelligence Advanced Research Projects Agency, IARPA-BAA-15-11, January 2017.

Professor Clark also served in two significant leadership roles that bring international attention to our program. He served on the Academic Advisory Board for the North Atlantic Treaty Organization (NATO) Defense College for AY 2013-2014, and 2014-2015. This is a high-profile position that puts him in contact with the upper echelons of NATO. He also continues his role as President of the Association for the Study of the Middle East and Africa (ASMEA). This is a professional association for scholars in these particular fields of expertise.

Professor Clark teaches primarily in the graduate program where he has taught such courses as: Arms Control and National Security Policy (6050); Strategic Systems and Thought (6010); International Security (6020); Theory and History of Strategy (6000); International Relations Theory (6090); Seminar in International Law (6040). He regularly supervises independent studies and serves on a majority of comprehensive examination committee in the M.A. program.

Antony Field (Associate Professor, Ph.D., University of Warwick).

Professor Field was hired in 2011 and is a scholar who specializes in intelligence analysis, international politics, terrorism, and security policy. His scholarship focuses on intelligence failures, understanding of security and the evolution of terrorism. Over the past three years, he has been conducting research on "Complex Coordinated Terrorist Attacks", as part grant awarded by the Department of Homeland Security and the Federal Emergency Management Agency.

His recent publications include: (2019) "Ethics and Entrapment: Understanding Counterterrorism Stings," *Terrorism and Political Violence*, 31(2), 260-276; (2017) "The Hollow Hierarchy: Problems of Command and Control in the Provisional IRA," Journal of Terrorism Research, 8(3), 11-23; and (2017) "The Dynamics of Terrorism and Counterterrorism: Understanding the Domestic Security Dilemma," Studies in Conflict & Terrorism 40(6), 470- 483.

Through his teaching, Professor Field promotes the development of critical thinking skills, reflective research and the use of "structured analytic techniques". Each year, he mentors a team of students from his seminar on "Intelligence Assessments and Estimates", who are selected to present their research findings to the annual CSU ACE Colloquium (a gathering of over 200 people, including faculty and students from as many as 14 regional universities and representatives from as many as 20 governmental agencies and private corporations).

Professor Field teaches in both the undergraduate and graduate programs, on such courses as Western Political Systems (3000), International Politics (4000), National Security Policy (4840), Techniques of Intelligence Analysis (590), International Terrorism (6060), and Strategic Intelligence (6210). He regularly serves on graduate comprehensive examination committees for the National Security Studies M.A. degree and is responsible for overseeing student advising and comprehensive examinations for the National Cyber Security Studies M.S. degree. Professor Field leads a summer study abroad class on Transatlantic Security and Democracy (5900), during which students travel to the United Kingdom to explore the evolution of national security policy and intelligence practices.

He has served as Board Member for the International Association for Intelligence Education since 2017.

Brian Janiskee (Professor, Ph.D. Michigan State University.)

Professor Janiskee was hired in 1998 and is a scholar specializing in American politics, public policy, research methodology, and national security. His scholarship focuses on state and local politics, crime policy, and, national-security-related issues. He was department chair from 2005-2021.

Since the last program review, Professor Janiskee's textbook on California government, *Democracy in California: Politics and Government in the Golden State* (Rowman & Littlefield), went into fourth (2015) and fifth (2019) editions. In 2014, he co-authored "AIR Strike: A Dynamic Tactical Control Model for the Cyber Battlefield." This project was conducted in

consultation with an agency within the Department of Defense as part of the Intelligence Community Center of Academic Excellence (IC-CAE) at California State University, San Bernardino (CSUSB). In 2015, he co-authored "The Commonalities of Cyber and Physical Security." This project was conducted in consultation with an agency within the Department of Defense as part of the IC-CAE at CSUSB. In 2016, he co-authored "What is Cyber War"? This project was conducted as part of the IC-CAE at CSUSB. In 2015, Dr. Janiskee participated in the Defense Intelligence Agency's Annual Meeting of the Intelligence Community Centers of Academic Excellence in Arlington, VA.

Professor Janiskee teaches in the undergraduate program and two graduate programs, the National Security Studies M.A. and the National Cyber Security Studies M.S. He teaches such courses as: Government of the U.S. (2030); International Relations (2040); American Foreign Policy (3250); State and Local Politics (3300); Research Methods (5920), Cyber Security and Cyber Warfare (6030), and American Foreign Policy (625). Professor Janiskee regularly supervises independent studies and internships. He also regularly serves on graduate comprehensive examination committees. In addition, he was the faculty advisor for our local chapter of Pi Sigma Alpha, which has won three national best chapter awards under his leadership, since the last program review. In 2016, he won the Outstanding Professor Award at CSUSB. This is the University's highest award. It is given annually to one faculty member in recognition of excellence in teaching, research, and service. In 2019, he was named Outstanding Instructor of the Year by CSUSB's College of Extended and Global Education, in recognition of his work in professional and continuing education.

Alemayehu G. Mariam (Professor, Ph.D. University of Minnesota)

Professor Mariam was hired in 1989 and is a scholar who specializes in public law, American politics, and comparative politics. His scholarship focuses on civil rights, human rights, and dictatorships.

Dr. Mariam opted for FERP in Fall 2018 but continues teaching with the department.

Dr. Mariam developed a course (PSCI 5400) on African Dictatorships, the first of its kind in the United States. For our graduate programs. He developed the course as part of a grant for the CSU ACE program. He teaches the course for graduate students every other year.

Lecturers

Graeme Auton, University of Redlands

Troy Hinrichs, California Baptist University

Funding

Funding for professional development opportunities for faculty and staff are uncertain at this point because of the budget shortfalls stemming from the pandemic and changes to the university priorities.

In previous years, the department was funded 20 hours (weekly) of graduate assistantships, but that has dried up since the pandemic.

Grants and other sources of funding

Since the last review of 2014, two faculty have received some level of grant funding for research projects.

Mark Clark received $91,000 as Lead Analyst, "Crowdsourcing Evidence, Argumentation, Thinking and Evaluation (CREATE)," awarded as a subcontract to George Mason University, with Intelligence Advanced Research Projects Agency, IARPA-BAA-15-11, January 2017.

Tony Field Co-Principal Investigator, $35,000, "Preventing Complex Coordinated Terrorist Attacks," Department of Homeland Security/Federal Emergency Management Agency, March 2017.

Scholarships

The National Security Studies program has several endowed scholarships for students and the student-led club, NatSec, one of which has been added since the last review:

Payouts for 2020-2021 were as follows:

William Craig Green Scholarship: $5,000

Ralph and Marie Weber Scholarship: $913

*Mark and Mara Clark Scholarship (first payout, 2021): $714

The NSS program has two scholarships that are annually funded:

Craig and Jennifer Fuher: $1,000

Captain Paul Vince Vegna: the primary sponsor, Vincent Vegna, passed away in December 2020. He funded up to $2,000 per year until 2019 when he began working to endow a scholarship. However, his family is working on completing the endowment process in his honor.

Space and equipment

The NSS program has at least eight classrooms used for program activities. They include: SB 205; SB 213; SB 214; CE 113; CE 115; CS 122, 128, 222. It also has an additional room for a computer lab attached to SB 514.

SB refers to classrooms in the Social and Behavioral Sciences building; CE refers to classrooms in the College of Education building; CS refers to a classroom in the Biological and Chemical Sciences building.

Summary & Recommendations:

Over the last two years, the department has been getting increasing national and international interest.

For the National Security Studies degree, total applications (18) for 2020 were up significantly (6) compared to 2019. For Fall 2021, the program received a total of 16 applications, several of whom are international students (5), and some of whom had to defer to Spring 2022.

We believe two things helped increase the number of applicants:

1) During Winter and Spring 2020 we built a database of departments and contact people across the CSU and UC systems, as well as key colleges and universities in the western U.S., and notified them of our MA degree program. We had our largest pool of successful candidates for Fall 2020 with minimal advertising.

2) The Chancellor's Office in Winter 2020 recommended dropping external testing for the duration of COVID because it could unfairly disadvantage a significant number of potential students. As a result, we dropped the GRE requirement for Fall 2020, Spring 2021, and likely for Fall 2021.

We will continue to advertise in the western region this year. We will review the academic progress of the next cohort or two in the M.A. degree to determine whether to reinstate the GRE requirement once COVID restrictions have eased. The graduate coordinator reports anecdotally that many potential applicants reported that dropping the GRE was a huge relief, financially, for many potential students. As well, it simplified the application process for many potential applicants. However, we are yet uncertain whether we will have more attrition of new students compared to previous years.

Recommendations for the Program over the Next Five Years

The program will need to appoint a new graduate coordinator for the National Security Studies program as the current coordinator will be retiring in the next two years. The coordinator's role has been changing as so many international and national students regularly seek out enrollment advice during the summer months.

The program should continue to assess the changes that were made to the program curriculum for the conversion to Semester to determine their effectiveness.

Program should continue to assess the quality of students over time without the requirement of the GRE.

The program should evaluate faculty workload with NSS curricula as FERP faculty move to full retirement.

Program faculty would like to see professional development funds restored for travel to conferences and paper presentations.

We will continue to advertise in the western region this year. We will review the academic progress of the next cohort or two in the M.A. degree to determine whether to reinstate the GRE requirement once COVID restrictions have eased. The graduate coordinator reports anecdotally that many potential applicants reported that dropping the GRE was a huge relief, financially, for many potential students. As well, it simplified the application process for many potential applicants. However, we are yet uncertain whether we will have more attrition of new students compared to previous years.

Providing Department:
Master of Arts in National Security Studies

External Reviewer Report
CSUSB National Security Studies Program
Feb. 17, 2022

This is the external review report for the CSUSB M.A Program in National Security Studies (NSS). The external reviewer is Daniel Palm, Ph.D., Professor of International Relations, Azusa Pacific University. Virtual visits with CSUSB Administration, NSS faculty and students took place Feb. 2 and 3, 2022.

<u>Learning Outcomes and Program Effectiveness</u>

Program Learning Outcomes (PLOs) are well-designed, are reviewed regularly, and reflect well the objectives of the program, preparing students for professional life in national security related careers. NSS PLOs are appropriately broad, focusing on major institutions, theories and concepts, policies and strategies, and effective writing. Each builds on basic skills NSS applicants can reasonably be expected to have cultivated as undergraduates.

NSS PLOs match appropriately with the University's eight ILOs.[1] Courses and curricula are well-considered, requiring students to engage the broad spectrum of the field, while engaging in depth in specific areas (ILOs 1, 2). A review of representative course syllabi indicates that students are required to read critically and engage current literature in the field (ILOs 3, 4). The program emphasizes devising solutions to current national security problems, as students will be expected to do in their forthcoming professional capacities, utilizing their respective individual skills and strengths (ILOs 5, 6). NSS students can expect to engage regularly with each other and professional counterparts from across the globe, appreciating their diverse perspectives on security challenges (ILOs 7, 8).

The Self-Study Report and a curriculum review reveal courses and requirements that a professional current in the field would expect students to encounter. The strong career success pathways of NSS program alumni indicate that the program is teaching content appropriate to the field, with an admirable mix of classic texts in the field alongside the most recent scholarship.

Program assessment is accomplished twice annually by means of questions embedded in comprehensive exams required of students completing the program. Three faculty score the exams against an established rubric that is well-suited to assessing the four PLOs, and allowing long-term comparisons. On the basis of these scores, NSS faculty are able to adjust course content as necessary.

NSS faculty recognize the program's emphasis on writing as a strength, and indeed, rigorous instruction in this area is crucial for maintaining the program's strong reputation. In this reviewer's virtual meetings, students and faculty alike commented on the importance of simulation exercises, both as a means of demonstrating student abilities to potential employers, and as a means to recruit students to the program. Students offered high praise for Dr. Clark's course, PSCI 600 Theory and History of Strategy, and its emphasis on clear, concise writing.

Several first-year students noted that release from the GRE requirement was an incentive for them to apply to the program. One student recommended that the program consider student-to-

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[1] Office of Academic Programs, Institutional Learning Outcomes (ILOs), 2022.
https://www.csusb.edu/academic-programs/assessment/institutional-learning-outcomes-ilos

student mentoring to help incoming first-year students better understand faculty expectations. A second-year student noted the length of time involved in government job applications and security clearances, suggesting general advising for first-year students on this subject.

The program would benefit from a resumption of funding for one, preferably two, graduate assistants. Students hired for these positions in past years effectively managed special event logistics, maintained contact with alumni and recruiters for government and industry, and were trained and on hand to speak directly to prospective students.

Faculty Engagement:

As detailed in the NSS self-study, the program enjoys the support of a dedicated faculty specializing in various sub-fields in national security, backed by two experienced lecturers. The recent addition of two faculty, Professor Levin-Banchik and Professor Borges, is noteworthy, strengthening the program's ability to cover the breadth of national security issues and world regions. Faculty lead or participate regularly in professional conferences, publish in their areas of expertise, and apply for external grant support. Since the most recent program review, faculty cooperated effectively in making the transition from quarters to semesters, adjusting requirements and course load. Through simulation exercises, professional development workshops, and colloquia the NSS program regularly allows student engagement with non-faculty professionals in national security positions. It is noteworthy and to the program's great credit that an increasing number of these professionals are NSS alumni.

Program Resources

The NSS program has enjoyed significant external grant support, and is presently well-supported by the University. In the months ahead, assuming health restrictions are gradually lifted, one may hope that any funding reductions related to covid can be restored. One urgent need noted above: a resumption of support for two grad assistants, typically second year NSS students who can plan and manage NSS events, and who can connect directly with prospective students. In the present challenging era for enrollments, broad University support to publicize graduate programs will be essential.

Overall Comments and Recommendations

A significant milestone for the program lies ahead with its founder, Dr. Mark Clark, moving toward full retirement. With its existing leadership, well-regarded faculty, and reputation for excellence, the program appears very well-prepared to manage this transition.

Recruitment will remain a challenge, but the NSS program enjoys a significant advantage in its longstanding experience with annual activities open to prospective students. As soon as is practical, consider a resumption of in-person events--even on a small scale--bringing prospective students on campus and face-to-face with NSS faculty, alumni, current students, and non-faculty professionals. Consider innovation in international recruitment, consulting with CSUSB international recruiting offices.

Faculty might consider an additional assessment tool, such as a required online or paper exit interview for students to complete indicating their perception of program strengths and weaknesses, including both quantitative and qualitative responses.

Continue to encourage alumni networking and communication as is practical within the understandable limits of alumni engaged in national security careers. Consider periodically recruiting a team of five alumni in national security positions to review the NSS curriculum and recommend new courses or amendments to existing courses.

Consider establishing a student-to-student mentoring program, assigning each first-year student a second-year mentor, or create mentor groups within the student-led NatSec club.

If not already in place, consider adding incentivized feedback for participants in high-impact practices as an additional tool for future program assessment.

Investigate the feasibility of interaction/cooperation with security graduate programs among NATO, Latin American, and Asian partner nations.

2021-22 MA National Security Studies Committee Review Report
Reviewer:
Academic Program Review/Self-Study Review Committee

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:
All learning outcomes, the ILO's, the PLO's and all relevant information, including intent and analysis for all facets of the Learning Outcomes were included, however, via Campus Labs; the APRC recommends that they be included directly on the form for future 5-year cycle reviews as this information will other not be archived along with these reports.

The Assessment Plan is quite cogent, most sensible, and most relevant to the academic program and is clearly student centric and focused on an intent, demonstrated by the entirety of the Political Science Department, to have student success and continual improvement at its core. However, as mentioned above, for the next 5-year cycle, the Department should include those materials for the MA in NSS directly in their self-study report.

The Political Science Department has with the MA in NSS, developed and implemented a fine program of learning outcomes assessment.

The Political Science Department has clearly identified the strengths of the NSS MA program. At the core of its strengths are the faculty, the curricular and co-curricular components, the design and implementation of the professional internship sites and opportunities and the relationship to professional organizations and alumni networking. Indeed, the area of improvement has at its base the need to replace the founding and now retiring graduate coordinator of the MA in NSS. In addition to that daunting task, the Department will continue to evolve their highly nuanced and sensible assessment program with an attentive eye on continual improvement.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:
The Political Science Department has a sound assessment process and plan for the future. Though, as noted earlier, the APRC encourages the Department to include these materials here as opposed to a link in Campus Labs so that these materials are archived and made readily accessible.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:
The APRC recommends not just hiring a replacement of Dr. Mark Clark as the Coordinator, that, if the possibility of having one or more Assistant or Associate Coordinators presents itself, it may prevent a "gap" year with only an "interim" in the coordinator role. In addition to the very well-designed and executed assessment processes already in place, the APRC recommends an exit interview and possibly a 2 and 5 year "check in/follow up" with alumni of the

program. These materials may not just provide fruitful data to enhance the MA in NSS, but may also enhance the already successful alumni network.

We would like to remind the program—In fact, we are reminding every program/department in the current review cycle—that by the time the program is reviewed in the next cycle, they are expected to have implemented a full-fledged assessment plan, have conducted sufficient assessment of the learning outcomes of the program with multi-year data, and have engaged in close-the-loop activities.

2021-22 MA National Security Studies College Dean Report
Reviewer:
College Dean

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:
Program Strengths

- Dr. Palm, the program external reviewer, commended the MA in NSS program for their assessment planning. Specifically, he drew attention to well-designed PLOs rooted in progressive basic skills students transitioning from and undergraduate NSS program to the MA should have reasonably developed as part of their undergraduate training.
- An intentional curricular mix that emphasizes both broad understandings of NSS as well as depth in essential content areas.
- A sense of belonging and connectedness among students in the MA program and access to a global network of program alumni and practitioners.
- The program's focus on ensuring effective communication skills and the use of simulation exercises to advance student learning and employability.
- Faculty dedication and expertise.
- Significant alumni base employed in public and private sector national security agencies.

Areas for Potential Improvement

- Program marketing and student recruitment.
- International student recruitment.
- Partnerships with international agencies and universities with similar programs.
- As Dr. Palm suggested, consider a student-to-student mentoring program for smoother transitions for incoming students.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:
NSS faculty regularly engage in program assessment to analyze student learning and program effectiveness. The cornerstone of the assessment plan is the comprehensive examination, the passage of which is required for successful program completion. Questions designed to measure student learning are embedded in these exams and a pretested rubric is utilized by all evaluators to assure consistency. NSS faculty regularly analyze assessment data as a means to identify areas for further program improvement. It seems evident that this current assessment model offers a meaningful improvement from past assessment practices.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:

- Ensure program continuity and effective leadership after the full retirement of Dr. Clark.
- Continue to seek sources of external support to enhance student learning opportunities and build on the program's already strong reputation.

- Focus on alumni engagement to continue expanding employment networks and mentors for graduates and to broaden recruitment streams through word of mouth.
- Continue to emphasize and foster a culture of assessment in the department.
- Emphasize diversity, equity, and inclusion in curriculum, student success, and faculty recruitment and success.

Providing Department:
College of Social and Behavioral Sciences

2021-22 MA National Security Studies Dean of Graduate Studies Report
Reviewer:
Dean of Graduate Studies

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:
One of the NSS program's strengths is its successful recruitment of URM students, who in Fall 2021 constituted 57% of the program enrollment.

From Fall 2020 to Spring 2022, the program eliminated the GRE requirement, which is known to be a deterrent factor in the recruitment of prospective students, especially URM students.

Program learning outcomes are well-defined and clear.

The curriculum is current and leads to successful student career pathways.

In general, though, student recruitment remains a challenge.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:
In the response to the previous program review, the NSS program hired more faculty.

The program cannot easily track students whose careers require a security clearance. However, the program has a strong connection to its alumni community and the program alumni routinely return to the campus for its annual Colloquium.

The new semester-based curricular structure allows students to complete the program in 4 semesters.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:
The NSS should consider implementing a holistic review process of prospective student applications.

While the GRE requirement was dropped during the Covid'19 pandemic, NSS might consider dropping the GRE requirement permanently in concert with the national trends to eliminate standardized tests as university admission criteria.

NSS should consider seeking funding opportunities through federal grants to support their research and secure funding for graduate research assistants.

NSS program faculty might consider partnering with the Office of Graduate Studies to seek more support for its student recruitment efforts.

Providing Department:
Graduate Studies

2021-22 MA National Security Studies Plan of Action
Proposed Action:

1. All learning outcomes, the ILO's, the PLO's and all relevant information, including intent and analysis for all facets of the Learning Outcomes are to be included in the next Five Year review.
2. Continue recruitment internationally and domestically.
3. Peer-to-peer mentoring. Requested of CSBS to restore funding for graduate assistants to help program coordinator with recruitment, initial advising of new applicants, and first year students.
4. Mentoring of new program coordinator.

Timeline:

1. Next five year review.
2. Ongoing, twice yearly.
3. Beginning AY 2022-2023 and ongoing.
4. AY 2022-2023.

Responsibility:

1. Professor Steven Childs.
2. AY 2022-2023: Professor Mark Clark. Clark will retire at end of 2023 and Professor Steven Childs will continue recruitment efforts.
3. Dean of the CSBS.
4. Professor Mark Clark.

Cost:

1. 0
2. 0
3. ~$9,000 per AY for 20 hours of graduate assistantships.
4. 0

Resources:

1. n/a
2. n/a
3. Funding restored to program.
4. n/a

Providing Department:
Master of Arts in National Security Studies

2021-22 Self-Study Report
Program Overview:

PROGRAM OVERVIEW

1. Brief description of the context of the program. This may include program history or other information explaining the program in relation to the discipline, college, and/or department/school.

The mission statement of California State University, San Bernardino is as follows: "CSUSB ensures student learning and success, conducts research, scholarly and creative activities, and is actively engaged in the vitality of our region. We cultivate the professional, ethical, and intellectual development of our students, faculty and staff so they thrive and contribute to a globally connected society." The Political Science department at CSUSB serves that mission. Indeed, the department offers a traditional, liberal arts curriculum, but one updated to accord with meaningful trends in scholarship and teaching, as well as the ever-changing conditions of the world. The department introduces our students to critical inquiry into central questions of human life, such as what are justice and freedom, while also preparing them to address the practical realities of their academic and professional careers. The department has long served Cal State with respect to scholarship development, grant money, curriculum growth, participation in events important to the University, and the level of national acclaim brought to the campus through the department's activities.

2. Description of the curriculum of the program, including any co-curricular experiences or high impact practices (HIPs); any substantial changes to the curriculum since the previous program review should also be described.

The current Bachelor of Arts degree program is comprised of 36 semester units (one class in the major, Social Science 3060: Expository Writing for the Social Sciences, is provided by the College of Social and Behavioral Sciences). Political Science majors are required to take three core courses: U.S. Government (which is also a general education requirement), International Relations, and American Political Thought. These three classes together give the students a solid basis in domestic and global politics, as well as theory. Students are then required to take at least one class in each of five subfields in the discipline: American politics, political theory, public law, international relations, and comparative politics. There are multiple offerings in each subfield every year, allowing students to tailor their experience to their interests while exposing them to the array of topics in the discipline. Each student is also required to take two advanced seminars, which have variable topics and which can correspond to any of the five subfields.

The principal change to the curriculum since the last program review was the conversion of the program from the quarter system to the semester system. Under the previous system, there were seventeen required courses in the major (68 quarter units). There are now twelve courses. The chief difference was that previously there were two courses required in each of the five subfields. For ease of transition, we decided simply to reduce that requirement to one course for each subfield. This maintains the breadth of the requirements that we think is best in keeping with political science as an exemplar of liberal education.

Our co-curricular activities and high impact practices are substantial. Our campus chapter of Pi Sigma Alpha, the National Political Science Honor Society, is very active, hosting various events each year, including the annual department banquet. It has won multiple best chapter awards over the years. Our National Security Club (NatSec) is a central hub for a range of activities related to international relations, including an annual colloquium in which students present their academic work and meet with potential employers. The Department supports a study abroad program, which, but for the recent pandemic, each summer included about ten students for classes in the United Kingdom. Lastly, the Law Society is the department's student club centered on our Pre-Law minor, which we expect to return to regular activity when a new faculty member is hired in the public law field.

3. Brief overview of the assessment processes for student learning and program effectiveness.

The department aims to be one of the outstanding teaching institutions of political science in Southern California. To do this, the department has set five principal goals for itself with respect to student learning:
Goal 1: Students will have *experience* as active participants in politics and/or academic organizations within the discipline of political science.
Goal 2: Students will be able to evaluate the *institutions* of politics.
Goal 3: Students will be able to evaluate the *theories* of politics.
Goal 4: Students will be able to evaluate the *policies* of politics.
Goal 5: Students will obtain effective written communication skills.
Each year, in a rotating fashion, one of the goals is assessed. We employ a variant of the pre-test/post-format. In the Spring semester, we draw a random sample of student term papers from our introductory international relations course (PSCI 2040). The chair and the department Outcomes Assessment Committee then evaluate the papers as they relate to knowledge of the particular goal on a six-point scale (rated from superior to incompetent). In the same semester, we similarly examine papers drawn from one section of a senior seminar. The chair and the committee evaluate answers as they relate to knowledge of that year's particular goal on the same six-point scale. The "pre-test" and "post-test" results are examined in order to assess the improvement in student knowledge over time. The details of these goals, as well as the process by which we assess the department's achievement of them, are described in more detail in the Learning Outcomes and Program Effectiveness parts of this report.

Response to Previous Program Review:
RESPONSE TO THE PREVIOUS PROGRAM REVIEW

1. Summary of the recommendations from the last program review.
There were three broad recommendations from the previous program review. First, the University Program Review Committee stated that the "focus of creating a general liberal arts core has been very successful and the department is encouraged to maintain that approach." Second, the Committee suggested that "[m]ore effort should be undertaken to track the path of graduates when undertaking careers or additional academic study." Third, the Committee

noted that it was "pleased with the department's assessment effort" and that "by the time the program is reviewed in the next cycle, the department is expected to have implemented a full-fledged assessment plan, have conducted sufficient assessment of the learning outcomes of the program with multi-year data, and have engaged in close-the-loop activities."

2. Summary of the Plan of Action resulting from the last program review.
In accordance with the first recommendation from the last program review, we made no plans to change the basic structure of our program or alter its general emphasis on liberal education. We continued to do what we have always done: provide high quality political science instruction for our students. The principal issue that arose in the years since the previous program review was the University's decision to convert from the quarter system to the semester system. In effect, we had to adapt our action plan to that new situation. Other than that, we intended to keep the diverse array of approaches to political science that have been the hallmark of our department. As to the second recommendation of the University committee, i.e., to track more closely the careers of our students after graduation from CSUSB, that is always a difficult task. There is no real infrastructure at the department level to do that. Needless to say, our faculty would continue to maintain relationships with students after they graduate. On the third recommendation of the University committee, i.e., to implement our assessment plan fully, we planned to do just that. We describe our activities in that regard in more detail below.

3. Description of what the program has accomplished on that Plan of Action.
We can say that the department has followed what we consider to be the principal recommendation of the University Committee, namely, to continue the program more or less as is. As noted, the main change that has occurred is the conversion from quarters to semesters. Since we are only in our second year of the semester system, and given that the first year occurred when the entire campus when to virtual teaching because of the pandemic, it is unclear what, if any, effect the conversion has had on our program.
With respect to tracking the careers of our graduates, it is not easy to remain in contact with former students given the realities of professional mobility, changes in contact information, and so forth. Nevertheless, our faculty members routinely stay in touch with former students, often writing letters of recommendation for them years later as they progress through their careers. And in many cases these former students have become friends and even co-workers of the faculty (two of our full-time faculty members are graduates of the program).
With respect to the last recommendation of the University committee regarding implementation of the assessment plan, we have compiled much data since 2014, touching on each of the five goals in that plan. In the last two years, the plan was updated as to its correspondence to the institutional learning goals of the University. We discuss these results and updates in the Learning Outcomes and Program Effectiveness parts of this report.

Students:
STUDENTS*

1. Description of student enrollments, including current number of students in each concentration and trends in student enrollment since the last program review.

Overall enrollments in the Political Science Department have remained steady since the last review of the B.A. program. The large lecture U.S. Government course (PSCI 2030) is the introductory course in the undergraduate major. It also serves as a core requirement in the University's General Education program. As such, PSCI 2030 contributes a great deal to the overall enrollments in the department every year. These enrollments are sometimes referred to as full time equivalent students (FTEs), i.e., the total number of students enrolled in courses divided by the standard student course load (five semester classes). By this measure, the Political Science Department's enrollments have gradually increased over the years. Generally speaking, as the University as a whole has increased in size, so has the department's enrollment. (In the table below, lower division FTEs include PSCI 2040, which is a requirement in the major but not in GE; the large majority of those FTEs are in PSCI 2030.)

	Fall 2018	Fall 2019	Fall 2020
Lower division FTEs:	269.9	240.3	307.2
Upper division FTEs:	119.5	106.4	97.4
Total undergrad FTEs:	389.4	346.7	404.6

Enrollments in the Political Science B.A. program in particular remained relatively constant in the five year period after the 2014 program review. For example, as noted in the chart below, the number of majors in the program rose slightly and then declined between 2015 and 2019, starting with 220 majors and ending with 221.

YEAR	#	% of College
Fall 2015	220	4.1
Fall 2016	239	4.8
Fall 2017	251	4.4
Fall 2018	242	4.5
Fall 2019	221	4.2
Fall 2020	178	3.4
Fall 2021	195	3.4 (est.)

However, as is evident in the chart, the number of political science majors dropped more dramatically in Fall 2020 (down to 178). It is unclear at the moment whether or not the relative decline in majors since 2017 represents a more general trend that may continue. Of course, the Covid-19 pandemic hit in the Spring of 2020. It may be that the drop in majors the following Fall was related to that event, as all classes were delivered in the online mode. However, not all departments across the University witnessed a decline of that size. It should be noted that no courses in the Political Science Department had a significant online component before the emergency implementation of online teaching at the start of the Spring 2020 quarter (the last before the conversion to semesters). In fact, no political science course during a normal academic year was delivered in a distance learning format prior to the pandemic. At the same time, the Fall 2020 term was the first under the semester system. It may be that the combined effect of the pandemic and the semester conversion was to undercut the number of declared

majors in political science. In any case, recent data indicate that the number of majors ticked up in Fall 2021. It is our hope and expectation that the number of majors will increase as the University gets back to normal, with most classes taught in-person, as we suspect that most of our students prefer.

2. Discussion of the program's student population, including student demographics and student interests, and how the program is responsive to diverse student backgrounds and interests.

For many years, a large majority of students at CSU, San Bernardino have been first generation students, i.e., those whose parents did not earn a four-year college degree. The percentage of first generation students at CSUSB has increased even more in the last decade. Students in the political science B.A. program mirror this phenomenon. As indicated in the following chart, more than 80% of our students are the first in their families to go to college.

Year	First Gen	Non-First Gen
2011	134 (66%)	68 (34%)
2015	149 (73%)	55 (27%)
2021	143 (84%)	28 (16%)

It is generally thought that first generation students tend to be less successful in college than non-first generation students. CSUSB generally does a good job in narrowing that gap. The Political Science Department has likewise done so. Indeed, the overall department graduation rate, i.e., for both first generation and non-first generation students, outperforms the University and College. With respect to the most recent cohorts of undergraduates for which we have data, the chart below compares the percentages of students who completed their degrees in four years (students admitted in 2016) and six years (students admitted in 2014) for the University, College, and Political Science Department.

	Graduation in 4 years		Graduation in 6 years	
	1^{st}gen	non-1^{st}gen	1^{st}gen	non-1^{st}gen
University	23%	26%	57%	61%
College	33%	29%	62%	69%
Pol. Sci. B.A.	47%	33%	77%	79%

As with the student population at CSUSB as a whole, a large majority of students participating in the political science B.A. program self-identify as Hispanic or Latino. Indeed, as indicated in the following chart, the proportion of students in the program that is Hispanic has increased significantly over the last ten years. At the same time, the absolute number, as well as the proportion, of most other racial or ethnic groups has declined. This undoubtedly reflects the changing demography of the region that CSUSB serves.

Year	Students	White	Black	Hispanic
2011	217	54 (24.9%)	26 (12.0%)	106 (48.8%)
2015	220	38 (17.3%)	15 (6.8%)	137 (62.3%)
2019	221	21 (9.5%)	9 (4.1%)	157 (71.0%)
2020	178	14 (7.9%)	9 (5.1%)	125 (70.2%)
2021	180	20 (11.1%)	8 (4.4%)	127 (70.6%)

Regardless of the racial or ethnic composition of our students, the department believes that its curriculum appeals to the kinds of students who naturally are drawn to the discipline, i.e., those

interested in politics, law and government. Political science necessarily addresses topics touching on issues of diversity, whether through, for example, comparative analyses of different states and societies, the study of cooperation and conflicts between those societies, or the examination of ethnic, racial and gender coalitions within those societies. We might also note here not only the ethnic diversity of our full-time faculty (three of the eight of whom are foreign born), but the range of their intellectual approaches. Given that the department's graduation rate exceeds that of the University and the College, we are confident that our instruction and mentoring efforts serve the interests and education of our students as a whole.
* All data cited in this part may be found at:
https://dashboard.csusb.edu/idashboards/view?guestuser=idashguest&dashID=599&dashId=599

Learning Outcomes & Assessment Processes:
LEARNING OUTCOMES AND ASSESSMENT PROCESSES

1. Description of how the PLOs were developed and of any revisions to the PLOs since the last program review.

The Program Learning Outcomes (PLOs) for the B.A. in political science were updated roughly at the time of the last program review. Below are the PLOs and the related Student Learning Outcomes (SLOs):

- PLO GOAL 1: Students will have *experience* as active participants in politics and/or academic organizations within the discipline of political science.
    - o SLO 1.1: Students, where possible, will participate in extra-curricular activity in student government, organizations, or community service.
    - o SLO 1.2: Students, where possible, will participate in practical political activities: either through internships administered in the major; independent study projects; student clubs such as the Law Society or Pi Sigma Alpha; or attendance at professional meetings.
- PLO GOAL 2: Students will be able to evaluate the *institutions* of politics.
    - o SLO 2.1: Students will be able to evaluate political institutions in terms of their relationship to individuals.
    - o SLO 2.2: Students will be able to evaluate political institutions in terms of their relationship to societies.
    - o SLO 2.3: Students will be able to evaluate political institutions in terms of their relationship to the international arena.
- PLO GOAL 3: Students will be able to evaluate the *theories* of politics.
    - o SLO 3.1: Students will be able to evaluate political theories in terms of their relationship to individuals.
    - o SLO 3.2: Students will be able to evaluate political theories in terms of their relationship to societies.

- o SLO 3.3: Students will be able to evaluate political theories in terms of their relationship to the international arena.
- PLO GOAL 4: Students will be able to evaluate the *policies* of politics.
  - o SLO 4.1: Students will be able to evaluate policies and their relationship to individuals.
  - o SLO 4.2: Students will be able to evaluate policies and their relationship to societies.
  - o SLO 4.3: Students will be able to evaluate policies and their relationship to the international arena.
- PLO GOAL 5: The department expects the graduating political science majors have attained the necessary critical thinking skills leading to lifelong learning, as found in written communication.
  - o SLO 5.1: Students will demonstrate an ability to write well-organized coherent essays.
  - o SLO 5.2: Students will be required to write a minimum of 5,000 words per course.

The PLOs were designed principally to reflect the structural emphases of the B.A. curriculum, while also including an experiential component that would complement that curriculum.

Goal 1 sets forth our aim that students in the program participate in activities such as internships with political campaigns or law firms or other entities, clubs organized within and without the Political Science Department, or student governance on the CSUSB campus. As we address elsewhere in this report, the department provides a number of high impact practices such as Pi Sigma Alpha and NatSec. Students are regularly advised of internship opportunities such as the Sacramento Semester Program and the Panetta Institute fellowship.

Goals 2-4 address the substantive elements of the course curriculum itself. Those substantive elements we classify in terms of institutions, theories and policies, each of which is addressed in terms of its relationship to individuals, societies, and the international arena. In so doing, we believe we have captured the meaningfulness of the curriculum in a comprehensive manner.

Particular courses in the curriculum naturally line up more clearly with specific parts of the assessment plan. For example, political philosophy courses, such as Modern Political Thought (PSCI 3130), naturally comprise study of political theories. Legislative Process (PSCI 3200), on the other hand, typically focuses on a political institution, i.e., the U.S. Congress. At the same time, an international relations course, such as American Foreign Policy (PSCI 3250), clearly examines the global arena more fully than either PSCI 3130 or PSCI 3200. Nevertheless, these topics intersect: Congress is a player in the making of foreign policy, the ideas of thinkers like Hegel (usually examined in PSCI 3130) bear upon the relations between states in world history. In sum, our approach to outcomes assessment captures the breadth and diversity of political science across the array of courses in the B.A. program.

Goal 5 addresses our aim to help students attain the necessary critical thinking skills leading to lifelong learning as found in written communication. In particular, our objective is to enhance

the ability of students to evaluate political science research, structure an argument, and support that argument with evidence. It goes without saying that these are worthwhile skills for anyone, but they perhaps are even more so for our students, who tend to enter professional fields such as education, law, and public service, in which the written word is so important.

2. Presentation of a matrix mapping Program Learning Outcomes (PLO) to Institutional Learning Outcomes (ILO) and, if applicable, to external professional standards.

In 2019-2020, the department mapped its program learning outcomes onto CSUSB's institutional learning outcomes. Below are CSUSB's Institutional Learning Outcomes:

1. Breadth of Knowledge: Students identify, explain, and apply multiple approaches to problem solving and knowledge production from within and across disciplines and fields to intellectual, ethical, social, and practical issues.
2. Depth of Knowledge: Students demonstrate a depth of knowledge in a specific discipline or field and apply the values and ways of knowing and doing specific to that discipline or field to intellectual, ethical, social, and practical issues.
3. Critical Literacies: Students analyze the ways artistic, oral, quantitative, technological and written expression and information both shape and are shaped by underlying values, assumptions and contexts, so that they can critically contribute to local and global communities.
4. Ways of reasoning and inquiry: Students engage in diverse methods of reasoning and inquiry to define problems, identify and evaluate potential solutions, and determine a course of action.
5. Creativity and Innovation: Students develop and use new approaches to thinking, problem solving and expression.
6. Integrative Learning: Students connect disciplines and learning experiences to frame and solve unscripted problems using lenses from multiple fields, contexts, cultures and identities.
7. Engagement in the Campus, Local and Global Communities: Students develop dispositions and apply intellect and behaviors to respect and promote social justice and equity on campus and across local and global communities.
8. Diversity and Inclusion: Students understand how dynamics within global communities influence the ways in which people see the world. They develop dispositions to respectfully interact and collaborate with diverse individuals and groups and acknowledge their own perspectives and biases.

See **TABLE 1** in the attachment, a Matrix Map of the Political Science B.A., which incorporates the Program Learning Outcomes of the Political Science B.A. program to CSUSB's Institutional Learning Outcomes (ILOs).

3. Presentation of a curriculum map showing how PLOs are addressed in program courses.

See **TABLE 2** in the attachment, a Scaffolding of Assessment for the B.A. program, linking the PLOs and SLOs to the Curriculum Map, with the courses distinguished by levels of student knowledge and experience.

See **TABLE 3** and **TABLE 4** in the attachment, which illustrate how the aforementioned scaffolding can be presented as Sample Roadmaps for students in the program.

4. **Description of the program's annual student-learning assessment process, including measures for evaluating student achievement on the PLOs, and types of data collected each year using these assessment measures since the last program review.**

Each year, one of the five goals (the Program Learning Outcomes described in section 1 above) is evaluated. The department chair identifies the goal to be evaluated that year, based on a simple rotation (i.e., Goal 1 one year, then Goal 2 the next, and so on). In the following, we lay out the procedure.

Assessment Procedure for Goal 1:

- Students experience direct citizenship activity as described above through internships and participation in department clubs, organizations, and events.
- The department chair or designee monitors the extent of such activity through advising each major and by the faculty serving as official advisors to the various clubs and activities specified in this review (e.g., Pi Sigma Alpha and NatSec).
- The department chair monitors results of the numbers of students involved in such activities and determines whether more programs, or more faculty involvement, may be necessary.

Assessment Procedures for Goals 2 through 5:

- Pre-Test: In the Spring Term of the year in which the scheduled goal is analyzed, one section of our introductory course in international relations, PSCI 2040 (204 under the original quarter system), or a suitable alternative, is identified by the department chair. This course was selected for the pre-test because it must be taken by all majors and serves as a baseline from which the post-test can be evaluated. One-fourth of the student term papers of the identified course is selected at random from the official CSUSB roster. Once the papers have been identified, the chair requests from the instructor a copy of a course paper for each of the randomly-selected students. The instructor of this course submits copies of the requested papers to the chair, having removed all personal student information. The chair, along with the department Outcomes Assessment Committee, evaluates the answers as they relate to knowledge of this particular goal on a six-point scale as described below:

- - 6 Superior: well-organized, vivid examples, mastery of detail
  - 5 Strong: well-organized, less vivid, but still detailed
  - 4 Competent: clear but less organized, basic details
  - 3 Weak: description but no analysis, muddled details
  - 2 Inadequate: superficial evaluation, patterns of serious error
  - 1 Incompetent: ineptness, inability to answer, no attempt made
- Post-Test: In the Spring term of each academic year, one section of a senior seminar is identified by the department chair. One-fourth of the student term papers of the identified course is selected at random. Once the papers have been identified, the chair requests from the instructor a copy of a course paper for each of the randomly-selected students. The instructor of this course then submits copies of the requested papers to the chair, removing all personal student information. The chair, along with the department Outcomes Assessment Committee, evaluates answers as they relate to knowledge of this particular goal on a six-point scale as described above.

Typically, after the data for the assessment is collected in the Spring term, a report is written by the department chair the following Fall, with the report filed or submitted to the administration later in that academic year, if requested.

See **TABLE 5** in the attachment, an Assessment Rubric for PLOs in upper-division political science courses.

Closing the Loop: Collecting Data

- The department expects that at least seventy percent of the essays achieve a score of 4 on a 6-point scale, as described above.
- In addition, the department conducts a quantitative and qualitative comparison of the term papers from PSCI 2040 with those from the senior seminar.
- The department Outcomes Assessment Committee compares scores of the two groups and any relevant qualitative observations from reading the papers.
- The department Outcomes Assessment Committee may make any necessary recommendations to the department Curriculum Committee, who study the results and suggest advice to the whole department.

Closing the Loop: Goals

- Improvement of learning
- Stronger program/department
- More successful students and future professionals
- Better retention and graduation rates

Closing the Loop: Strategies

- What are we doing effectively?

- Where can we do better?
- Did we meet our targets? Why were targets not met? Were targets too high/low?
- Did we collect sufficient data?
- Most importantly: What can we do differently?

Closing the Loop: Processing Data

- Share: Disseminate assessment findings to faculty colleagues.
- Discuss: Provide opportunities for discussion of the assessment results.
- Plan: Develop ideas and proposals for revising activities, goals, curriculum, teaching and assessment methods.
- Act: Implement new plans for improvement.

Attached Files
[Learning Outcomes Tables.pdf](#)

Program Effectiveness:
PROGRAM EFFECTIVENESS

1. Presentation of key findings from the annual assessments of student learning since the last program review.

Since the last program review, we have been able to cycle through the entire assessment schedule that we set for ourselves. That is, we have been able to collect data on all five of the PLOs set forth in our assessment plan. In what follows, we summarize the findings of those reports.

Goal 1: Students will have *experience* as active participants in politics and/or academic organizations within the discipline of political science.

Since the last review, we have had two opportunities to assess Goal 1. An assessment was conducted in the 2013-2014 academic year, with the findings reported in 2015. The report noted that there "were 17 students who took internships for credit in our department in the 2013-2014 academic year. This compares with 15 internships offered in the 2008-2009 academic year." As for our department clubs and activities, Theta Iota, our local chapter of Pi Sigma Alpha, the national political science honor society, was recognized as one of the 12 best chapters in the nation. Up to that time, that was the fifth such award that our chapter had received. The assessment report catalogues multiple events sponsored or co-sponsored by the club that year: a seminar on the U.S. Constitution led by a retiring faculty member; a debate between San Bernardino mayoral candidates; a seminar on Abraham Lincoln and the Civil War; a presentation by a former White House staff member who served in the Kennedy

Administration; a seminar on current political trends; and the annual department banquet, at which our guest speaker discussed the crisis in Ukraine.

Data for Goal 1 was accumulated again in the 2018-2019 academic year and reported in 2021 (the Covid-19 pandemic hit in Spring 2020, causing a delay in the report). However, the report indicated that, unlike five years earlier, only 7 students took internships for credit in the 2018-2019 academic year. We repeat here what the Committee indicated in the report: "This is an area in which we need to improve." On the other hand, the assessment report noted that our student clubs continued to impress. Our Pi Sigma Alpha chapter again was recognized as one of the 20 best chapters in the nation, out of about 800 chapters. That was the seventh consecutive year in which the club won the award and the eleventh time overall. That year, the club sponsored a "Tea with Alumni" event, provided a $1,000 student scholarship to the outstanding Pi Sigma Alpha senior, hosted the Pi Sigma Alpha Western Regional Student Research Conference, and again hosted the department's annual banquet. The assessment report also noted activities of the National Security Club, which was established the previous year. NatSec hosted an intelligence simulation exercise with students and visiting members of the U.S. Intelligence Community. It also hosted the 13th annual Intelligence Community Center of Academic Excellence Colloquium, in which students from 9 universities and 14 representatives from agencies in the Intelligence Community (IC) and private companies participated. NatSec that year also hosted a resume feedback workshop.

In sum, the assessment process regarding Goal 1 of the department's PLOs has yielded a good deal of information about the extra-curricular activities of our undergraduate majors.

Goal 2: Students will be able to evaluate the *institutions* of politics.

Data on Goal 2 of the PLOs was collected in 2015. The Assessment Committee reported that the "average score for essays from the introductory PSCI 204 course on international relations [now PSCI 2040] was 4.7 and the average score for essays from the PSCI 535 [PSCI 5350] course on constitutional law was 4.9. For PSCI 204, 85 percent of the essay scores were 4 or better. For PSCI 535, all of the essays were scored at 4 or better."

In both instances, the bulk of the papers indicated a solid understanding of political institutions and their interactions with individuals and societies, domestically and internationally. We expected to see strong results from the senior seminar, a course in which the students were required to write legal briefs. As for the introductory PSCI 204 course, the committee was surprised and pleased to see that the papers were so strong. The committee discussed how we might replicate this result more widely throughout our courses or to encourage faculty further who may be using similar practices

The committee did note that the instructor for the PSCI 204 course was an adjunct faculty member who also had experience teaching SSCI 306, the upper-division GE writing course (now SSCI 3060). The instructor most likely implemented techniques that are emphasized in the writing course, such as the instructor editing multiple required drafts of papers. It was also

noted that the nature of the PSCI 204 assignment may have contributed to the strong essay scores for Goal 2. The students were asked to evaluate three different organizational models and determine the extent to which each model contributed to a better understanding of a particular political phenomenon. This likely encouraged students to provide detailed accounts of political institutions, which may have contributed to the relatively high assessment scores. In any case, the department gained useful information about the program and its attainment of this goal.

Goal 3: Students will be able to evaluate the *theories* of politics.

The department collected data on Goal 3 in Spring 2016. There were somewhat surprising results in this instance. The average score for essays from the introductory PSCI 204 (2040) course on international relations was 4.6 and the average score for essays from the PSCI 540 (5400) course on comparative politics was 4.1. That is, the "pre-test" scores were higher than the "post-test" scores. For PSCI 204, 60 percent of the essays were scored as 4 or better. For PSCI 540, 33 percent of the essays were scored at 4 or better.

In both instances, the bulk of the randomly selected papers indicated that the students frequently used theoretical concepts to help them understand the political phenomena in question. However, some students merely listed theories and did not offer much detail of the specific content of these theories or how the theories they listed specifically affected the phenomenon they were analyzing. It must be pointed out that, despite the fact that the average score of the papers from PSCI 204 were stronger than those for PSCI 540 for the purposes of the assessment, the PSCI 540 papers were the stronger papers *per se*.

The committee came to some tentative conclusions. The specific assignment for which the students wrote a paper in PSCI 204 explicitly required that students apply theories of international relations studied in class to explain major issues in U.S. foreign policy. In the PSCI 540 assignment, students were asked to conduct a case study and were not prompted to offer theoretical concepts, though almost all did so to some extent. More generally, theoretical concepts are central to the introductory international relations course, perhaps more than in any other course in the curriculum. On this particular goal, the scores from that course might be unusually high, in comparison to the senior seminar course in comparative politics. In any event, we will provide more analysis of this result in the next section of this self-study.

Goal 4: Students will be able to evaluate the *policies* of politics.

Data for Goal 4 were collected in Spring 2017. The average score for the papers from PSCI 204 (2040) was 4.9 and the average score from PSCI 590 (5900) was 5.4. For PSCI 204, 62.5 percent of the essay scores were 4 or better. For PSCI 590, all of the essays were scored at 4 or better. As for the PSCI 204 course, the committee was encouraged by the results, even though the number of scores at 4 or greater did not reach 70 percent.

The committee was pleased with the strong scores from PSCI 590, indicating that policy issues are a prevalent feature in our curriculum. Strong results were expected from the senior seminar. The outcomes assessment committee proposed some ideas that could be presented to the entire department in light of the fact that only 62.5 percent of the papers in PSCI 204 were scored at 4 or better. We will address these proposals in the next section of this self-study. However, the results from the assessment of Goal 4 were generally in keeping with what the department expected.

Goal 5: The department expects that graduating political science majors have attained the necessary critical thinking skills leading to lifelong learning, as found in written communication.

Data for Goal 5 were collected in Spring 2018 and reported in 2019. As with the previous years, papers from PSCI 204 (2040) were randomly sampled. They were compared with those from PSCI 592 (5920), the senior seminar in government. The average score for papers from PSCI 204 was 4.375 and the average score for those from PSCI 592 was 4.700. For PSCI 204, 87.5 percent of the scores were 4 or better. For PSCI 592, all of the papers scored at 4 or better. The committee noted that, as for strengths of the papers evaluated, the students seem to have good citation habits. The committee also noted that it had "some confidence that students in our classes are comfortable reading political science research and demonstrate a solid capacity to use critical thinking skills in assessing that research. The main weakness we encountered in the student writing samples was grammar. While papers were consistently well-structured and argued, some papers were not well-edited."

2. Summary analysis and interpretation of these key assessment findings in terms of strengths and weaknesses of the program.

One of the principal recommendations of the previous program review was that the department fully implement its outcomes assessment plan. We have done so. Moreover, we believe that the findings from the assessment process confirm our efforts to follow the other principal recommendation from the previous program review: that we maintain the success of the program as is, with its liberal arts orientation and its emphasis on a broad exposure to political science as an academic discipline.

As noted above, the department was pleased with the assessment results regarding Goal 2 (student ability to evaluate political institutions). The study of institutions is, of course, central to the discipline. The success of the students' in this regard was not surprising. In the Spring of the current academic year (2021-22), we will once again collect data on Goal 2.

We will assess Goal 3 (student ability to evaluate political theories) next year. As intimated above when discussing the previous assessment of this goal, PSCI 2040 tends to be organized tightly around theoretical concepts (liberalism, realism, neorealism, etc.). The success of the students in that class in evaluating political theories, despite it being a lower division course, should be taken into account when comparing it to a given senior seminar course. When the time comes, the department chair and the Assessment Committee will have to take into

account the specific writing assignment in the senior seminar (case study versus something else). It may be more appropriate to select for the "post-test" a theory seminar. In any event, this is more a matter of assessing the assessment than of assessing student learning. As to the latter, the department believes the evidence suggests that we are succeeding.

As noted above with respect to Goal 4 (student evaluation of public policies) and Goal 5 (student writing ability), the record suggests that our students do improve as they proceed through the program with respect to both their knowledge of issues and policies of the day and their ability to express that knowledge in writing. To be sure, with respect to the latter, the department would prefer to see a marked improve in grammar and spelling. With the conversion to semesters, the department opted not to create its own writing course for majors in the program. In the best of all possible worlds, we would prefer to oversee our own writing course. However, it is doubtful that in the foreseeable future we will have the resources needed to make that possible.

While we are pleased with the program's learning outcomes, it is not without weaknesses. We noted above that we would like to have more students participating in internships. Not surprisingly, the number of student internships dropped even more during the Covid-19 pandemic. While we had been averaging about seven per year, only two students participated in internships for credit in the department in the 2020-21 academic year. We are continuing our efforts in this respect, but it is unlikely that that number will increase substantially before conditions return to normal.

Yet, our other activities, particularly Pi Sigma Alpha and NatSec (discussed below in detail), have continued to provide students with meaningful extra-curricular experiences and opportunities. As we note below, the appointment of a new tenure-track faculty member in public law should also enable us to revive the Law Society student club. Lastly, we hope that, after the pandemic has passed, the department's study abroad program will resume.

3. Discussion of other aspects and measures of program effectiveness, including but not limited to:

Faculty areas of expertise:

We have faculty that are experts in all of the areas of academic political science (we provide profiles of each of the tenure line faculty in Part VI of this report). Given the place of the National Security Studies program within the department, we are particularly strong in the areas generally associated with international relations. Most of those faculty members have regional specialties as well, making our offerings in the area of comparative politics also very strong. We have traditionally also been strong in the area of public law. However, given the retirements of Al Mariam and Edward Erler, we no longer actually have a full-time member of the department dedicated to public law. As mentioned elsewhere in this report, Professor Mariam does still teach primarily law courses in his reduced teaching load. We are also fortunate to have two excellent part-time instructors who have carried much of this burden in

recent years: Troy Hinrichs, a full-time professor at a neighboring four-year university; and Lou Gordon, recently appointed as a federal judge (we hope to have Dr. Gordon continue to teach in the program). We are currently conducting a job search for a tenure-line position in public law.

Evidence of faculty achievement, productivity, and professional engagement:

We address this in our faculty profiles in the Program Resources part of this report.

Numbers of tenure-line and lecturer faculty teaching in each of the key areas of the program:

American politics: 3 tenure-line; 1 lecturer
Comparative politics: 4 tenure-line; 1 lecturer
International relations: 5 tenure-line; 1 lecturer
Public law: 1 tenure-line; 2 lecturer
Political Theory: 2 tenure-line; 3 lecturer

PSCI 2030 (U.S. Government): 7 tenure-line; 3 lecturer

Staff contributions to the program:

Our Administrative Support Coordinator, Marilyn Gareis, has filled that role for sixteen years. She is a crucial figure in the department and one of the most knowledgeable and respected employees in the University. She has been a past recipient of the President's Outstanding Staff Award and has previously been named the Outstanding Staff Member for the College of Social and Behavioral Sciences.

Curricular innovation in the program:

As a result of recommendations in the 2007 program review, there was a significant expansion of courses in the department in the seven years after that. Accordingly, there have been relatively fewer new courses created since the 2014 review. However, the following courses have been created since then:

Latin American Politics (3060)
Latino Politics in the U.S. (5920)
Gender and Politics (5920)
Media and Politics (5920)
Political Behavior (in development)

Pedagogies and modalities in the program:

The department has traditionally focused on in-person instruction. Before the Covid-19 pandemic, none of our courses were offered in a distance learning format. As a result of changes in the last year, of course, all of our classes have been offered online. We suspect that some number of our classes will be offered in online or hybrid formats in the coming years, but that remains to be determined.

High-impact practices in the program:

Pi Sigma Alpha:

Theta Iota, the department's chapter of Pi Sigma Alpha, the National Political Science Honor Society, continues its long tradition of success, winning a national best chapter award year after year. Indeed, the chapter's advisor, Professor Christina Villegas--like her predecessor, Professor Janiskee--has been named to Pi Sigma Alpha's national board. The chapter hosts events such as scholarly lectures, student writing competitions, and the Department's annual end-of-the-year banquet, which includes an induction ceremony for new Pi Sigma Alpha members and the announcement of the Department's multiple scholarship awards. All such events are widely publicized and well attended.

In the two years following the last program review, the club was advised by Professor Janiskee. In AY 2014-15, there were three guest speakers (funded by the Liberty Symposium), who spoke on academic topics such as the concept of liberty, Aristotle's political theory, and the meaning of property rights. Charles Dunn, a staffer in the Kennedy administration, was the speaker at that year's annual banquet. There was also a movie night, a field trip to the USS Midway in San Diego, a roundtable on Middle East politics, and a talk by former Congressman Jerry Lewis. In AY 2015-16, there were two seminars with guest speakers (funded by the Liberty Symposium), one on the upcoming 2016 elections and the other focused on the U.S. Supreme Court. The annual banquet that year celebrated the 40th anniversary of the Theta Iota chapter, with the original advisor, Professor Emeritus Ed Erler, and the first chapter president, Ernest Vincent, Esq., serving as that year's speakers. The club also hosted a movie night, another guest speaker, and a presentation by department faculty member Meredith Conroy.

Beginning in AY 2016-17, the success of the club continued under Professor Villegas. That year, department Professors Janiskee and Borges gave talks. A live recording of the "Law Talk" podcast (funded by the Liberty Symposium) was a featured event. There was another guest speaker who addressed the question of the federal government's role in education. Rebecca Burgess, of iCivics, a non-profit created by former Supreme Court Justice Sandra Day O'Connor, spoke at that year's annual banquet. That year also witnessed the first Pi Sigma Alpha student Writing Symposium. The following year, Rebecca Kimitch, a Pulitzer prize winner for local reporting, spoke at the annual department banquet. Professor Steven Childs gave a talk on US security assistance, a graduate of the B.A. program gave a talk on pursuing careers in government service, and the second Student Writing Symposium was held. In AY 2018-19, the

club hosted Pi Sigma Alpha's Western Regional Research Conference, which included political science student participants from both CSUSB and surrounding colleges. Among other activities that year, there was a "Tea with Alumni," in which two former students from the B.A. program, one employed at George Mason University and the other a field representative for a U.S. Congressmember, offered advice on careers to our current students.

The 2019-20 academic year was, of course, disrupted in the Spring with the onset of the Covid-19 pandemic. Nevertheless, early in the year, Professor Al Mariam gave a lecture on the "Medemer" political philosophy espoused by Ethiopian Prime Minister and recent Nobel Peace Prize recipient Dr. Abiy Ahmed. The group was able to take another field trip, this one to the Ronald Reagan Presidential Library. And just before the pandemic hit, the club was able to host the third installment of the Student Writing Symposium. Unfortunately, the annual banquet had to be abbreviated and conducted online. However, the next year, AY 2020-21, despite the entire University conducting business virtually, the club was able to engage in a number of activities. Chapter officers attended the Riverside Chamber of Commerce Legislative Summit, which featured talks by several prominent business leaders and a keynote address by California Lieutenant Governor Eleni Kounalakis. In addition, Professor Conroy gave a lecture on the upcoming 2020 election and a guest speaker gave a talk on the Chinese government's treatment of the Uyghur population. Finally, the club hosted the annual induction ceremony online. As part of the proceedings, a former student of ours, who is now an assistant to the mayor of Riverside, gave a talk about networking and career advancement after college.

NatSec:

Our National Security Club (NatSec) serves students interested in international relations and national security. NatSec is advised by Professors Mark Clark and Steven Childs, though the latter carries out most of the daily duties as advisor. NatSec grew out of activities associated with a major grant to our National Security Studies (NSS) M.A. program from the Office of the Director of National Intelligence. After that grant expired in 2017, the program developed means to maintain its designation as an Intelligence Community Center of Academic Excellence. To that end, NatSec organizes a number of activities in which undergraduates as well as graduate students participate.

Since 2017, NatSec has hosted three major events per year. An Intelligence Analysis Simulation Exercise is conducted each Fall (3 Nov 2017, based on the Kurds in Syria and Iraq with 90 attendees; 26 Oct 2018, based on the Korean Peninsula with 91 attendees; 25 Oct 2019, based on narco-traffickers and the Central/South American drug trade with 70 attendees; 16 Oct 2020, based on the Korean Peninsula and held virtually with 54 attendees; 29 Oct 2021, set around Iran). All simulations except the first one in 2017 involved representatives from the Intelligence Community.

A Professional Development Workshop is conducted each Winter. The workshop covers resumes, cover letters, an overview of the background investigation process, and a "Policymaker Daily Brief" writing exercise (22 Jan 2018, with 11 attendees; 28 Jan 2019, with 7

attendees; 10 Jan 2020, with 14 attendees; and 5 Feb 2021, held virtually with 48 attendees). Representatives from the Intelligence Community participated in the 2020 and 2021 events and NatSec is planning to hold the next one in person on 4 Feb 2022.

NatSec organizes a major colloquium each Spring. The event features presentations by our NSS graduate students and allows participants to hear about career opportunities from federal and local government intelligence and security agencies, law enforcement, and private sector employers (13 Apr 2018, with ~125 attendees and 9 agencies/organizations represented; 12 Apr 2019, with 150 attendees and 14 agencies/organizations represented; and 19 March 2021, held virtually with 50 attendees and 17 agencies/organizations represented).This event includes students and faculty from across the campus and from affiliated universities in southern California, and representatives from 14-16 agencies and corporations.

NatSec also hosts additional events and information sessions as opportunities arise. For example, NatSec members participated in a Leadership Challenge Center (LCC) event on 8 March 2018 (10 students) and 12 Feb 2019 (8 students). The LCC offers team-building exercises via obstacle course elements. Several guest lectures have been hosted in recent years, including a talk by Moeed Yusuf of the United States Institute of Peace (co-sponsored with Pi Sigma Alpha); another by Stevan Bernard, former Security Chief at Sony Pictures, who spoke about the 2014 Sony Picture Studios hack; and an invited virtual talk by a representative from the Department of Defense, who discussed various contributions of cryptographic innovations during wartime. NatSec schedules office hours and info sessions throughout each year by representatives from different security organizations, including the Office of the Director of National Intelligence, the National Counterterrorism Center, the National Nuclear Security Administration, the Department of Defense, and the Central Intelligence Agency. Just this past year, Professors Childs and Clark worked with academic outreach programs with Strategic Command (StratCom) to become a member of its Academic Alliance. This will afford us the opportunity to have specialists present work in virtual formats for our students and for our students to present their research to academic conferences.

Study Abroad:

In cooperation with the College of Extended and Global Education, the Department supports a study abroad program to the United Kingdom. Professor Antony Field conducts a summer study abroad class (about ten students) on Transatlantic Security and Democracy (PSCI 5900). Students explore the development of national security policy and intelligence practices, with an emphasis on the cooperative relationship between the U.S. and the U.K. Study abroad experiences are life-changing for many students. The program was suspended due to the pandemic, but the department in the future most likely will continue to encourage students to take advantage of this and other study abroad programs.

Law Society:

The Law Society, the department's student club centered around our Pre-Law minor degree is led by Professor Al Mariam, who is in the University's early retirement program. Just before his retirement, Professor Mariam led the club in its celebration of the 800[th]anniversary of Magna Carta. Traditionally, the Law Society would, like the other clubs based in the department, host a number of events every year. However, as technically a part-time instructor, Professor Mariam now has limited duties in the department. If the department is successful in its current constitutional law tenure-line recruitment, the new faculty member would most likely take over as Law Society advisor and invigorate the club.

Advising and mentoring available to students in the program:

All of our full-time faculty members engage in extensive advising and mentoring activities, including writing letters of recommendation and informing students of networking and career opportunities. Professor Borges directs students to internship opportunities. Professor Villegas advises our Pi Sigma Alpha chapter. Professor Childs oversees NatSec. The department chair, currently Professor Zentner, is typically a point-person for advising students in the department. Professors Conroy and Levin-Banchik have been noteworthy recently in incorporating student researchers as assistants in their scholarly endeavors.

Student, faculty, staff and alumni feedback on the program:

There is little survey data from students about their opinion of the effectiveness of the program. In 2019, eight students apparently were surveyed; in 2020, eleven or twelve were, depending on the question. These sample sizes are very small. As to the quality of the instruction, students apparently are quite pleased: in both years, all of the students said they were either satisfied or very satisfied with the instruction; in 2019, three out of four were very satisfied; in 2020, ten out of twelve were very satisfied. A majority of students in both years were satisfied or very satisfied with their personal interactions with faculty, staff, and students; the course requirements and electives in the major; and academic guidance from the faculty. Oddly, six of the eleven students surveyed in 2020 were dissatisfied with the career counseling from the faculty, while three of eight were dissatisfied in 2019. Again, with such small sample sizes it is difficult to conclude much from these surveys, including such differences from year to year. However, the numbers across the categories are consistent with those in the College of Social and Behavioral Sciences as a whole.

Program Resources:
PROGRAM RESOURCES

1. Total numbers of tenure-line and lecturer faculty, as well as staff

There are currently eight full time tenure-line faculty members in the Political Science Department who teach courses in the B.A. program (year hired in parentheses):

> Fabián Borges (2015)
> Steven Childs (2016)
> Meredith Conroy (2013)
> Antony Field (2011)
> Brian Janiskee (1998)
> Luba Levin-Banchik (2020)
> Christina Villegas (2015)
> Scot Zentner (1993)

We also have two instructors in the Faculty Early Retirement Program (FERP):

> Mark Clark (1990)
> Al Mariam (1990)

There are currently seven part-time faculty members with contractual entitlements in the Political Science Department who teach in the B.A. program:

> Graeme Auton
> Rebeca Castaneda
> Lou Gordon
> Troy Hinrichs
> Joe Jablonski
> Joseph Lake
> Dan Palm

Tenure-line faculty profiles:

Fabian Borges Herrero (Associate Professor, Ph.D. University of Southern California, 2015)

> Professor Borges joined the Department of Political Science in 2015. His teaching and research interests focus on comparative politics, international political economy, and Latin American politics.

> Professor Borges has been a very prolific scholar since his arrival at Cal State. Among numerous publications, he authored articles for academic journals such as *Government and Opposition*, *Comparative Politics*, and *Revista de Ciencia Política*. He also published a chapter in the *Oxford Encyclopedia of Latin American Politics*. His new book, *Human

Capital versus Basic Income: Ideology and Models of Anti-Poverty Programs in Latin America, is forthcoming from the University of Michigan Press. The volume is a culmination of his extensive work on conditional cash transfers and social policy more broadly in Latin American nations. It represents his emergence as a major scholar in the field of Latin American social policy.

Professor Borges teaches primarily in the undergraduate program, including courses such as U.S. Government (2030), International Relations (2040), and International Organizations (5100). He has created two new courses for the B.A. program: Latin American Politics (3060) and Latino Politics in the U.S. (5920). He also offers an elective course on Latin American Politics (PSCI 5400), which serves the National Security Studies M.A. and the National Cyber Security Studies M.S. programs. Dr. Borges is the Internship Coordinator for the Department of Political Science. He has mentored a number of students in both the undergraduate and graduate programs.

Steven Childs (Associate Professor, Ph.D., Claremont Graduate University, 2011)

Professor Childs teaches in the B.A. program as well as the National Security Studies M.A. and the National Cyber Security StudiesM.S. programs. His scholarship focuses on national security policy, conventional arms proliferation, nuclear deterrence, the security politics of the Middle East, Africa and Asia regions, and unconventional conflict. His work has appeared in publications including *Defense & Security Analysis*, *Comparative Strategy*, the *Journal of Advanced Military Studies*, the *Journal of the Middle East and Africa*, and *Studies in Conflict & Terrorism*. He is a member of the Association for the Study of the Middle East and Africa (ASMEA) and regularly participates in its conferences.

Professor Childs teaches both undergraduate and graduate courses at CSUSB. Courses he has taught include U.S. Government (2030), American Foreign Policy (3250), National Security Policy (4840), the Comparative Politics of East Asia and the Middle East (5400 special topics), Terrorism in Africa (5900), International Security (6020), International Relations Theory (6090), African Security (6120), Middle East Security (6130), and the Regional Security of East Asia (6140). He regularly supervises independent studies and serves on most comprehensive examination committees in the M.A. program. Dr. Childs also served as the lead in designing and creating the mock intelligence analysis simulations that comprise the comprehensive exam for the National Cyber Security Studies M.S. degree, and he presently manages the distribution of these exam materials.

In addition to his research and teaching, Professor Childs serves as the National Security Studies Club (NatSec) faculty advisor, which continues the university's post-grant activities as a legacy Intelligence Community Center of Academic Excellence. In this capacity, he works with NatSec Club officers to host professional development activities, including but not limited to original analytical simulation exercises, resume workshops, and the annual Colloquium on national security career opportunities.

Mark T. Clark (Professor, Ph.D., University of Southern California,1989)

Professor Mark Clark was hired in 1990 and is a scholar specializing in national security policy and serves as Director of the National Security Studies M.A. program and the National Cyber Security Studies M.S. program. His extensive scholarship focuses upon defense and strategic studies, intelligence analysis, Russian foreign policy, and international relations theory. He has published widely on ballistic missile defense policy, nuclear strategy and strategic deterrence, strategic theory, conflict and peace theories, proliferation and arms control policy, and most recently, on terrorism networks. He opted for FERP in Fall 2018 while remaining active in the graduate program through summer 2023. While Professor Clark teaches primarily in the graduate program, he is a former chair of the Department of Political Science and still advises students in the B.A. program.

Professor Clark has been the principal investigator on grants awarded from the Office of the Director of National Intelligence, the Defense Intelligence Agency, and the National Science Foundation. He has also served in two significant leadership roles that bring international attention to our department. He served on the Academic Advisory Board for the North Atlantic Treaty Organization (NATO) Defense College for AY 2013-2014 and 2014-2015. This is a high-profile position that put him in contact with the upper echelons of NATO. He also continues his role as President of the Association for the Study of the Middle East and Africa (ASMEA). This is a professional association for scholars in these particular fields of expertise. He and his wife, Mara, established an endowed scholarship for students in the National Security Studies program (MA and MS degrees) that made its first award in Fall 2021.

Meredith Conroy (Associate Professor, Ph.D. University of California, Santa Barbara, 2010)

Dr. Conroy is a scholar specializing in American politics, political communication, and gender. Since the last program review, she has been very prolific as a scholar, publishing three books: *Masculinity, Media, and the American Presidency* (Palgrave Macmillan, 2015), *Sex and Gender in the 2016 Presidential Election* (ABC–CLIO, 2018), and *Who Runs? The Masculine Advantage in Candidate Emergence* (University of Michigan Press, 2020).She has also authored or co-authored eight peer reviewed articles, appearing in journals such as *Political Research Quarterly*;*American Politics Research*; *Journal of Women, Politics, and Policy*; *Journal of Information Technology and Politics*; and *Politics and Gender*. For these substantial efforts, Dr. Conroy won the College of Social and Behavioral Sciences "Outstanding Faculty in Research or Creative Contribution" in 2021.

In order to cultivate student-involved research, Dr. Conroy has applied for and received the internal Faculty/Student Grant through the Office of Student Research three times. These grants have funded six political science students' research activities. Students presented their work at the CSUSB Meeting of the Minds symposia. In 2015, the project won "Best Poster Presentation." For these efforts and others, Dr. Conroy was awarded

the Office of Student Research "Research and Creative Activity Mentor" award in 2021. Her courses include U.S. Government (2030), Political Parties (3260), The American Presidency (4310), Formulating Public Policy (5280), and seminars on Media and Politics and Gender and Politics (5920). She is currently developing a course on Political Behavior.

Dr. Conroy works toward bringing political science research to a broader audience through public engagement as a "politics contributor" with FiveThirtyEight.com, the data-driven news site associated with ABC News. For Fivethirtyeight, she has written numerous stories (one or two stories a month since 2019). In addition to regularly writing stories for FiveThirtyEight, she also participated in the organization's "liveblog" including their election coverage, which was a resource for millions of Americans who were watching the ballots be counted over the course of election week 2020.

Antony Field (Associate Professor, Ph.D., University of Warwick, 2010)

Professor Field was hired in 2011 and is a scholar who specializes in intelligence analysis, international politics, terrorism, and security policy. His scholarship focuses on intelligence failures, understandings of security, and the evolution of terrorism.

Over the past three years, Dr. Field has been conducting research on "Complex Coordinated Terrorist Attacks" as part of a grant awarded by the Department of Homeland Security and the Federal Emergency Management Agency. His recent publications include: "Ethics and entrapment: Understanding counterterrorism stings," *Terrorism and Political Violence*(2019);"The Hollow Hierarchy: Problems of Command and Control in the Provisional IRA," *Journal of Terrorism Research*(2017); and "The Dynamics of Terrorism and Counterterrorism: Understanding the Domestic Security Dilemma," *Studies in Conflict & Terrorism*(2017).

Through his teaching, Professor Field promotes the development of critical thinking skills, reflective research, and the use of "structured analytic techniques." Each year, he mentors a team of students from his seminar on "Intelligence Assessments and Estimates," who are selected to present their research findings to the annual CSU ACE Colloquium (a gathering of over 200 people, including faculty and students from as many as 14 regional universities and representatives from as many as 20 governmental agencies and private corporations). Professor Field teaches in both the undergraduate and graduate programs, with such courses as Western Political Systems (3000), International Politics (4000), National Security Policy (4840), Techniques of Intelligence Analysis (5900), International Terrorism (6060), and Strategic Intelligence (6210). He regularly serves on graduate comprehensive examination committees for the National Security Studies M.A. degree and is responsible for overseeing student advising and comprehensive examinations for the National Cyber Security Studies M.S. degree. Professor Field has led a summer study abroad class on Transatlantic Security and Democracy (5900), during which students travel to United Kingdom to explore the

evolution of national security policy and intelligence practices. He has served as Board Member for the International Association for Intelligence Education since 2017.

Brian Janiskee (Professor, Ph.D. Michigan State University, 1996)

Professor Janiskee was hired in 1998 and is a scholar specializing in American politics, public policy, research methodology, and national security. His scholarship focuses on state and local politics, crime policy, and national-security-related issues. He was department chair from 2005-2021.

Since the last program review, Professor Janiskee's textbook on California government, *Democracy in California: Politics and Government in the Golden State* (Rowman & Littlefield), went into fourth (2015) and fifth (2019) editions. In 2014, he co-authored "AIR Strike: A Dynamic Tactical Control Model for the Cyber Battlefield." This project was conducted in consultation with an agency within the Department of Defense as part of the Intelligence Community Center of Academic Excellence (IC-CAE) at CSUSB. In 2015, he co-authored "The Commonalities of Cyber and Physical Security." This project was also conducted in consultation with an agency within the Department of Defense as part of the IC-CAE at CSUSB. In 2016, he co-authored "What is Cyber War"? This project was conducted as part of the IC-CAE at CSUSB. In 2015, Dr. Janiskee participated in the Defense Intelligence Agency's Annual Meeting of the Intelligence Community Centers of Academic Excellence in Arlington, VA.

Professor Janiskee teaches in the undergraduate program and two graduate programs, the National Security Studies M.A. and the National Cyber Security Studies M.S. He teaches such courses as: American Government (2030), International Relations (2040), American Foreign Policy (3250), State and Local Politics (3300), Research Methods (5920), Cyber Security and Cyber Warfare (6030), and American Foreign Policy (6250). Professor Janiskee regularly supervises independent studies and internships. He also regularly serves on graduate comprehensive examination committees. In addition, he was the faculty advisor for our local chapter of Pi Sigma Alpha, which won three national best chapter awards under his leadership since the last program review. In 2016, he won the Outstanding Professor Award at CSUSB. This is the University's highest award. It is given annually to one faculty member in recognition of excellence in teaching, research, and service. In 2019, he was named Outstanding Instructor of the Year by CSUSB's College of Extended and Global Education, in recognition of his work in professional and continuing education.

Luba Levin-Banchik (Assistant Professor, Ph.D. Bar-Ilan University, 2016)

Professor Levin-Banchik was hired in 2020. Her areas of research include international and national security, international relations theory, foreign policy, simulations and active learning, conflict escalation and recurrence, Russian politics and foreign policy, and research methods.

Prior to joining the Department of Political Science, Dr. Levin-Banchik taught for two years as a visiting professor at San Diego State University. Prior to that, she held post-doctoral positions at the University of Toronto and the University of California, Davis. She has extensive teaching experience in international relations theory, politics and conflict, Middle East politics, and research methods. She has an impressive research background. For AY 2021-22, she is the Conference Chair for International Studies Association-West and president-elect of ISA-West for next year.

Her book, *World Politics Simulations in a Global Information Age*, was published by the University of Michigan Press. In addition, she has several articles published in the top journals in her field. Much of her research focuses on how democratic countries respond to crises, the role of the media, and the risk of military escalation during crises. Her work with students on world politics simulations is most impressive. In addition to her already substantial research background, she has incorporated her innovative work with students on world politics simulations into her research agenda. Her incorporation of these high-impact practices into our classrooms is a vital contribution to both our undergraduate and graduate programs and enhances and expands our department's strong record of student engagement and success. Furthermore, prior to joining California State University, San Bernardino, she has received over $200,000 in grants and fellowships. Professor Levin-Banchik teaches a variety of courses in our program including National Security Policy (PSCI 4840), Seminar in International Relations (PSCI 5900), and American Foreign Policy (PSCI 6250).

Alemayehu G. Mariam (Professor, Ph.D. University of Minnesota, 1984; J.D. University of Maryland, 1988)

Professor Mariam was hired in 1989 and is a scholar who specializes in public law, American politics, and comparative politics. His teaching and scholarly interests focus on civil rights, human rights, and dictatorships. He has graciously taken on the duty of serving as the principal pre-law advisor in the department and advisor to the student Law Society.

Professor Mariam is a significant figure among advocates within the Ethiopian Diaspora. He publishes weekly commentaries on Ethiopian and African politics and human rights. He Chaired the Ethiopian Diaspora Trust Fund, which raised over $7 million for development work in Ethiopia. He has given numerous radio and television interviews on Ethiopian Television, Voice of America, and Ethiopian Satellite Television. He has testified virtually before the Ethiopia Constitutional Commission on the issue of elections during states of emergency. He has given a lecture to Ethiopian federal judges on the topic of an independent judiciary, which was televised nationally in February 2020. He has made public appearances with Ethiopian Prime Minister Abiy Ahmed and has led grassroots efforts opposing U.S. Senate Resolution 97 and House Resolution 445,

measures opposing the Ethiopian government's policies regarding law enforcement in the Tigray region of the country.

Professor Mariam opted for FERP in Fall 2018 but continues teaching within the department. He regularly teaches Judicial Process (3280), Constitutional Law (4100), Bill of Rights (4110), and the Seminar in Constitutional Law (5350). He developed a course on African Dictatorships (PSCI 5400), the first of its kind in the United States, which serves our undergraduate and graduate programs.

Christina Villegas (Associate Professor, Ph.D. University of Dallas, 2013)

Dr. Villegas joined the Department of Political Science in 2015, after several years as an adjunct professor. Her research interests are in the areas ofPolitical Thought, Public Policy, and American Institutions. She has published an article in *Perspectives on Political Science.*She has published several book chapters for collections published by ABC-CLIO. Moreover, to date, she has published three books, including *Hard Drive: A Family's Fight against Three Countries* (Morgan James, 2015), and two reference books, with substantial original contributions, for ABC-CLIO: *Contemporary World Issues: The Youth Unemployment Crisis* (2018) and*Contemporary World Issues: Modern Slavery*(2019). She has a third in that series, *Contemporary World Issues: Foster Care in America*, which is due to appear in the coming year. She also produced an annotated collection, entitled *Documents Decoded: Alexander Hamilton*(2018), which presents and examines writings from the American founder and statesman. Lastly, she was included as a third author of a popular text, *Democracy in California: Politics in the Golden State*(Rowman & Littlefield, 2019).

Dr. Villegas is the faculty Advisor for the Theta Iota Chapter of Pi Sigma Alpha, the National Political Science Honor Society. During her time as advisor, the chapter continued its tradition of excellence by winning its ninth, tenth, eleventh, and twelfth National Best Chapter Awards. She also sits on the national board of the honor society. She similarly has been awarded several grants and honors for her work with students. She teaches courses in American politics and political thought, including U.S. Government (2030), Legislative Politics (3200), Formulating Public Policy (5280), Classical Political Thought (3100), American Political Thought (3140), as well as a seminar on the political thought of Alexander Hamilton (5300).

Scot Zentner (Professor, Ph.D. Michigan State University, 1994)

Having arrived in 1993, Dr. Zentner is the senior full-time faculty member in the department. His teaching and research interests are political theory and American politics. His scholarship focuses on classical and modern political philosophy, American political thought, immigration, and political parties. He took over duties as chair of the department in Fall 2021.

In addition to several book chapters, Dr. Zentner has published articles in journals such as *Polity*, *Presidential Studies Quarterly*, and *Interpretation: A Journal of Political Philosophy*. Since the last program review, he published a book entitled *Party and Nation: Immigration and Regime Politics in American History* (Lexington, 2019), a philosophical and historical examination of party competition in the U.S. Dr. Zentner regularly delivers papers at professional colloquia and academic conferences, and is a frequent panel chair and discussant at such meetings. During the period under review, he was a visiting faculty member at Ashland University. He also served as the director of the grant-funded Liberty Symposium, which met regularly, hosted discussions of various books, and invited a number of prominent guest speakers to campus.

Dr. Zentner teaches in the undergraduate program. His courses include U.S. Government (2030), American Political Thought (3140), Classical Political Thought (3100), Foundations of Modern Political Thought (3110); Modern Political Thought (3130), Postmodern Political Thought (3150), War and Politics (5200), Constitutional Interpretation (5250), and various senior seminars in Political Theory (5300).

2. Professional development funding and opportunities for faculty and staff, in the program

Professional development funding is largely dependent upon resources provided by the College of Social and Behavioral Sciences. In recent years, the amount of travel funds for academic conferences has waxed and waned. Of course, at the time of this writing, resources are especially squeezed given the budget difficulties associated with the Covid-19 pandemic. Nevertheless, several of our faculty members have been awarded teaching and research grants from various units on the campus as well as from outside sources.

3. Funding for program operations and activities

Despite budget problems within the University as a whole, particularly in the last two years, the Political Science Department has been able to operate as normal. For example, we have not had to cancel, or not schedule in the first place, courses merely because of a lack of funds for part-time instructors. We have been able to offer the full complement of courses needed to sustain the program. We hope, of course, that that continues into the future.

4. Grants and other external sources of funding

Since the last review of 2014, at least five of our faculty have received some level of grant funding for research or other projects:

Mark Clark received $91,000 as Lead Analyst, "Crowdsourcing Evidence, Argumentation, Thinking and Evaluation (CREATE)," awarded as a subcontract to George Mason University, with Intelligence Advanced Research Projects Agency, IARPA-BAA-15-11, January 2017.

Meredith Conroy has received several grants and awards totaling $13,500: two Faculty/Student Research Grants, Office of Student Research, CSUSB ($2,500); Carrie Chapman Catt Award (with Mark Daku), Iowa State University ($2,000); Why it Matters Grant, College of Social & Behavioral Sciences, CSUSB ($5,000); College of Social and Behavioral Sciences, Research Slam! ($1,000); Outstanding Faculty in Research or Creative Contribution, CSUSB ($1,000); Research and Creative Activity Mentor, CSUSB ($2,000).

Tony Field was a Co-Principal Investigator on a $35,000 grant: "Preventing Complex Coordinated Terrorist Attacks," Department of Homeland Security/Federal Emergency Management Agency, March 2017.

Luba Levin-Banchik has received several grants since her appointment little more than a year ago. She was awarded an Israel Institute Faculty Development Grant of $10,100 for the design and development of a new course on U.S.-Israel Relations. She was awarded a $5,000 Undergraduate Summer Research Program fellowship, from CSUSB's Office of Student Research, to support a team of three undergraduate student researchers in 2021. And she was awarded $2,000 for grant development as part of the CSUSB Winter 2021 Grant Proposal Development Program.

Scot Zentner received grants, totaling $30,000, from the Charles Koch Foundation to fund a Liberty Symposium ($6900, AY 2013-14; $10300, AY 2014-15; $9200, AY 2015-16; $3600, AY 2016-17), which supported a reading group with students and hosted guest speakers to campus.

There are several scholarship funds for our students that have been established through the Political Science Department, many with funds donated by alumni from the B.A. program. These scholarships and awards vary slightly from year to year, but range in size from roughly $500 to almost $3000.

Donald W. Jordan Memorial Scholarship
This scholarship provides funds to help meet the cost of education for undergraduate students interested in the practice of law

Nancy E. Smith Scholarship
This scholarship provides support to help meet the cost of education to students majoring in Political Science or Public Administration with a minimum GPA of 3.0 for undergraduate students and a 3.2 for graduate students with an interest in a career in public service or public service organization.

Joseph B. Campbell Scholarship Endowment
A GPA of 3.0+ is required to earn this scholarship. The recipient must be a political Science major, pre-law minor or political science minor, with an interest in U.S. Constitution and/or the concept of liberty.

Maurice H. Kronowitz Scholarship
This scholarship provides funds to help meet the cost of education for high scholastic senior students (135 units and above) planning to apply to law school upon graduation.

Robert and Frances Fullerton Scholarship
This scholarship is to provide funds to help meet the cost of education for full-time students who intend to pursue a law degree upon graduation.

The McLaughlin Family Award
This award should preferably go to a student who re-entered school after a period of absence (or perhaps for a student who started college later in life). The student must be a political science major with 3.0+ GPA.

Edward and Frances Erler Award for Outstanding Pi Sigma Alpha Student
An award of $1,000 given to the Pi Sigma Alpha senior with the highest GPA. The donor is anonymous.

5. Space and equipment available for program operations and activities

Ordinary operations of the department, including printing and copying services, office space for instructors, supply of computer work stations and laptops for full-time faculty, have generally been good. For the most part, our faculty are supported in their endeavors as would be expected of a typical academic department.

Summary & Recommendations:
SUMMARY AND RECOMMENDATIONS

1. Summary of strengths, areas of improvement and weaknesses of the program, in light of the findings described in the Program Effectiveness and Program Resources parts of this report.
As noted in the balance of this report, the principal strength of the department is its ability to provide a comprehensive undergraduate education in political science. In doing so, the department has fulfilled the main recommendation from the previous program review, i.e., the charge to provide a learning experience centered on a liberal arts education. This is reflected in the department continuing its tradition of requiring all majors to take courses in all of the sub-fields, in addition to the core courses and the senior seminars. We do not have multiple tracks or concentrations. We believe this approach exposes students to the diversity of the discipline, which, in turn, reflects the diversity of human affairs.
Of course, the department is not perfect. Our review of the department has revealed three areas that might be termed weaknesses. First, we noted that the number of students taking internships for credit in the department is lower than we would like. Second, while the written work of our students generally meets the mark as to content, errors in grammar, syntax and spelling could improve. These two problems, however, are not as great as the third, i.e., the loss of two full-time faculty members to teach in the area of public law. We note that this is

especially so when we consider that the pre-law program is integral to the department and serves wider purposes in the University than the political science B.A.

We end by repeating two important points mentioned elsewhere in this report. First, it likely will be some time before we see the full consequences of the recent conversion from quarters to semesters. In short, we are not sure what weaknesses may eventually be revealed in this regard. Second, the pandemic has affected all programs in the University. The drop in the number of majors in Fall 2021, while possibly related to the semester conversion, may have also been partly caused by the move of all courses to the online format that term.

2. Recommendations for the program over the next five years.

First, we shall attempt to increase the number of students taking internships. While our various extra-curricular activities are substantial, we believe internships can provide particularly worthwhile experiences for students.

Second, we will continue our due diligence to help our students improve their writing. While the department lacks the personnel to offer its own writing course, we nevertheless will continue to emphasize to our students the central importance of the written word.

Third, and the project of immediate concern, is our intention to fill the current tenure-line position in public law. Indeed, given the growing numbers of students in the pre-law program, as well as the needs of the B.A. program, this is an imperative.

Providing Department:
Bachelor of Arts in Political Science

External Reviewer Report, Political Science Department, California State University at San Bernardino

Mark Blitz
Fletcher Jones Professor of Political Philosophy
Claremont McKenna College
February 21, 2022

During the site visit (via Zoom) I conducted the following meetings: Introductory Meetings with Provost Shari McMahan and Department Chair Scot Zentner; an hour long meeting with the Department Faculty, attended by all the full time members; a 40 minute meeting with approximately 10 students; a meeting with Dean Rafik Mohamed, College of Social & Behavioral Sciences; and, an exit meeting with the Provost and Department Chair

I also read the Department's detailed self-study, and I read a selection of student papers from a number of courses. The self-study gave a clear picture of the department's activities, supplemented by the various discussions I had.

In what follows I will address the areas raised in the "expectations for the external reviewer report" and other questions as well. My report is based on the meetings mentioned above, the department's self-study, and my reading of the student papers provided to me. I have also read selections of the department members' scholarship.

Program, Faculty, and Curriculum

The CSUSB program in political science is a broad liberal arts program that covers the major fields in the discipline. It requires students to study in each of the major subfields, American Government, Public Law, Political Theory, International Relations, and Comparative Government and also to take core courses in American Political Thought, U.S. Government, and International Relations. The program also makes available several opportunities for external learning in political science, including membership in the nationally recognized Pi Sigma Alpha Honor society and participation in its events, participation in the National Security club and Law Society, internships, and study abroad opportunities. In addition, the basic U.S. Government course is part of CSUSB's overall general education requirement. The faculty is a collegial one, something that is not always the case in university life, and the department is also fortunate to have excellent administrative support.

This program emphasis is appropriate, emphasizing breadth, while allowing for depth. This structure and content of the curriculum matches the expectations for student learning very well.

The curriculum gives students the opportunity to study the various areas of government and to emphasize those in which they come to have the greatest interest. It also gives them a sense of careers in the areas closest to political science – law and government service. In addition, it gives students

familiarity with the basic institutions, policy questions, political processes, and fundamental principles that can enable them to become informed citizens.

The department has eight tenure-line faculty members, 2 faculty in the early retirement program and currently employs 7 part time faculty. This is on the whole an appropriate number, given that there are normally full time faculty in each of the major areas in which the department offers instruction. At least this many full time faculty are required for the department to meet its instructional responsibilities. The department has also been able to benefit from some integration with non-faculty and non-CSUSB faulty, especially in the national security program and through some of the activities of Pi Sigma Alpha.

The major issue in delivering the curriculum concerns the lack of a full time tenure line faculty member in public law. This lack is being addressed through a current job search, and is expected to be filled in the current hiring cycle.

The students in the program with whom I spoke were uniformly complimentary about their education, across a range of fields, and singled out many of the faculty for their attention and effort. Despite their heavy teaching demands, moreover, the department's members have been able to engage in an enviable amount of serious research. An expectation that they do so is an important feature of the program, and it usefully improves the substance of teaching by helping to keep faculty engaged and up-to-date.

Expectations concerning research, and several of the publications of members of the department, have enabled department members to advance scholarship and teaching in political science generally. They have publications in important journals, books with major publishers and national recognition in areas such as National Security, American Politics, and state (California) government.

The major limit to the effectiveness of the program is the teaching load. 4/4 is a heavy teaching load, as is 4/3 in the cases where adjustments are made for class size. The effect of the teaching load is felt not only in the limited time for scholarship, but also in instruction, because of the reduced amount of attention that can be given to students individually. In general, there was a sense from faculty that the previous quarter system was less burdensome.

Alleviations to this problem are beyond the department's control and, given various constraints, perhaps largely beyond the administration's control as well. But efforts should continue to be made to pursue an increase in resources. It is important to emphasize, again, that this issue affects faculty attention to students as well as faculty scholarship.

Program Learning Outcomes

The department has done a fine job of setting and studying a useful group of program learning outcomes, and the Program Learning Objectives reflect the university's overall learning objectives. There is also a good graduation rate among students, higher than in the university generally.

The department chooses to evaluate one of the objectives in depth each year. In general the outcomes represent and reflect successful advances in student learning, as is evidenced by the material in the self-study. I also examined a group of student papers in various fields within the discipline, which confirmed the evidence presented in the self-study concerning learning about political institutions, political theories, public policy and foreign affairs.

One area of possible improvement which came up in discussions and in the self-study (although not in the papers I read) concerns writing skills. Helping with writing is labor intensive, and is a university wide and not only or primarily a department responsibility.

A second area of possible improvement concerns internships, a significant part of the experiential learning objective. It is difficult to find internships and for students to take them, given the current environment. Students should continue to be encouraged to pursue them, however, especially once more activities occur in person. The department might work (or expand its work) with the appropriate university wide offices such as advancement to expand its relations with alumni who might be interested in offering internships, and in discussing policy issues and career opportunities with students.

Program Resources and Enrollments

The program's resources are sufficient to meet current instructional demands, as long as tenure track positions are replaced as necessary, and the number of adjunct faculty is kept at the present amount. Given the demands of a 4/4 teaching load, however, any increase in faculty that could relive that burden would be useful.

The major addition to current resources that the Department has requested is a tenure line position in public law. This position would replace recent retirements and is integral to the Departments broad liberal arts focus and to the career paths in the law that many students wish to follow. It is likely that by the time this report is considered the position will have been filled. If not, a search to fill it should continue.

The program has had good enrollments, with some recent decline, most likely due to the situation brought about by adjustments caused by Covid. One recruiting tool that might be explored is to emphasize the importance of the study of political science for citizenship generally, whatever career and activities students will emphasize in the future. This also fits well with the department's liberal arts focus.

Recommendations

The program in general is a strong one and should continue to pursue its current liberal arts direction, with a faculty that is both committed to instruction and that engages in substantive research. Within the rubric of a conversion to a semester system, and the expansion of online learning in response to Covid, the Department has done a good job in following its plan of action in response to the last review.

My first and most basic recommendation, therefore, is that the department should continue the liberal arts focus of its curriculum, and be allowed to fill positions in its central areas of instruction and research should vacancies occur over the next five-year period.

Second, I concur with the department's recommendations that over the next five years efforts should be made to improve student writing, the availability of internships, and that the pubic law opening be filled. With regard to internships, the department might work with the office of advancement to develop lists of alumni who may be in a position to aid with internships, should additional students pursue these once there is an expanded return to in person learning and work.

My third recommendation is that as experience with the semester system and online instruction increases the department (and administration) should examine the most effective mixture of teaching modalities for attracting students, advancing student learning, and relieving the burdens on faculty. It will be difficult to maintain the current level of scholarship, and of individual attention to students, without adjustments to the operative teaching load.

My fourth recommendation is that, to encourage increased enrollments, the department might consider slightly expanding its offerings in local government/civic engagement: this may attract non-majors and students from various programs within the university, as well as additional majors.

2021-22 BA Political Science Committee Review Report
Reviewer:
Academic Program Review/Self-Study Review Committee

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:

The Department of Political Science has assembled a most impressive, scaffolding system, comprehensive yet easily understood and flexible assessment strategy. There is a fine blend of Material Knowledge and Theory alongside extensive manners by which both oral and written communications by the students are enhanced and through which the level and manner of feedback presented by the faculty not only allow for but encourage subject mastery. In the Assessment Processes, the Political Science Department applies a focused, yet flexible (to allow for evolution) as they clearly strive for continual instructional improvement to meet the needs of their students.

Per their findings, both internal and external, as well as furthered by the conversion from Quarter to Semester which led to a reality of fewer courses (often this occurred in the form of 3 courses being sculpted into 2) the Political Science Department has reduced the number of courses required from 17 to 12. This has allowed for students to then complete more open electives, both in Political Science and outside of the program, which has then created a more intellectually free environment. Students have also been able to develop a more nuanced focus with the Major, such as global politics, American politics, political theory, public law, international relations and comparative politics. Additionally, with the inclusion of Co-Curricular activities in the Assessment process, further attention has been given (which also requires considerable time and effort put forth by the Faculty) in key areas such as the Political Science Honor Society, the Law Society and the National Security Club as well as (pre-pandemic) international studies programs.

The Political Science Department has also noted 3 areas of improvement via their assessment:

1. They will be developing their internship program to have more offerings and also more student enrollment.
2. While there has been noted improvement with written communication skills development, the Department will continue to further enhance these components of the educational experience.
3. With the drop in the instruction (via the departure of faculty with specific areas of expertise in public law) in public law, there is a gap in this field of instruction.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:

The Assessment Plan is quite cogent, most sensible, and most relevant to the academic program and is clearly student centric and focused on an intent, demonstrated by the entirety of the Political Science Department, to have student success and continual improvement at its core.

All learning outcomes, the ILO's, the PLO's and all relevant information, including intent and analysis for all facets of the Learning Outcomes were included.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:

The Political Science Department has a sound and insightful assessment process and plan for the future. The APRC applauds the Political Science Department, its faculty, staff and students, in their commitment to the educational experience and continual improvement. In this, the APRC agrees that the expansion of Internships, including an expansion of Community Partners, will certainly build on the traditional classroom experience for the students as well as assist in the professional experience and career building process, from entry level professional job through professional/graduate school and beyond. Additionally, the blending of the high-impact practices and co-curricular nature of the Internships further enhances the greater understandings that the students develop in the process.

We would like to remind the program—In fact, we are reminding every program/department in the current review cycle—that by the time the program is reviewed in the next cycle, they are expected to have implemented a full-fledged assessment plan, have conducted sufficient assessment of the learning outcomes of the program with multi-year data, and have engaged in close-the-loop activities.

 The APRC also recognizes the considerable effort of the Faculty to expand into playing a guiding role across several student clubs and organizations. With the unwanted addition of gaping hole in the field of Public Law, one of the most popular fields of endeavor in Political Science, the Department may consider hiring two additional faculty over the next academic year, or two, in order to continue the traditions set forth of excellence in these areas.

2021-22 BA Political Science College Dean Report
Reviewer:
College Dean

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:

Program Strengths

- The curriculum is designed to offer coverage in all key Political Science areas while still affording students the opportunity to take "deeper dives" into specific content areas.
- Program faculty are meaningful engaged in research and have strong records of scholarly engagement despite a relatively high teaching load.
- Department leadership has done well balancing teaching assignments such that tenure-line faculty teach both PSCI 2030: Government of the United States (GE category D1) and major-specific courses.
- High level of student engagement and satisfaction with the curriculum and faculty, and a great deal of support for students interested in honor society participation.
- Concise and relevant program learning outcomes that connect to the university's objectives.
- Strong emphasis on excellence in teaching as assessment of teaching practices.

Areas for Potential Improvement

- Identify additional support for student internships and experiential learning opportunities.
- More intentional engagement with alumni as a resource for mentorship and undergraduate student internships.
- Collaborate with the Office of Enrollment Management in determining trends in educational and professional interests among incoming students to inform adjustments/areas of emphasis in curriculum.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:

Q2S afforded the faculty in Political Science the opportunity to closely examine the undergraduate curriculum and existing assessment practices. With respect to the curriculum, in broad consultation with all program faculty, relevant college and university curriculum and assessment committees, and college leadership, the department chose to "convert" more than transform. This was strategically wise as they already offered a balanced program in Political Science and a curriculum unmarred by bloat or curriculum creep. The department did, however, use Q2S and feedback from the previous program review to revise its assessment practices and instruments. In direct response to the last program review, the department has also explored ways to better engage with and track alumni, understanding that this is not primarily a function of academic departments. Finally, the department expanded high impact teaching and learning practices through opportunities like studies abroad, expansion of student clubs, and student honor societies.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:

- While enrollments have been fairly steady, as advised by the external reviewer, the department may consider ways to broaden the undergraduate major's appeal through curricular innovation and working more closely with Enrollment Management to capture the interests of incoming and prospective students.
- Continue to emphasize and foster a culture of assessment in the department.
- Work with campus partners to address courses with persistently high DFW rates and consider course redesign and additional student support where appropriate.
- Emphasize diversity, equity, and inclusion in curriculum, student success, and faculty recruitment and success.

Providing Department:
College of Social and Behavioral Sciences

2021-22 BA Political Science Plan of Action
Proposed Action:
Overview:
In keeping with the self-study and reviewer recommendations, the department aims to continue its focus on providing a broad political science education on the liberal arts model. At the same time, we will remain mindful of the ever-changing educational environment and the need to make changes when and where appropriate.

Internships:
The department will redouble its efforts to increase the number of internships. The department routinely advises students via email of internship opportunities that become available. However, more needs to be done. To that end, the department will do the following:

1. Coordinate with department faculty to advertise internship opportunities in their classes, especially those that are in person. In particular, we will ask faculty to explain these opportunities to students and encourage them to participate.
2. Request faculty to reach out to department alumni who might be able to provide more internship opportunities for our students, whether in law firms, courts, government programs, or businesses. As a corollary of that effort, we will invite alumni to speak with students, providing career advice and networking opportunities. If this effort takes root, perhaps something like an internship advisory board can be created for the department.
3. Lastly, the department will explore the possibilities, however slim, of obtaining University resources to help fund at least some internships that might otherwise be unpaid.

Enrollments:
The number of majors in the Political Science B.A. program appears to have leveled off since the distinct drop in Fall 2020. The department will monitor closely our enrollments as we proceed, assessing the extent to which that drop was relatively temporary, perhaps caused by the pandemic and the semester conversion, or something more long term.

1. The large lecture GE course, PSCI 2030: U.S. Government, has traditionally been a feeder for new majors to our program. In the wake of the pandemic, the course currently needs to be offered online in order to maintain enrollments, limiting faculty opportunities to mentor students. While we hope that the class in the future can be offered primarily in person, we will nevertheless encourage faculty now to reach out to prospective majors in their U.S. Government sections.
2. We will work with the Office of Enrollment Management to attempt to identify prospective political science majors, including exploring opportunities for recruitment of international students, who might be attracted to the strengths of the department in comparative politics and international relations.
3. The department will examine the possibility of curricular additions in order to tap into more student interests. Along those lines, the department currently is seeking to add a new public opinion and political behavior class to its offerings.

Faculty:

1. The department just successfully completed a search for a faculty member in public law and American politics. The public law position was the most pressing immediate need of the department in terms of faculty personnel. The department

will assess its needs going forward as we gauge the demand for courses. The most likely needs in the future will be in the areas of American politics, political theory, and public law.

2. The external reviewer noted the problem of faculty workload. The semester conversion effectively increased the teaching load, with many faculty now teaching four classes rather than two during much of the year. It is perhaps unlikely to happen, but the department will encourage the administration to try to reduce the de facto teaching load to three sections a semester.

DFWI:

1. Our department has determined that when DFWI rates spike, it typically is not because more students suddenly perform poorly. Rather, the cause typically is an increased number of students who simply do not attend class or complete work assignments. Faculty will continue to encourage students to show up to class and to study, penalizing and rewarding them accordingly.
2. Faculty will be apprised of the early alert system provided through EAB. Our aim is always to retain as many students as possible.
3. The department is also now acting to reduce the DFWI rate, particularly in courses identified by the administration, by vigorously implementing administrative drops. By identifying as soon as possible those students who likely will not attend class or complete assignments, we hope that the DFWI rates will begin to reflect the number of students actually in the classes.

Assessment:

1. The reviewers indicate that our assessment measures are well designed and effective. We will continue to execute our assessment plan and collect data into the future.
2. As noted in the self-study, through the assessment process we have identified the need to improve student writing. The department does not have the capacity to provide its own writing class. The faculty, however, will continue to address this issue in their classes. As with other areas, reducing the total teaching load would free up faculty time to concentrate on this task.

Timeline:
Internships:
The department will begin, or has already begun, all of the measures outlined in the action plan. It is uncertain, but we would hope to see some increase in numbers of internships within two years.

Enrollments:
Enrollments are monitored on an ongoing basis. The department will reach out to Enrollment Management presently. One course will likely be added to the curriculum in the coming academic year.

Faculty:
Since enrollments and retirements largely determine faculty hiring needs, the department will wait at least one year before considering applying for another faculty line.

DFWI, Assessment:
The department will continue its efforts on an ongoing basis.

Responsibility:
Internships:
The department chair and internship coordinator will take the lead on advertising and arranging internships. The chair will inquire with the University about possible funding of internships. All of the department faculty will encourage internships and reach out to alumni.

Enrollments:
The department chair will monitor enrollments and coordinate with Enrollment Management. All faculty will, over time, consider any curricular changes.

DFWI:
All of the department faculty will continue to contribute to this effort.

Assessment:
The department chair and at least one other faculty member (changing on a rotating basis) make up the department assessment committee.

Cost:
Internships:
Other than possible University funding, added costs should be minimal.

Faculty:
Should the University be able to reduce the teaching load of faculty, the costs of course would be borne by the University.

Enrollments, DFWI, Assessment:
Added costs should be minimal.

Resources:
With respect to all areas of the action plan, faculty time is the principal resource to be used.

Providing Department:
Bachelor of Arts in Political Science

Self-Study Report

of the

Department of Psychology

Encompassing Academic Years 2020-2022

Date of Current Document:
December 22, 2021

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Self Study Report

Department of Psychology

Department of Psychology Self-Study 2020 – 2022

I. Psychology Department Programs, Faculty, Students, and Institutes

A. The Department within the Context of the University's Mission

Like the University as a whole, the Psychology Department is a teaching and learning community dedicated to the actualization of human potential and an appreciation and respect for individual uniqueness, diversity, and achievement. We strive to provide rich and varied learning opportunities for our students both in the classroom and through extensive student involvement in our faculty's research and professional activities. In keeping with the University's "tradition of close student contact with faculty, staff, and administrators," the Department provides an exceptional degree of individual guidance and mentorship, despite serving close to 2000 undergraduate majors. Through a deep commitment to teaching and research excellence on the part of our award-winning faculty, the Psychology Department seeks to "make a positive difference in the lives of its students and the communities it serves," and to "improve the quality of life" in the Inland Empire region.

The primary recipients of the Psychology Department's services are students enrolled at California State University, San Bernardino. Students' needs are met by the faculty's active pursuit of teaching and scholarly excellence. The Department seeks to judiciously integrate various market demands and student interests to develop a realistic selection of courses/ programs for which we have the resources to maintain high quality instruction. The goal of the Psychology Department is to shape and enhance student perspectives through knowledge of the basic processes and fields of psychology. The Department seeks to educate students in a manner consistent with their personal interests and career objectives, and in a manner representing and upholding the department's professional responsibilities and guidelines. As a result, the faculty expect to create a positive reputation and market demand for graduates of the Department's programs.

B. Programs Overview

The Department of Psychology sponsors three undergraduate majors leading to the B.A. (General Psychology, Biopsychology, Industrial and Organizational Psychology), one M.A. graduate program (Psychological Science) with two concentrations (General and Behavioral and Cognitive Neuroscience), two M.S. graduate programs (Clinical/Counseling Psychology, Industrial and Organizational Psychology), two institutes (the Institute for Child Development and Family Relations and the Learning Research Institute), and a Community Counseling Center. The department office, faculty offices, technical and staff support, and research labs are housed primarily in the 4th and 5th floor and basement of the Social and Behavioral Sciences Building (SBSB). Some space has also been allocated to Psychology in the Faculty Office Building (FOB)

for research space, part-time faculty offices, and offices associated with the Department's sponsored institutes.

The curriculum of the Psychology major (49-50 semester units) reflects the diverse fields of psychology and emphasizes the scientific pursuit of knowledge as the foundation for the discipline. There are three concentrations within the major: General Psychology, Biological Psychology and Industrial and Organizational Psychology. The Biological Psychology Concentration provides students with cutting edge knowledge in the field of behavioral neuroscience. The Industrial and Organizational Psychology concentration provides students with knowledge of the applications of psychology in the workplace, such as personnel selection, gender equity in work settings, understanding and improving relations between employer and employee, program evaluation, employee mental health, and many other issues regarding the interface between psychology and business. The Department also offers a minor in Psychology (18 semester units). At the graduate level, the Department offers Masters of Art and Science degrees: MA in Psychological Science (34-35 semester units), MS in Clinical/Counseling Psychology (63-71 semester units), and MS in Industrial and Organizational Psychology (45 semester units).

The most significant curricular changes since the last self-study are: 1) impaction of the Psychology major, 2) the development and expansion of the Psychology pre-major and GPA requirements, 3) the revamping of the undergraduate program and creation of 3 concentrations in general psychology, biopsychology, and industrial and organizational psychology; 4) the creation of two new lower-division courses that are part of the undergraduate requirements for the Psychology Pre-major (PSYC 2211 - Introduction to Psychological Research and PSYC 2220 - Brain and Behavior); and 5) the university's conversion to a semester system in Fall 2020.

C. Our Faculty

The faculty of the Department of Psychology consists of 25 full-time faculty members (one full-time lecturer, five assistant professors, five associate professors, and sixteen full professors), twenty-two part-time faculty, and seventeen graduate student teaching associates. The full-time faculty provide coverage in a wide range of psychology sub-areas including, social, personality, developmental, clinical/counseling, cognitive, biological/neuroscience, psychometrics, quantitative, and industrial/organizational. Of the full-time faculty, one is currently FERPing (our partial retirement program) and one is serving as a 12-month Chair. The Department is presently recruiting for one replacement tenure-track position in biopsychology with appointment in August 2022 and two full-time lecturer positions (one replacement in biopsychology and one new in general psychology) with expected appointments in August 2022.

The period covered by this self-study coincided with a substantial decrease in State funds to the CSU due to the COVID-19 pandemic. This is reflected in the hiring pattern across the past two years. In addition, Psychology split from our Child Development program faculty (n = 8 full-time faculty) who formed their own stand-alone department,

which had received our three most recent new full-time hires pre-COVID-19. During the 2021-2022 academic year, Psychology was granted one replacement line to support the replacement of a tenure-line biopsychology faculty and two additional positions to recruit for two full-time lecturers in biopsychology and general psychology (i.e., with preference for expertise in developmental psychology, research methods, and statistics).

Table 1 lists the numbers of full-time faculty (by rank), part-time faculty, and teaching associates for each year of the current self-study. In Fall 2021, Psychology's Child Development program split from the department to form their own standalone department. As such, the faculty data reflected below include ONLY Psychology faculty even for the 2020-21 academic year. ***Psychology's current Student to Faculty Ratio (SFR) is 76:1.***

Table 1: Psychology Department Faculty								
Academic Year	Full-Time Lecturer	Assistant Professor	Associate Professor	Full Professor	FERP Faculty	Total Full-Time Faculty	Part-Time Lecturer	Teaching Associate
2020-2021	1	7	4	15	1	25	23	16
2021-2022	1	5	6	14	1	24	23	17

Under the new semester system, tenure-track faculty members at CSUSB are expected to teach 12 Weighted Teaching Units (WTUs) - typically, four 3-unit classes per semester (24 WTUs per year). Assigned time can be granted for the supervision of Master's theses, for internal and external research grants, teaching grants, and some select, time-intensive service opportunities on campus. The average teaching load among the tenure-track faculty in Psychology during the current academic year (2021-2022) was 12.91 WTU, however this number includes those faculty with significant release time for external grants and service and those on sabbatical.

It is important to note that many Psychology faculty are highly involved in significant internal service opportunities and external grant activities. As such, many of our tenure-track faculty are significantly bought out from teaching. In addition, the Psychology Chair has a 100% buyout from teaching and the Associate Chair has a 50% buyout from teaching. Currently, 9 out of the 24 full time tenure-track faculty are bought out from teaching 9 WTU or more ($M = 16$ WTU), excluding any one-time internal grant funding or service activity and/or assigned time for supervision of graduate students. As such, our SFR is actually much higher than what has been reported.

D. Our Students

As of Fall 2021, there were 1,862 students enrolled in the undergraduate psychology major. This represents 11.14% of the undergraduate enrollment at the University (N = 16,704). **Table 2** compares the FTEs generated by Psychology with those generated by the other departments in the College of Social and Behavioral Sciences in Fall 2021. This comparison underscores the considerable and disproportionate FTE contributions of the Department to the College and to the University.

Table 2: Full-Time Equivalencies (FTEs) Fall 2021						
Department	**Undergraduate**		**Post-Bac/Graduate**		**Overall**	
	Headcount	**FTEs**	**Headcount**	**FTEs**	**Headcount**	**FTEs**
Anthropology	57	47.4	22	10.16	79	57.56
Criminal Justice	872	756.53	24	12.5	896	769.03
Child Development	477	405.73	24	12.5	501	419.81
Economics	73	63.93	0		73	63.93
Environmental Studies	12	11.53	0		12	11.53
Geography	72	61.33	0		72	61.33
History	342	280.8	23	13.33	365	294.13
Human Development	82	69.33	0		82	69.33
National Security Studies	0	69.33	46	30.58	46	30.58
Political Science	180	161.93	0		180	161.93
Psychology	**1707**	**1450.26**	**72**	**67.91**	**1779**	**1518.18**

SBS	0		19	10.74	19	10.74
Sociology	810	690.86	0		810	690.86
Social Sciences	31	26.26	1	0.58	32	26.85
Social Work	274	234.66	194	219.99	468	454.66
Total College of Social & Behavioral Sciences	**4989**	**4260.60**	**425**	**379.91**	**5414**	**4640.51**

Table 3 presents the enrollment figures for each year covered by this self study.

Table 3: Number of Psychology Majors							
Fall of Academic Year	Pre-General Psychology	General Psychology	Pre-Biopsychology	Biopsychology	Pre-Industrial and Organizational	Industrial and Organizational	Total Majors
2020	944	617	84	72	24	55	1796
2021	1154	465	55	111	17	60	1862

Appendices A and **B** list the number of sections, numbers of students, and average class size for courses comprising the various requirements of the psychology major during the years of the current review cycle. In addition, the table provides an average across the cycle. With the exception of the advanced seminar (PSYC 442X) and lab (PYSC 443X) culminating experience courses, the number of sections offered per year has not changed, although class size has increased substantially across virtually all categories with the exception of the advanced culminating lab and seminar courses (PSYC 442X and 443X), which have a strict upper bound due to the writing intensive nature of these courses.

In addition to the large class sizes, the data summarized in Appendix A also reveal a second highly concerning trend for the psychology major. This concerns the imbalance between part-time and full-time faculty in the coverage of classes. This imbalance has been evident since and prior to our last review in 2015. While some degree of dependence upon part-time faculty is essential in any department with faculty highly engaged in professional activities or significant service appointments, it is clear to many faculty in the Department that this dependence has become too great. The increase in enrollments without a comparable increase in full-time staffing has led to substantially **larger class sizes** and to a **growing dependence upon part-time instructors** for

coverage of classes. Each of these trends is highly concerning, particularly as our department has recently lost faculty due to the split with Child Development and the retirement (and impending retirement) of some senior faculty. Current class sizes at the 300-level make it difficult, if not impossible, to utilize high impact pedagogy. Students suffer as a result, especially in regard to writing skills. In addition, the over-dependence on part-time instructors is no less concerning. Despite performing well, part-time faculty generally do not provide research-informed instruction or the valuable out-of-the classroom opportunities that full-time faculty provide.

E.   Centers and Institutes

Psychology faculty are intricately involved with several key centers and institutes at CSUSB. These are briefly described below.

1.Community Counseling Center (CCC). Counseling services for personal and emotional problems are available through the Community Counseling Center. Clinical/counseling psychology faculty and graduate students staff the Community Counseling Center. Individuals experiencing problems in relationships, feeling anxious or depressed, or seeking help with other personal problems can receive confidential counseling from the Center, which is located on campus. Intakes are conducted by the Director of the Center, Dr. Stacy Forcino, who matches prospective clients with counselors who can best meet their needs. Clients meet with their individual counselor for a 50-minute session once a week in-person or via videoconferencing. The length of counseling is not limited; clients may begin in September and continue until June when the Center closes for the summer. Counseling services are provided for a fee of $10.00 per session. The CCC is also a training facility for graduate students in the Clinical/Counseling Psychology M.S. Program.

2. The Institute for Child Development and Family Relations (ICDFR). The ICDFR, directed by Dr. Mark Agars, is a multidisciplinary center for the study and promotion of child and family well-being that sponsors a variety of community initiatives. In effect, the ICDFR is an umbrella organization which covers many child and family related sub-projects established through partnerships between CSUSB and the surrounding community. Described separately below, these include Quality Start San Bernardino (QSSB), ECE Workforce Development, BEFAST Cognitive Training Program, Science of Parenting (SOP), FAITHs Program, Students Deserve Success Tutoring program for homeless youth, the University Center for Developmental Disabilities (UCDD), the Work-Family-Life Project, and the Infant Toddler Lab School (ITLS). These and other projects are spearheaded by faculty from across the University, including numerous Psychology and Child Development faculty. The ICDFR also maintains an active webinar series and social media presence intended to provide science and best practice guidance to parents and families in the surrounding communities. Each of the projects housed

within the ICDFR provides opportunities for students to become involved in research and community service.

3. Learning Research Institute (LRI). The CSUSB Learning Research Institute (LRI) promotes an interdisciplinary scholarly focus on the student learning experience and how it may be improved. Under the directorship of Drs. Hideya Koshino and Jason Reimer, the Institute supports this focus by sponsoring and conducting research activities that examine the cognitive, neurobiological, and environmental variables that contribute to the academic success of our diverse student body. Currently, the LRI is pioneering the development of training-based interventions to remediate cognitive control and working memory deficits in college students. In addition, the LRI contributes to a campus culture supportive of student learning and scholarly exchange by hosting invited speakers, collaborating with other campus institutes such as the Teaching Resource Center, providing financial and material support for faculty interested in studying student learning, disseminating findings to the local and global community, and providing CSUSB students with opportunities to be directly involved in the research process.

F.   Off-Campus Contributions

The Department continues to provide instruction to Psychology majors at the Palm Desert Campus and has a substantial presence there. For years, Psychology has been one of the largest majors at PDC. In addition to a significant presence at the satellite campus, several initiatives providing community service are either housed within the College's ICDFR or function independently. These are described below.

1. **Work-Family-Life Project (WFL)**. Initiated in 2011 by Dr. Mark Agars, the WFL Project is a long-term research initiative geared toward finding applicable solutions to the work and family challenges faced by individuals living at or near poverty lines in our geographic region. The primary goal of the project is to identify and develop initiatives to help individuals maintain employment, while managing and balancing work and family responsibilities. Such initiatives are expected to yield improved family functioning, work productivity, and reduced conflict in both the family and the workplace. The WFL team is regularly in the community learning from individuals and employers, while searching for and proposing new solutions and collaborating with like-minded community and professional organizations interested in addressing these issues.

2. **Community-Based Participatory Research (CBPR)**. Under the mentorship of Dr. David Chavez, Psychology students have the opportunity to utilize a Community-Based Participatory Research paradigm in working with communities that have historically been marginalized in society due to a number of factors including but not limited to ethnicity, social class, and sexual orientation. Dr. Chavez connects student research teams with community-based organizations (CBOs) providing service to community members.

Through CBPR, Psychology students engage in service AND research. Currently, students are involved with three CBOs: the Boys & Girls Club of Waterman Gardens, the INSPIRE Multicultural Center (a DBH funded Holistic Campus developed by El Sol as a comprehensive community serving organization in the San Bernardino Metropolitan and East Valley Region), and The Rainbow Pride Youth Alliance (providing a safe, healthy, and enriching environment for LGBTQI youth of the Inland Empire).

3. **Photovoice Project**. The Community and Relationship Enhancement (CARE) research group, under the mentorship of Dr. David Chavez, has been implementing a participatory research process called 'Photovoice' that provides empowering opportunities of expression for children and youth living in impoverished neighborhoods. Through the use of photography and guided prompts, Photovoice enables at-risk youth to document their strengths and challenges thereby giving a voice to those silenced by society.

4. **Community Outreach Program (COP)**. Under the advisement of Dr. Manijeh Badiee, the Community Outreach Program is a new student organization that takes pride in representing California State University, San Bernardino in the community. With over 100 student members, COP seeks to help the community through service and volunteer work in a variety of organizations and settings throughout the inland empire. The organization's mission is to inform students of available volunteer opportunities in the community, connect students with organizations affording such opportunities, and support students who are currently volunteering by providing a safe place where they will be able to discuss their volunteer experiences with different organizations and receive recognition for their community service.

G. University-Wide Contributions

Faculty of the Department teach six courses (PSYC 1100, 1105 and 1115; SSCI 3060, 3160, and 33250) that satisfy General Education requirements of the University. In addition, faculty teach several courses that are either required or options in several certificate programs. Finally, Psychology faculty have mentored students in the Undergraduate Studies' University Honors Program, as well as the Federally-funded program for supporting entry of under-represented groups into the sciences – Undergraduate Research Training Initiative for Student Enhancement (U-RISE). Psychology Faculty are utilized to an exceptional degree by the College and University. During the current period, Dr. Janelle Gilbert serves as the University's General Education Director, Dr. Cynthia Crawford serves as the Director of Faculty Research Development through the Office of Academic Research, and Drs. Donna Garcia and Cari Goetz serve as the directors of the University's Diversity and Equity in Promotion, Tenure, and Hiring (DEPTH) Center. In addition, Dr. Mark Agars serves as director of the college-based ICDFR, Drs. Jason Reimer and Hideya Koshino as co-directors of the Learning Research Institute, and Dr. Stacy Forcino as Director of the Community Counseling Center.

H. Student Advisement

In order to help students design their personal curricula, we have several advising mechanisms.

1. Professional Advising. CSUSB has professional advisors that serve as the primary source of advising for students during regularly scheduled office hours and by appointment. Typically, first year freshmen receive advising through Advising & Academic Services and all other undergraduate students receive advising from one of the two professional advisors assigned to the Psychology major within the College of Social Behavioral Sciences.

2. Peer Advising. The Psychology Department has a Peer Advising Center (PAC), where senior level students are trained to assist other students with the design of their curriculum. The PAC also offers a variety of student informational resources, from Financial Aid pointers to career and graduate program information. Undergraduate students are encouraged to get advising at least twice a year to register for classes. In addition, they must meet with the Department Advisor or Chair if they are falling behind in their financial aid contract. There is a separate advisor available for students attending classes on the Palm Desert campus. The PAC is part of the University's SSI Program and has a fully developed assessment plan.

3. Department Chair. The Chair of Psychology serves as a secondary advising coordinator and holds monthly workshops and advising hours each week by appointment.

4. Advising Coordinator. Although students are welcome and encouraged to meet and discuss their curriculum with any of the psychology faculty, we have a designated departmental faculty advisor in charge of the advising process (Janelle Gilbert). Dr. Gilbert provides regularly scheduled student contact hours and responds to student inquiries via phone and email regarding department programs and university policies.

5. Psychology 1101 – Psychology as a Major. All pre-psychology majors are required to take this one-unit course as a prerequisite to the psychology major. PSYC 1101 is designed to advise students on their options as psychology majors. The class reviews the fields of psychology, career options relevant to different fields of psychology, preparation for graduate work in psychology, and course options relevant to each field. As part of this course, students work with the course content to design their personal curriculum based on their academic and professional goals. It is a requirement of the course that students receive advising from the PAC.

6. <u>Undergraduate Program Directors</u>. The directors of the three concentrations offered by the Psychology Department hold regular advising hours for students in their respective programs.

7. <u>Faculty Advising</u>. All faculty members advise students during regularly scheduled office hours and by appointment. Faculty are expected to be available to assist with any advising question. In practice, owing to the other advising services provided by the Department, faculty advising typically involves providing information and guidance on graduate programs and careers relevant to the faculty member's areas of expertise as well as helping students to plan and prepare for these future options.

II. Department of Psychology Responses to Recommendations from the 2014-2015 Program Review

The CSUSB Department of Psychology underwent its most recent self-study in 2014-2015 and received a detailed external review in March, 2015. This review generally commended the Department and noted several "outstanding areas of excellence". These included praise for the Chair (Dr. Robert Ricco) and Dean (Dr. Jamal Nassar) and the Department's "productive, collegial" faculty, support for faculty reassigned time for faculty scholarship, outreach and service to the local community. In their evaluation of the Department, the reviewers noted that, "The scholarly productivity of the faculty is impressive, not just for a CSU campus but for any university." However, the reviewers noted some "significant challenges" related to the overgrowth of the undergraduate student body, support for undergraduate advising, curriculum sequencing, and competing demands between teaching and research activities. Each of these areas is discussed below, with an emphasis on how the Psychology department has responded to the recommendations of the reviewers.

A. Explosive Growth of Student Enrollment

The previous external reviewer recommended that it was critically important that we address the "explosive growth of student enrollment in the department's majors." Since our previous self-study in 2014, the Psychology Department and University opted to declare impaction for the Psychology major. After careful assessment, which took into consideration the CSU formula for determining the capacity of a program, the number of tenure-track faculty in the Psychology department relative to the other tenure-track faculty at CSUSB, and the maximum class size for upper-division classes in which high impact pedagogical practices can be employed, a ***headcount capacity of 1,646*** was established. Impaction status was first granted in Spring 2017, however our plan for 2017-2018 and 2018-2019 only consisted of new criteria for moving from the pre-major to the major. These requirements stated that in order to complete the pre-major, students must have taken Basic Skills in English and Math, along with PSYC 100, 101, and 210 - each with a grade of C or better. In addition, students must have an overall GPA of 2.25 and a GPA across the pre-major classes of 2.5. Accordingly, our initial

impaction plan did not include any criteria for admission into the pre-major. That is, it did not prevent any student from declaring Psychology as their major and, therefore, entering the pre-major. It only affected movement from the pre-major into the major.

Our true plan containing the current criteria for acceptance into the pre-major (i.e., for declaring the Psychology major) was first applied to the admissions process for the 2019-2020 academic year (see criteria below). In addition to meeting the criteria outlined below, applicants can only apply for enrollment into the Psychology major for the Fall semester each year.

1. Impaction Criteria for Pre-Psychology Majors:

First-Year Students:

The admission of First-Year students to Psychology majors is based on the Multi Factor Admissions Score (MFAS), which is determined by a combination of high school grade point average (GPA) and applicant attributes.

Applicants will be required to meet a minimum 3.00 GPA to be reviewed for admission.

If eligibility is not met with GPA alone, admission of First-Year Student to the Pre-Psychology majors will then be based on a qualifying Multi Factor Admission Score (MFAS), which is determined by a combination of the applicant's high school Grade Point Average (GPA) and other applicant attributes such as work experience and educational program participation.

Students whose GPA's are between 2.61 - 2.99 will be considered as space is available after a review of the overall applicant pool.

The minimum GPA to qualify for admission to Pre-Psychology is a 2.60.

Please note: During the admission process, First-Year Students apply to the Pre-Psychology major. In order to advance into the Psychology program, a minimum University GPA of 2.25 is required. Additionally, students must receive a minimum grade of 'C' in each of the following courses with an overall GPA of 2.50: Written Communication (A1), Mathematics (B1), PSYC 1100, PSYC 1101, PSYC 2210 and 2211.

Upper Division Transfers:

The admission of upper-division transfers to all Pre-Psychology majors is based on the applicant's transferable GPA.

The minimum GPA to qualify for admission to Pre-Psychology is a 2.60.

In order to advance into the Psychology program, a minimum University GPA of 2.25 is required. Additionally, students must receive a minimum grade of 'C' in each of the following courses with an overall GPA of 2.50: Written Communication (A1), Mathematics (B1), PSYC 1100, PSYC 1101, PSYC 2210 and 2211.

Enrollment data since impaction criteria were applied

When the full criteria were implemented in 2019-2020, Psychology's enrollment showed some slight improvement (see Table 1). However, overall impaction has been unsuccessful. Since CSUSB does not have an admissions review process, all applicants that meet the admissions criteria outlined above are admitted. Thus, Psychology has seen a steady increase in admission and has consistently seen enrollment numbers that exceed the established headcount capacity. In Fall 2020, the department requested to modify the impaction criteria and increase the GPA requirement from 2.6 to 2.7 and this request was denied. **Table 4** Presents Psychology 5-year enrollment post-impaction:

Table 4. Psychology 5-year enrollment post-impaction.						
Term	**Total Undergrad Enrolled**	**FTF**	**New Transfer**	**Continuing**	**TT Faculty**	**Undergrad/TT Faculty Ratio**
Fall 2021	1,862	134 (7%)	463 (24%)	1,265 (68%)	24*	76
Fall 2020	1,796	129 (7%)	470 (26%)	1197 (67%)	36 (25*)	50(72)
Fall 2019	1,813	166 (9%)	397 (22%)	1,250 (69%)	33	55
Fall 2018	1,888	154 (8%)	353 (19%)	1,381 (73%)	34	56
Fall 2017	2,176	214 (10%)	367 (17%)	1,575 (70%)	32	68

*Number of faculty excluding those in Child Development

2.   Pre-Major Requirements

In addition to declaring impaction, the department has also made changes to the pre-major requirements. One of the problems with our past Pre-Psychology requirements was that students could take almost every Psychology course as a Pre-Psychology student. The Department felt it was important that the new requirements act as a stronger "gate" for our upper-division courses. In other words, students should not be able to progress too far in our curriculum without being a full Psychology major. Our new curriculum since the quarters to semester conversion has restricted access to certain upper division Psychology courses to students who have completed the pre-major. As such, since our last program review, and as part of the conversion from quarters to semesters process, we

added requirements and restrictions to the pre-major in order to regulate entry into the major (from the pre-major) and do so in a manner that does not disadvantage any particular demographic group. Our pre-major includes new courses, an expansion of the pre-major, and new GPA requirements. For transfer students, all of the pre-major requirements can be satisfied at a community college with the exception of PSYC 1101.

Our pre-major requirements are as follows:

Course	Units
General Education Basic Skills in English (A1)	3
General Education Basic Skills in Mathematics (A3)	3
PSYC 1100 Introduction to Psychology	3
PSYC 1101 Psychology as a Major	2
PSYC 2210 Psychological Statistics	4
PSYC 2220 Brain and Behavior	3
PSYC 2211 Introduction to Psychological Research	3
Total Units 21	

In addition to these 7 courses, students also now must satisfy a series of GPA requirements before they can advance to the Psychology major. Specifically, ***students may earn no grade lower than a "C" (2.0) in each of these pre-major courses. In addition, students must have a GPA of 2.5 in the pre-psychology major and an overall University GPA of 2.25***. By adding the GPA requirements, the Pre-Psychology major now has a strong set of standards that most, but not all, students will be able to meet. This requirement gives our Pre-Psychology major some "teeth" that it did not have previously.

The pre-major now includes two new courses, PSYC 2220 and PSYC 2211. Adding these courses to the pre-major also provides an effective gate to the major.

PSYC 2220 - Brain and Behavior. PSYC 2220 is a lower-division course in biopsychology that was added as one of the requirements of the Pre-Psychology major, and it is now a required course for all Psychology majors. Many psychology departments at other universities have separate lower-division and upper-division courses in biopsychology, and we retained our upper-division biopsychology course in this area (PSYC 3363).

PSYC 2211 - Introduction to Psychological Research. PSYC 2211 is a newly added, lower-division research methods course that covers the basics of research methodology. This course is required of all Psychology majors and is part of the Pre-Psychology requirements. The course is meant to prepare students for the upper-division required course, PSYC 3311 - Research Methods in Psychology. Pre-Psychology majors are not allowed to PSYC 3311.

Accordingly, we now have a two-course methodology sequence for research methods.

B. Continued Hiring of Tenure-track Faculty

The previous external reviewer recommended that we continue hiring tenure-track faculty to adequately serve matriculating students and ensure the quality of the degree. Last year there were no new lines granted to Psychology, in part due to COVID-related budget cuts. This year we were granted one replacement line for a tenure line biopsychology faculty. This line was granted following the unexpected passing of a senior faculty during the Fall 2021 semester. The department is also recruiting two full-time lecturers (one in Biopsychology and one in General Psychology). The College Dean has allowed us to conduct these searches in response to our increased enrollment. We are hopeful that we will receive additional lines to recruit tenure line faculty next year. We anticipate the need for full-time faculty to become more imperative over the next few years, as there are at least 5 senior faculty that expect to retire over the next 0-5 years. The College Dean has agreed to review with the Chair departmental needs and anticipated retirements this Spring.

The Chair and Associate Chair have begun a new initiative to recruit additional part-time instructors with doctoral degrees as adjunct faculty. We have created an open position and advertisement for our part-time lecturer pool that is disseminated locally and nationally.

C. Balance Between Need for Tenure-track Faculty in the Classroom and Engagement in Scholarship

The previous external reviewer recommended that we engage in a department discussion about the realistic balance between the need for tenure-track faculty in the classroom and the faculty's intrinsic, desired engagement in scholarship. This was a reasonable concern in the department previously, as the Psychology Department had their own effective assigned time program that helped faculty to obtain release time as a function of their supervision of students and their more intensive service activities. However, in Fall 2020, the College implemented a universal assigned time policy. Specifically, faculty lost one course release that was granted to all faculty to support professional activity and other opportunities for assigned time became more limited. As part of the quarters to semester conversion process, the university adopted a 4:4 teaching load. As such, faculty have a higher baseline course load than we did in the past. That said, Psychology still continues to have highly productive faculty, many of whom have external grants or significant service roles at the university outside of the department. This, along with our already insufficient faculty size, puts an increased reliance on part-time faculty to meet our course demands. The Department has worked to hire more part-time and full-time lecturers who have a doctorate in psychology or a related field. Although not tenure-track faculty, instructors with a Ph.D. can provide greater depth with regard to both theory and research than adjunct faculty with a

Master's degree. The latter degree is currently more typical of our adjuncts, though we hire a number of doctoral candidates, as well as individuals with doctorates. Increasing the number of faculty with doctorates should help to ensure that adjunct and lecturer instruction is of high quality.

D. Course Sequencing for Upper-division Coursework

The previous external reviewer recommended that the Psychology department consider course sequencing to ensure student preparedness for upper-division coursework. In particular, they observed that PSYC 3311 (Introduction to Experimental Psychology) needs to become a prerequisite for all other upper-division courses. As mentioned already under Response A regarding our high enrollment, we now have required pre-major coursework that prepares students for their upper-division courses, but also ensures that students take foundational courses prior to working towards their upper-division requirements. Specifically, the following upper-division required courses, now require successful completion of the pre-major, PSYC 3311- Research Methods in Psychology, PSYC 3359 - Evolutionary Psychology, PSYC 3362 - Learning and Motivation, PYSC 3363 - Biological Psychology, PYSC 3355 - Industrial Psychology, PSYC 3357 - History and Systems of Psychology, PSYC 3377 - Tests and Measurements, and PSYC 3386 Introduction to Psychotherapy. Our advanced lab and seminars, which are writing-intensive and serve as the capstone courses in the major also all require the successful completion of the pre-major requirements, PSYC 3311 - Research Methods in Psychology, and one additional course in the content area.

E. Undergraduate Advising

The previous external reviewer recommended that the department prioritize undergraduate advising to help students conceptualize a coherent four-year roadmap through degree requirements. Specifically, they recommend mandatory advising at least once a year and noted that resources must be dedicated to this priority, whether through expansion of the PAC, increasing the faculty role in advising, or adoption of centralized college advising staffed by professional advisors. Since our prior review the University has adopted a centralized advising model. Typically, first year freshmen receive advising through Advising & Academic Services and all other undergraduate students receive advising from one of the two professional advisors assigned to the Psychology major within the College of Social Behavioral Sciences. The Psychology Department also continues to maintain a Peer Advising Center (PAC), where senior level students are trained to assist other students with the design of their curriculum. The PAC also offers a variety of student informational resources, from Financial Aid pointers to career and graduate program information. Undergraduate students are encouraged to obtain advising at least twice a year to register for classes. In addition, since the previous review, the University has coordinated with departments to create roadmaps for graduation for incoming freshman and transfer students. These are made available to students on our department website.

F. Assessment Planning

The previous external reviewer noted that the department's excellent assessment planning must be coordinated and implemented to fulfill its potential. Since the prior review period, and upon the completion of the conversion from quarters to semesters, the department has begun implementing its outcome assessment plan. In Fall 2020, the Psychology Department Outcomes Assessment Committee began implementing a seven-year plan to assess our Program Learning Outcomes (PLOs). This plan entailed identifying, describing, and prioritizing Program Learning Outcomes. During 2020-21, we identified ways to assess and began evaluation of PLO 2 Research Methods in Psychology. For the 2021-2022 academic year, the selected PLO to be defined and assessed is PLO 1, Psychology Knowledge. All learning outcomes are expected to have been fully defined and assessed by 2026-27.

G. Integration of Lecture and Tenure-track Faculty Into Department Culture

The previous external reviewer recommended that we work to ensure opportunities for integration of lecturer and tenure-track faculty into the department culture through improved recognition of the contributions of all faculty. Psychology was appointed a new Chair in Fall 2020. Since this time, the new Chair was worked to address concerns regarding culture and provide recognition for all faculty achievements. Specifically, the Chair hosted monthly virtual social events during 2020-21 that were advertised to all faculty. In Fall 2021, the Chair coordinated a homecoming mixer and hosted a holiday party that all faculty and staff were invited to attend. In addition, the Chair notes via email or at department meetings the shared achievements of full-time and part-time faculty. The Chair also developed a professional activities reporting system where faculty can record electronically their recognitions and publications. This information is shared at the longer department meetings held at the start or end of each semester. With respect to full time faculty, all new hires are assigned a departmental mentor to support their integration into the department and larger campus. All junior faculty are invited to meet with the chair at least two times a year as a group or individually. All new part-time faculty are mentored by the Chair and are invited to meet with her at least once each term. Lastly, part-time faculty are always invited to attend Department meetings and have an identified representative that attends all meetings. This practice is meant to convey that adjunct faculty input is highly valued. The Chair also updated the part-time faculty web-page and enabled part-time faculty to post their photos and relevant profile information. We are continuing to identify ways to build a sense of community in the department across all faculty. We look forward to resuming a full on-campus presence to create more opportunities for faculty (and student) socialization.

H. Number of Required Units for Undergraduate Program

The Previous external reviewer recommended that we "engage in reflection about why the number of required units for the undergraduate programs are relatively low, while the units for some non-accredited master's programs (in particular, I/O and Child

Development) are very high." The conversion to semesters provided opportunities for such reflections and departmental discussions. We worked to establish more of a uniform, fixed core of required classes across concentrations, while still maintaining some degree of choice by way of electives. Our total unit requirement is 49-50 units, with 25 units being uniform for all majors and the remaining 24 units being specific depending on the concentration (i.e., general psychology, biological psychology, and industrial and organizational psychology). It is unclear why the comparison was made to our graduate programs, however, the Industrial and Organizational M.S. Program is indeed sizeable, but its remarkable degree of success in placing graduates into career positions suggests that the degree of preparation and training provided is not superfluous. The size of the Clinical/Counseling M.S. Program is strictly determined by the licensing requirements of the BBS.

I. Anticipated Lab and Office Space Needs

The previous external visitor recommended that we work with the college and university to address anticipated lab and office space needs for incoming faculty and to re-house part-time faculty in their home department. Presently, all full-time faculty have office space and there is sufficient space available to support our three potential hires this year. We plan to provide office space for our full-time lecturers on the 5th floor, alongside our other tenure line faculty. However, with future hires, there may be an issue with securing office space, as some of our offices have been allocated to the Child Development department post-split. We will continue to work with the College to address office space needs as they arise, however. Since the previous review, the College has created a state-of-the-art lecturers suite that the Chair of Psychology has been encouraging part-time faculty to use. Other part-time faculty are housed in a shared office on the fifth floor or share office space in the adjacent Faculty Office (FO) building. All part-time faculty are able to work in the space of their choosing without any issue. The department continues to be extremely limited with respect to research space for tenure line faculty. We expect to work with the Dean and University to identify research space for incoming tenure-track faculty.

J. Summary of Department Responses to Recommendations

Over the current review cycle, the Psychology Department has made extensive efforts to address concerns and recommendations contained in the external review that accompanied our 2014-2015 Self Study. Most notably, we have successfully declared impaction and have further developed our pre-major requirements to attempt to mitigate our enrollment growth. We have also made meaningful changes to our curriculum and outcomes assessment plan. Due to the period of COVID-related budgetary problems leading to a hiring freeze and the loss of some faculty, we remain extremely limited in faculty density. Through the hiring of full-time lecturers and additional tenure track faculty, we hope to see growth and pre-emptive replacement of our faculty who are expected to retire over the next few years. Finally, we have made efforts to improve the department culture and provide recognition for all faculty achievements.

III. Description of the B.A. Degree in Psychology

A. Program Mission

The general objectives of the Bachelor of Arts in Psychology are to present the scientific and professional aspects of psychology to the undergraduate majoring in this field and to provide service courses as electives for students throughout the university. Psychology majors may plan to apply the knowledge and skills provided by a broad psychology background to many diverse employment opportunities which do not require graduate training. The department also offers coursework leading to the Master of Arts or the Master of Science in Psychology. Students intending to enroll in these programs or another graduate school will find the undergraduate program provides an excellent base for entry into graduate training.

The Department has ten distinct goals that we intend for all psychology majors to achieve prior to graduation with their B.A. in Psychology. Students majoring in Psychology will have the opportunity to develop proficiency in:

1. Knowledge of theory and empirical findings in psychology,
2. Research methods in psychology,
3. Application of psychological principles,
4. Critical thinking skills in psychology,
5. Information and technological literacy,
6. Ethical standards in academic and professional settings,
7. Career planning and development,
8. Interpersonal skills.
9. An appreciation of individual uniqueness and diversity, and
10. A commitment to life- long learning in psychology

The mission of the B.A. degree in Psychology is elaborated into ten distinct goals and associate learning outcomes (see **Appendix B**). The goal of the psychology department is to shape and enhance student perspectives through knowledge of the basic processes and fields of psychology. The department will educate our students in a manner consistent with their personal interests and career objectives, and in a manner representing and upholding our professional responsibilities and guidelines. As a result, we expect to create a positive reputation and market demand for graduates of our programs.

B.   Curriculum

As prerequisites for acceptance into the B.A. in Psychology, students must complete the following courses as a "Pre-psychology major." The combined grade point average in these courses must be a minimum of 2.25, with no grade lower than a "C". Following formal entrance to the major, students may proceed with PSYC 3311 (Experimental

Psychology) and the following upper-division courses meeting requirements in the major: PSYC 3355, PSYC 3357, PSYC 3359, PSYC 3360, PSYC 3362, PSYC 3363, PSYC 3364, PSYC 3377, or PSYC 3386, along with the 4000-level culminating experience courses.

Students enrolled in a Pre-psychology course will be allowed to enroll in PSYC 3311 for the following semester with the understanding that all Pre-psychology requirements will be completed successfully by the start of that semester. Prior to completing the prerequisites that comprise the Pre-psychology major, students who have completed PSYC 1100 may enroll in select upper division Psychology courses, the exceptions being noted above.

1.   General Education Basic Skills in English (A.1)
2.   General Education Basic Skills in Mathematics (A.3)
3.   PSYC 1100. Introduction to Psychology or its equivalent (also satisfies General Education category D.4)
4.   PSYC1101. Psychology as a Major
5.   PSYC 2210. Psychological Statistics or its equivalent
6.   PSYC 2220. Brain and Behavior
7.   PSYC 2211. Introduction to Psychological Research

The curriculum for the B.A. in Psychology (49 – 50 units) provides students with a broad background in the basic and applied fields of psychology and in the biological, cognitive, social, motivational, and learning processes involved in psychological phenomena. In addition, there are two formal concentrations within the Psychology B.A. These are Biological Psychology and Industrial and Organizational Psychology. In declaring a major, students have three options. They can select **General Psychology** (no formal concentration), **Biological Psychology**, or **Industrial-Organizational Psychology**. Through regular advising and the guidance of our faculty, students who opt for the General Psychology degree will be able to create an individualized plan including an informal concentration in any of a number of subareas within psychology such as clinical/counseling psychology, social psychology, developmental psychology, cognitive psychology, and experimental psychology. For the advanced 4000-level culminating experience within the major, students have the option to choose between a second level of training in psychological science (advanced experimental psychology) and a seminar-type experience intended to support students' efforts to apply their accumulated knowledge to important topical issues. The first option is particularly recommended for students interested in the science side of the field and for students who wish to pursue a degree in a doctoral or competitive masters program in psychology. The full curriculum appears below.

_____

Requirements for the B.A. in Psychology (49-50 units)

Required Courses for the Psychology B.A. (25-26 units)
1.   PSYC 1100. Introduction to Psychology (3 units)

2.   PSYC 1101. Psychology as a Major (2)
3.   PSYC 2210. Psychological Statistics (4)
4.   PSYC 2211. Introduction to Psychological Research (3)
5.   PSYC 2220. Brain and Behavior (3)
6.   PSYC 3311. Introduction to Experimental Psychology (4)
7.   *Three units chosen from:*
- PSYC 3382. Social Psychology (3)
- PSYC 3390. Abnormal Psychology (3)
8.   Advanced Culminating Experience: (Students must select one of the following options: 3-4 units)

OPTION I - *Four units chosen from:*
▪ PSYC 4431. Experimental Psychology: Developmental
▪ PSYC 4432. Experimental Psychology: Clinical (4)
▪ PSYC 4433. Experimental Psychology: Biological (4)
▪ PSYC 4434. Experimental Psychology: Social (4)
▪ PSYC 4435. Experimental Psychology: Personality (4)
▪ PSYC 4436. Experimental Psychology: Learning and Motivation (4)
▪ PSYC 4437. Experimental Psychology: Cognition and Perception (4)
▪ PSYC 4438. Experimental Psychology: Industrial and Organizational (4)

OPTION II - *Three units chosen from:*
▪ PSYC 4421. Advanced Seminar in Psychology: Developmental (3)
▪ PSYC 4422. Advanced Seminar in Psychology: Clinical (3)
▪ PSYC 4423. Advanced Seminar in Psychology: Biological (3)
▪ PSYC 4424. Advanced Seminar in Psychology: Social (3)
▪ PSYC 4425. Advanced Seminar in Psychology: Personality (3)
▪ PSYC 4426. Advanced Seminar in Psychology: Learning-Motivation (3)
▪ PSYC 4427. Advanced Seminar in Psychology: Cognition-Perception (3)
▪ PSYC 4428. Advanced Seminar in Psychology: Industrial and Organizational (3)
9.   Concentration (24 units).

Concentrations (24 units)
General Psychology Concentration (24 units)
▪ PSYC 2201 Developmental Psychology (3) or PSYC 3324 Developmental Psychobiology (3)
▪ PSYC 3360 Cognitive Psychology (3) or PSYC 3364 Perception (3)
▪ *Three units chosen from:*
▪ PSYC 3359 Evolutionary Psychology (3)
▪ PSYC 3362 Learning and Motivation (3)
▪ PSYC 3363 Biological Psychology (3)
▪ *Six units chosen from:*
▪ PSYC 3355 Industrial Psychology (3)
▪ PSYC 3357 History and Systems of Psychology (3)
▪ PSYC 3377 Tests and Measurements (3)

- PSYC 3386 Introduction to Psychotherapy (3)
▪ Upper Division Psychology Electives (9 units)

Students intending to apply to doctoral programs in psychology are encouraged to take the following courses: PSYC 3357, PSYC 3377, PSYC 4410, and PSYC 5953.

For the General Psychology Concentration, the Advanced Culminating Experience requirement is typically met by choosing a course from either the Advanced Experimental Psychology Option (PSYC 4431, 4432, 4433, 4434, 4435, 4436, 4437, or 4438) or the Advanced Seminar in Psychology Option (PSYC 4421, 4422, 4423, 4424, 4425, 4426, 4427, or 4428).

Biological Psychology Concentration (24 units)
▪ PSYC 3363 Biological Psychology (3)
▪ PSYC 4442 Behavioral Neuroscience (3)
▪ *Three units chosen from:*
- PSYC 3355 Industrial Psychology (3)
- PSYC 3385 Personality Psychology (3)
- PSYC 2201 Developmental Psychology (3)
▪ *Three units chosen from:*
- PSYC 3359 Evolutionary Psychology (3)
- PSYC 3360 Cognitive Psychology (3)
- PSYC 3364 Perception (3)
▪ Foundations of Biopsychology - *Six units chosen from* (6 units)
- PSYC 3362 Learning and Motivation (3)
- PSYC 3365 Cognitive Neuroscience (3)
- PSYC 5538 Introduction to Psychopharmacology
▪ Upper Division Biopsychology Electives (*six units chosen from*):
- PSYC 3318 Health Psychology (3)
- PSYC 3324 Developmental Psychobiology (3)
- PSYC 3333 Drugs and Behavior (3)
- PSYC 3339 Methods in Human Neuroscience (3)
- PSYC 3357 History and Systems of Psychology (3)
- PSYC 3359 Evolutionary Psychology (3)
- PSYC 3362 Learning and Motivation (3)
- PSYC 3365 Cognitive Neuroscience (3)
- PSYC 3367 Neuropsychiatric Disorders (3)
- PSYC 4410 Advanced Psychological Statistics (3)
- PYSC 4423 Advanced Seminar in Psychology: Biological (3)
- PSYC 4426 Advanced Seminar in Psychology: Learning and Motivation (3)
- PSYC 5538 Introduction to Psychopharmacology (3)
- PSYC 5539 Current Methods in Neuroscience (3)
- PSYC 5562 Neural Mechanisms of Learning and Memory (3)
- PSYC 5567 Neural Substrates of Psychiatric Disorders (3)

For the Biological Psychology concentration, the Advanced Culminating Experience requirement is typically satisfied by taking either PSYC 4433 (Experimental Psychology: Biological) or PSYC 4436 (Experimental Psychology: Learning and Motivation).

Students intending to apply to doctoral programs in biopsychology are encouraged to take appropriate coursework in biology, chemistry, and physics.

Industrial and Organizational Psychology Concentration (24 units)
- PSYC 3354 Organizational Psychology (3)
- PSYC 3355 Industrial Psychology (3)
- PSYC 3377 Tests and Measurements (3)
- *Six units chosen from:*
    - PSYC 3360 Cognitive Psychology (3)
    - PSYC 3362 Learning and Motivation (3)
    - PSYC 3363 Biological Psychology (3)
    - PSYC 3364 Perception (3)
- *Three units chosen from:*
    - PSYC 2201 Developmental Psychology (3)
    - PSYC 3357 History and Systems of Psychology (3)
    - PSYC 3385 Personality Psychology (3)
- *A minimum of six units chosen from:*
    - PSYC 3340 Stereotyping, Prejudice, and Discrimination (3)
    - PSYC 4410 Advanced Psychological Statistics (3)
    - PSYC 5540 Work, Retirement, and Leisure (3)
    - PYSC 5582 Diversity, Work, and Family (3)
    - PSYC 5583 Occupational Health Psychology (3)
    - PYSC 5575 Internship (3)
    - PSYC 5953 Independent Study (3)

For the Industrial-Organizational Psychology concentration, the Advanced Culminating Experience requirement is typically satisfied by taking either PSYC 4428 (Advanced Seminar in IO Psychology) or PSYC 4438 (Experimental Psychology: Industrial and Organizational).

Departmental Honors

Students majoring in psychology are eligible to receive honors in psychology at graduation if the following conditions are met:
1. At least one-half of the course work required by the major is completed at this university.
2. At least a 3.5 grade point average in the major.
3. An overall grade point average of 3.25 or better.
4. Completion of the two-semester Honors Program with a grade of "B" (3.0) or better each semester: PSYC 5597 (Honors Seminar), PSYC 5598A (Completion of Thesis).

C. Learning Outcomes Assessment Process

As noted previously, since the prior review period, and upon the completion of the conversion from quarters to semesters, the department has begun implementing its outcome assessment plan. In Fall 2020, the Psychology Department Outcomes Assessment Committee began implementing a seven-year plan to assess our Program Goals and Learning Outcomes (PLOs). This plan entailed identifying, describing, and prioritizing Program Learning Outcomes. Psychology has 8 program goals, each with specific PLOs (see Appendix B). All learning outcomes are expected to have been fully defined and assessed by 2026-27. We are currently in year two of our 7-year outcomes assessment plan.

1. <u>Outcomes Assessment Year 1 (2020-2021)</u>

AY 2020-2021 was the first year we began our assessment process. The University was on the semester system and also the first year of the new curriculum. The undergraduate BA in psychology was closely examined and revised over the course of several years ending in the adoption of a revised major in 2019. This revision to the major was undertaken in part because of our conversion from quarters to semesters in Fall of AY 2020.The revision was also conducted as the department sought to strengthen the scientific underpinnings of the major. Given the psychology department's interest in bolstering the scientific framework of psychology, our discussions, and our work in year 1 (2020-21) focused on thinking carefully about Learning Outcome 2," *Students will understand and be able to apply basic research methods in psychology, including research design, measurement, data analysis, and interpretation." We began by reviewing this outcome and its mapping onto our curriculum.* These were fruitful discussions in which we developed a common understanding of what each outcome was assessing. We also discussed the complexities of assessing these outcomes and strategies for assessment. A focus throughout these meetings was on a long -term interest in assessing learning outcome similarities and differences between transfer students and students who begin their college journey at CSUSB. A second ongoing interest is in the development of assessment methods and protocols to examine learning outcomes longitudinally. This is especially important with Learning Outcome 2 as it assesses the efficacy of the addition of Psychology 2211 to the psychology major and also our departmental commitment to a solid focus on the science of psychology. We did not formally directly assess Psychology 2211 this year because it is the first year it has been taught.

In examining LO 2, we focused on LO 2.1 and LO 2.3. We chose these outcomes as they seemed to be the most straightforward to address in a pandemic year when many faculty and students were stretched thin trying to adapt to an online learning environment. We sought to gather evidence of student learning and we also wanted to

assess our course mapping of this outcome. We targeted a Psychology 3311 (San Bernardino Campus) and a Psychology 2210 (Palm Desert campus) for outcome assessment data collection. Additionally, we wanted to validate our course mapping for this outcome.

>*Goal 2: Research Methods in Psychology -* Students will understand and be able to apply basic research methods in psychology, including research design, measurement, data analysis, and interpretation.
>**Learning Outcome 2.1:** Students will be able to articulate the strengths and limitations of the different research designs used by psychologists. (2211 - introduction, 3311 - development, 443X - mastery)
>**Learning Outcome 2.2:** Students will demonstrate an appreciation of the appropriate use of psychological tests and measurements.
>**Learning Outcome 2.3:**   Students will be able to interpret and evaluate the appropriateness of basic statistical results, distinguish between statistical significance and practical significance, and be able to describe effect size.
>**Learning Outcome 2.4**:   Students will understand how data are collected, analyzed, interpreted, and reported in psychological research.

Outcome assessment data for Learning Outcomes 2.1 and 2.3:

Direct Assessment Evidence for Learning Outcome 2.1:   Data for this outcome was collected via embedded questions in a large Psychology 3311 section in Spring 2021 (N is approximately 113). Note that this data was collected during Covid remote instruction and may be atypical. This course should provide evidence for developmental attainment of learning outcome 2, specifically, 2.1, "Students will be able to articulate the strengths and limitations of the different research designs used by psychologists."

Students in this course should demonstrate, through responses to embedded multiple choice questions, a developmental level mastery of this outcome. As per our curriculum map, learning outcome (LO) is introduced in Psychology 2211. The primary course where LO 2 is developed is Psychology 3311. After completing Psychology 3311, students demonstrate mastery of LO 2 in the advanced labs and seminars Psychology (Psychology 443X). We utilized five questions that examine LO 2.1. The number of students providing responses ranged from 111 to 122. Overall students have attained developmental mastery in all questions using a criterion of 70% correct. Items 1 through 5 have a percentage correct ranging from 83.5% to 97.4%.

Direct Evidence for Learning Outcome 2.3

Data for this outcome was collected via embedded questions in a section of Psychology 2210, Statistics and a section of Psychology 3331, Psychology of Women in Spring 2021. Note that this data was collected during Covid remote instruction and may be atypical. These courses should provide evidence for

developmental attainment of learning outcome 2, specifically, 2.3. Of note, Psychology 2210 is a statistics course and therefore this learning outcome is of central importance, this is where students should learn at an introductory level. Psychology 3331 is Psychology of Women, Psychology 3381 is Social Psychology this outcome should attain mastery in these courses. The data from Psychology 3331 was validated with similar results in Psychology 3382. When we revised our curriculum, we made an effort to reinforce the science of psychology, evidence of buy-in from faculty is seen in the use of embedded questions tapping into Learning Outcome 2 in a "content" course.

.   Items used to assess Learning Outcome 2.3 from a statistics course with pretest/posttest percent correct (Psychology 2210) N = 30, Averaged across all seven items Pretest: 1.3/7 (Median 1). Post test: 2.5/7 (Median 2)

Items used to assess Learning Outcome 2.3 from a Psychology of Women course (Psychology 3331 N = 83   Validated in Psychology 3382, Social Psychology, students in the course had a similar accuracy rate, (N =139).
Approximately 40% of students got all 3 correct (exceeds expectations); around 44% got 2 correct (meets expectations); and around 16% got 1 or 0 correct (below expectations).

2. **Outcomes Assessment Year 2 (2021-2022)**

For the 2021-2022 academic year, the selected PLO to be defined and will be assessing PLO 1, Psychology Knowledge.

Learning Outcome 1.1: Students will be able to describe psychology as a science whose primary objectives are to describe, understand, predict, and control behavior and mental processes.
Learning Outcome 1.2: Students will demonstrate an understanding of and knowledge of relevant theory and research in the general domains of (1) learning and cognition, (2) individual differences, psychometrics, personality, and social processes, including those related to sociocultural and international dimensions, (3) biological bases of behavior and mental processes, including physiology, sensation, perception, motivation, and emotion, and (4) and developmental changes in behavior and mental processes across the life span.
Learning Outcome 1.3: Students will be able to explain the major perspectives of psychology (e.g., behavioral, biological, cognitive, developmental, evolutionary, humanistic, psychodynamic, and sociocultural), to compare and contrast these perspectives, and to describe their advantages and limitations.
Learning Outcome 1.4: Students will demonstrate knowledge of the history of psychology, including the evolution of research methods in psychology, its theoretical conflicts, and its sociocultural contexts, and will understand the range of viewpoints informing the persistent questions and enduring conflicts in psychology, such as (1) the interaction of heredity and environment, (2) variability and continuity of behavior and mental processes within and across species, (3) subjective versus

objective perspectives, (4) the interaction of mind and body, and (5) free will versus determinism.

Learning Outcome 1.5: Students will be able to use the concepts, language, and major theories of the discipline to account for psychological phenomena, as evidenced by the ability to describe behavior and mental processes empirically, including the use of operational definitions, to identify antecedents and consequences of behavior and mental processes, and to use theory to explain and predict behavior and mental processes.

The following measures, data, and other metrics will be used to assess PLO 1.
1) Student grades and performance in coursework requested from the Office of Institutional Research (IR) and the IR dashboard data page
2) Exit survey - Questions about graduate school, employment, and other outcomes in the IR exit survey will be used to assess learning (this will be done at the end of the year, when the survey data is available to departments).
3) Number of student research projects, presentations, and grants
4) Number of students served (majors and non-majors)
5) DFW outcomes for classes will be examined, with an emphasis on bottleneck courses or courses where students historically struggle

We will also continue evaluation of PLO 2 (closing loop for AY 2020-2021) through evaluation of grades in research methods courses, student research projects, student research communication, and results from the exit survey.

IV. Faculty Engagement

The 25 tenure-track faculty in the Department engage in a diverse set of research activities. Virtually all of these activities provide opportunities for student involvement and training. **Appendix D** lists the current tenure-track faculty in the Psychology Department along with a brief description of each faculty member's research program.

The Department's faculty have a very good record of academic productivity, especially considering their significant teaching loads. Most faculty members have ongoing research projects that often include undergraduate and graduate students. The Department's members are active in participation in professional associations on the national, state, and local levels. Many of our faculty members also provide consultation and other services in their specialty areas to the community beyond the university.

Table 6 and **Appendix E** report, respectively, faculty publications/presentations and faculty external grants funded during the period covered by this self-study. Psychology faculty have been particularly successful in obtaining external funding and this has been critical to creating mentorship and training opportunities for students as well as financial support for students. While most Department grants have a strong student component, one grant in particular has been important sources of training and support for students from underrepresented groups. The CSUSB **U-RISE** (Undergraduate Research Training Initiative for Student Enhancement) program is a grant-based honors program funded

by the National Institute of Health to Dr. Sanders McDougall, Professor of Psychology and Dr. Cynthia Crawford, Professor of Psychology. It provides an excellent research opportunity for minority students seeking a Ph.D. in a health-related field. Students selected for the U-RISE program will receive a stipend of over $1,100 per month while working with a CSUSB faculty researcher, travel money for conferences, a tuition waiver that will cover approximately 50% of tuition expenses, and summer placement in a research laboratory at a major university.

Psychology faculty members have won numerous College and University awards during this self-study period. In December 2020, Dr. Cynthia Crawford won the Wang Family Excellence Award in the Outstanding Faculty Innovator in Student Success. This recognition acknowledges her exemplary achievements and contributions to the California State University System. This award is the most prestigious award in the CSU system and is granted to faculty that display extraordinary commitment and dedication and have distinguished themselves in their academic disciplines or university assignments. In addition, Dr. Kelly Campbell won the highest teaching honor at the University – the Golden Apple Award in Spring 2021. Dr. Jacob Jones won the College's Outstanding Junior Faculty award in Spring 2021. Dr. Stacy Forcino won the College's award for Outstanding Faculty in Instructionally Related Activities in Spring 2021. Lastly, Dr. Donna Garcia won the College's award for Outstanding Faculty in Service to the College in Spring 2021.

Table 6: Faculty Publications and Presentations (Fall 2020 to Present)		
Publications	**Number of Publications**	**Number of Publications** involving at least one student coauthor
Peer-Reviewed Journal Articles	28	13 (46.4%)
Books	2	0 (0%)
Book Chapters	4	1 (25%)
Publication Total	34	14 (41.1%)

V. Department Resources

A. Budget

Historically, the Department's budget was allocated by the Dean from College funds. Prior to 2020-2021, it had been the College's practice to decentralize budgets; accordingly, we typically began the fiscal year with several allocations from the College (e.g., Operating and Expense, Graduate and Undergraduate Student Assistant Monies, and funds to pay part-time faculty and teaching associates). Coinciding with the budgetary impacts associated with COVID-19, academic departments were not granted budgets in 2020-2021. Instead, the College had a centralized budget, and the department lost all pre-existing rollover. As of Fall 2021, the department did not receive an allocation from the College for the 2021-2022 year. Faculty professional development funds (PDF) from 2020-2021 were rolled over, but no other departmental monies were returned. The loss of autonomy in budgetary matters, and, in particular, the loss of rollover funds, is of significant concern and could create adverse consequences for the Department.

B. Space

The Psychology Department has concerns with regard to faculty office and lab space. Currently, we have faculty offices available to support this year's potential hires, but this is in part due to two unexpected openings of offices previously held by senior faculty and the re-purpose of an extra office space previously used by the former associate chair's student assistant. As our faculty size grows to meet the demands of our enrollment, we will have no other spaces available. Also, with the split of the child development department, Psychology lost one research lab space that was used by a former biopsychology faculty and faculty office space. The Department has no lab space to offer newly hired faculty. Generally, in recruiting faculty who are strong in research as well as teaching, it is difficult to be competitive unless an institution can offer them research space with respect to which they have reasonable access.

Appendix A

Enrollment in Psychology Classes at San Bernardino Campus

Enrollment in Psychology Classes (SB Campus)									
	Number of Sections			Number of Students			Average Class Size		
	FT	PT	Total	FT	PT	Total	FT	PT	Mean
1. PSYC-1100									
Fall 2020	0	3	3	0	567	567	-	189	189
Spring 2021	0	3	3	0	335	335	-	111.67	111.67
Fall 2021	0	3	3	0	390	390	-	130	130
	0%	100	100.00%	0%	100%	100.00%			
2. PSYC-1101									
Fall 2020	0	4	4	0	453	453	-	113.25	113.25
Spring 2021	0	3	3	0	268	268	-	89.33	89.33
Fall 2021	0	3	3	0	482	482	-	120.50	120.50
	100.00%	0.00%	100.00%	0%	100%	100.00%			
3. PSYC-2210									
Fall 2020	2	1	3	183	23	206	91.5	23	68.67
Spring 2021	2	1	3	176	22	198	88	22	66
Fall 2021	2	1	2	183	21	204	68	-	68
	100%	0%	100.00%	100%	0%	100.00%			
3. PSYC-2220									
Fall 2020	1	0	1	196	0	196	196	0	196
Spring 2021	0	1	1	0	179	179	0	179	179
Fall 2021	1	1	2	198	95	293	198	95	146.54
	47.46%	52.54%	100.00%	50.04%	49.96%	100.00%			
3. PSYC-2211									
Fall 2020	1	0	1	202	0	202	202	0	202
Spring 2021	1	0	1	192	0	192	192	0	192
Fall 2021	1	0	1	194	0	194	194	0	194
	47.46%	52.54%	100.00%	50.04%	49.96%	100.00%			

	Number of Sections			Number of Students			Average Class Size		
4. PSYC-3311									
Fall 2020	2	0	2	301	0	301	150.5	0	150.50
Spring 2021	2	0	2	197	0	197	98.5	0	98.5
Fall 2021	1	0	1	194	0	194	194	0	194
	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%			
5. PSYC 3382									
Fall 2020	1	1	2	95	93	188	95	93	94
Spring 2021	1	1	2	80	99	179	80	99	89.5
Fall 2021	2	1	3	187	95	282	93.5	95	94
	57.15%	42.85%	100.00%	55.77%	44.22%	100.00%			
5. PSYC 3390									
Fall 2020	1	2	3	71	208	279	71	104	93
Spring 2021	2	1	3	162	88	250	81	88	83.3
Fall 2021	1	2	3	89	279	368	89	139.5	122.66
	44.44%	55.55%	100.00%	35.89%	64.10%	100.00%			
5. Advanced Seminars									
Fall 2020	2	4	6	42	91	133	21	22.75	22.16
Spring 2021	4	7	11	95	185	280	23.75	26.42	25.45
Fall 2021	1	5	6	29	111	140	29	22.2	23.33
	30.43%	69.56%	100.00%	30%	69.98%	100.00%			
6. Advanced Labs									
Fall 2020	1	0	1	17	0	17	17	0	17
Spring 2021	2	0	2	38	0	38	19	0	19
Fall 2021	1	0	1	16	0	16	16	0	16
	100.0%	0%	100.00%	100.0%	0%	100.00%			
5. PSYC 2201									
Fall 2020	0	2	2	0	291	291	0	145.51	145.5
Spring 2021	0	2	2	0	225	225	0	112.5	112.5
Fall 2021	0	2	2	0	328	328	0	164	164
	0%	100%	100.00%	0%	100.00%	100.00%			

6. PSYC 3324

Fall 2020	0	1	1	0	71	71	0	71	71
Spring 2021	0	1	1	0	39	39	0	39	39
Fall 2021	1	0	1	39	0	39	39	02	39%
	33.33%	66.66%	100.00%	26.17%	73.82%	100.00%			

5. PSYC 3360

Fall 2020	1	0	1	188	0	188	188	0	188
Spring 2021	2	1	3	138	96	234	69	96	78
Fall 2021	2	1	3	51	67	118	25.5	67	39.33
	71.42%	28.57%	100.00%	69.81%	30.18%	100.00%			

6. PSYC 3364

Fall 2020	1	1	2	56	91	147	56	91	73.5
Spring 2021	1	1	2	66	66	132	66	66	66
Fall 2021	1	1	2	29	72	101	29	72	50.5
	50.00%	50.00%	100.00%	39.73%	60.26%	100.00%			

5. PSYC 3359

Fall 2020	0	0	0	0	0	0	0	0	0
Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	0	0	0	0	0	0	0	0	0
	0%	0%	100.00%	0%	0%	100.00%			

6. PSYC 3362

Fall 2020	1	1	2	64	188	252	64	188	126
Spring 2021	0	1	1	0	198	198	0	198	198
Fall 2021	2	1	3	81	98	179	40.5	98	59.66
	50.00%	50.00%	100.00%	23.05%	76.94%	100.00%			

5. PSYC 3363

Fall 2020	0	2	2	0	119	119	0	59.5	59.5
Spring 2021	0	2	2	0	77	77	0	38.5	38.5
Fall 2021	0	2	2	0	121	121	0	121	60.5
	0%	100.0%	100.00%	0%	100%	100.00%			

6. PSYC 3355

Fall 2020	0	2	2	0	142	142	0	71	71
Spring 2021	0	1	1	0	95	95	0	95	95

Fall 2021	0	2	2	0	89	89	0	44.5	44.5
	0%	100.0%	100.00%	0%	100.0%	100.00%			
5. PSYC 3357									
Fall 2020	0	2	2	0	126	126	0	63	63
Spring 2021	0	2	2	0	111	111	0	55.5	55.5
Fall 2021	0	1	1	0	97	97	0	97	97
	0%	100.0%	100.00%	0%	100.0%	100.00%			
6. PSYC 3377									
Fall 2020	0	1	1	0	50	50	0	50	50
Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	0	1	1	0	79	79	0	79	79
	0%	100.0%	100.00%	0%	100.0%	100.00%			
5. PSYC 3386									
Fall 2020	0	2	2	0	162	162	0	81	81
Spring 2021	0	2	2	0	115	115	0	57.5	57.5
Fall 2021	0	2	2	0	113	113	0	56.5	56.5
	0%	100.0%	100.00%	0%	100.0%	100.00%			

Appendix B

Enrollment in Psychology Classes at Palm Desert Campus

Enrollment in Psychology Classes (Palm Desert Campus)								
	Number of Sections			**Number of Students**			**Average Class Size**		
	FT	**PT**	**Total**	**FT**	**PT**	**Total**	**FT**	**PT**	**Mean**
1. PSYC-1100									
Fall 2020	0	1	1	0	107	107	-	107	107
Spring 2021	0	0	0	0	0	0	-	0	0
Fall 2021	0	1	1	0	28	28	-	28	28
	0%	100	100.00%	0%	100%	100.00%			
2. PSYC-1101									
Fall 2020	0	0	0	0	0	0	-	0	0
Spring 2021	0	1	1	0	12	12	-	12	12
Fall 2021	0	1	1	0	47	47	-	47	47
	0%	100%	100.00%	0%	100%	100.00%			
3. PSYC-2210									
Fall 2020	0	0	0	0	0	0	0	0	0
Spring 2021	2	0	2	76	0	76	76	0	76
Fall 2021	0	0	0	0	0	0	0	-	0
	100%	0%	100.00%	100%	0%	100.00%			
4. PSYC-2220									
Fall 2020	0	0	0	0	0	0	0	0	0
Spring 2021	0	1	1	0	43	43	0	43	43
Fall 2021	0	0	0	0	0	0	0	0	0
	0%	100%	100.00%	0%	100%	100.00%			
5. PSYC-2211									
Fall 2020	1	0	1	49	0	49	49	0	49
Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	1	0	1	22	0	22	22	0	22
	100%	0%	100.00%	100%	0%	100.00%			
6. PSYC-3311									
Fall 2020	1	0	1	41	0	41	41	0	41
Spring 2021	1	0	1	27	0	27	27	0	27
Fall 2021	1	0	1	39	0	39	39	0	39
	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%			
7. PSYC 3382									
Fall 2020	0	0	0	0	0	0	0	0	0
Spring 2021	0	1	1	0	59	59	0	59	59

Fall 2021	0	0	0	0	0	0	0	0	0
	0%	100%	100.00%	0%	100%	100.00%			
8. PSYC 3382									
Fall 2020	0	0	0	0	0	0	0	0	0
Spring 2021	0	1	1	0	59	59	0	59	59
Fall 2021	0	0	0	0	0	0	0	0	0
	0%	100%	100.00%	0%	100%	100.00%			
9. PSYC 3390									
Fall 2020	0	1	1	0	74	74	0	74	74
Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	0	1	1	0	46	46	0	46	46
	0%	100%	100.00%	0%	100%	100.00%			
10. Advanced Seminars									
Fall 2020	1	0	1	16	0	16	16	0	16
Spring 2021	2	0	2	35	0	35	17.5	0	17.5
Fall 2021	1	0	1	15	0	15	15	0	15
	100%	0%	100.00%	100%	0%	100.00%			
11. PSYC 2201									
Fall 2020	0	1	1	0	41	41	0	41	41
Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	0	0	0	0	0	0	0	0	0
	30.46%	69.54%	100.00%	24.88%	75.12%	100.00%			
12. PSYC 3324									
Fall 2020	0	0	0	0	0	0	0	0	0
Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	0	0	0	0	0	0	0	0	0
	30.46%	69.54%	100.00%	24.88%	75.12%	100.00%			
13. PSYC 3360									
Fall 2020	0	0	0	0	0	0	0	0	0
Spring 2021	0	1	1	0	62	62	0	62	62
Fall 2021	0	0	0	0	0	0	0	0	0
	30.46%	69.54%	100.00%	24.88%	75.12%	100.00%			
14. PSYC 3364									
Fall 2020	0	1	1	0	83	83	0	83	83
Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	0	0	0	0	0	0	0	0	0
	30.46%	69.54%	100.00%	24.88%	75.12%	100.00%			
15. PSYC 3359									
Fall 2020	0	0	0	0	0	0	0	0	0

Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	0	0	0	0	0	0	0	0	0
	30.46%	69.54%	100.00%	24.88%	75.12%	100.00%			
16. PSYC 3362									
Fall 2020	1	0	1	58	0	58	58	0	58
Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	1	0	1	13	0	13	13	0	13
	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%			
17. PSYC 3363									
Fall 2020	0	0	0	0	0	0	0	0	0
Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%			
18. PSYC 3355									
Fall 2020	1	0	1	22	0	22	22	0	22
Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	1	0	1	10	0	10	10	0	10
	30.46%	69.54%	100.00%	24.88%	75.12%	100.00%			
19. PSYC 3357									
Fall 2020	0	0	0	0	0	0	0	0	0
Spring 2021	1	0	1	31	0	31	31	0	31
Fall 2021	0	0	0	0	0	0	0	0	0
	30.46%	69.54%	100.00%	24.88%	75.12%	100.00%			
20. PSYC 3377									
Fall 2020	0	1	1	0	9	9	0	9	9
Spring 2021	0	0	0	0	0	0	0	0	0
Fall 2021	0	0	0	0	0	0	0	0	0
	0%	100%	100.00%	0%	100%	100.00%			
21. PSYC 3386									
Fall 2020	0	0	0	0	0	0	0	0	0
Spring 2021	0	1	1	0	66	66	0	66	66
Fall 2021	0	0	0	0	0	0	0	0	0
	0%	100%	100.00%	0%	100%	100.00%			

Appendix C

Goals and Program Learning Outcomes for Psychology Majors

Goal 1. Psychology Knowledge Base

Students will acquire knowledge of the major concepts, empirical findings, theoretical perspectives, and historical trends in psychology.

Learning Outcome 1.1: Students will be able to describe psychology as a science whose primary objectives are to describe, understand, predict, and control behavior and mental processes.

Learning Outcome 1.2: Students will demonstrate an understanding of and knowledge of relevant theory and research in the general domains of (1) learning and cognition, (2) individual differences, psychometrics, personality, and social processes, including those related to sociocultural and international dimensions, (3) biological bases of behavior and mental processes, including physiology, sensation, perception, motivation, and emotion, and (4) and developmental changes in behavior and mental processes across the life span.

Learning Outcome 1.3: Students will be able to explain the major perspectives of psychology (e.g., behavioral, biological, cognitive, developmental, evolutionary, humanistic, psychodynamic, and sociocultural), to compare and contrast these perspectives, and to describe their advantages and limitations.

Learning Outcome 1.4: Students will demonstrate knowledge of the history of psychology, including the evolution of research methods in psychology, its theoretical conflicts, and its sociocultural contexts, and will understand the range of viewpoints informing the persistent questions and enduring conflicts in psychology, such as (1) the interaction of heredity and environment, (2) variability and continuity of behavior and mental processes within and across species, (3) subjective versus objective perspectives, (4) the interaction of mind and body, and (5) free will versus determinism.

Learning Outcome 1.5: Students will be able to use the concepts, language, and major theories of the discipline to account for psychological phenomena, as evidenced by the ability to describe behavior and mental processes empirically, including the use of operational definitions, to identify antecedents and consequences of behavior and mental processes, and to use theory to explain and predict behavior and mental processes.

Goal 2: Research Methods in Psychology

Students will understand and be able to apply basic research methods in psychology, including research design, measurement, data analysis, and interpretation.

Learning Outcome 2.1: Students will understand and be able to explain the different research methods, will know how different research designs address different types of

questions and hypotheses, be able to distinguish research designs that permit causal inference, and be able to articulate the strengths and limitations of the different research designs used by psychologists.

Learning Outcome 2.2: Students will be able to evaluate the appropriate use of psychological tests and measurements, will understand the role that operational definitions of variables play in the science of psychology, and will understand the meaning of internal and external validity.

Learning Outcome 2.3: Students will be able to interpret and evaluate the appropriateness of basic statistical results, distinguish between statistical significance and practical significance, and be able to describe effect size and confidence intervals as reported in psychological research.

Learning Outcome 2.4: Students will understand how data are collected, analyzed, interpreted, and reported in psychological research.

Goal 3: Application of Psychological Principles

Students will be able to apply psychological principles in solving problems in different sub-disciplines within psychology, as well as applying these principles to personal, social, and organizational issues.

Learning Outcome 3.1: Students will be able to identify appropriate applications of psychology in solving problems associated with different sub-disciplines of psychology, including interventions in clinical, counseling, educational, industrial/organizational, community, and other settings.

Learning Outcome 3.2: Students will be able articulate how psychological principles can be used to explain social issues and inform public policy.

Goal 4.: Critical Thinking Skills in Psychology

Students will respect and use critical and creative thinking, skeptical inquiry, and, when applicable, the scientific approach to solve problems related to behavior and mental processes.

Learning Outcome 4.1: Students will engage in critical thinking by identifying and evaluating the source, context, and credibility of information, differentiating empirical evidence from speculation, and recognizing and defending against common fallacies in thinking.

Learning Outcome 4.2: Students will demonstrate an attitude of critical thinking that includes persistence, open-mindedness, tolerance for ambiguity, and intellectual engagement.

Learning Outcome 4.3: Students will have the ability to recognize, develop, defend, and criticize arguments and other persuasive appeals, and will be able to explain their ideas clearly and objectively.

Learning Outcome 4.4: Students will have the ability to support conclusions with reasons and evidence, to weigh support for conclusions to determine how well reasons support those conclusions, to identify weak, contradictory, and inappropriate assertions, and be able to make appropriate generalizations based on empirical findings.

Goal 5: Information and Technological Literacy

Students will learn how to use information and technology for research and professional activities including the identification and evaluation of scholarly material, data analyses, written reports, presentations, and communications.

Learning Outcome 5.1: Students will be able to locate and use online databases and sources to gather and evaluate scholarly material, and will understand the differences between primary versus secondary sources, empirical versus non-empirical sources, and peer-reviewed versus non peer-reviewed sources.

Learning Outcome 5.2: Students will be able to use the American Psychological Association guidelines to create and interpret written reports, statistical analyses, tables, and graphs.

Learning Outcome 5.3: Students will use information and technology ethically and responsibly, which includes having an understanding of and avoiding plagiarism, citing correctly from a variety of sources, avoiding the distortion of statistical results, and honoring copyright codes.

Learning Outcome 5.4: Students will know how to use technology for safe and effective communications and will be able to convey information clearly, appropriately, and in a variety of formats and contexts (e.g., essays, email correspondence, technical papers, formal and informal communications).

Goal 6: Values in Psychology

Students will understand and apply high ethical standards across academic and professional settings.

Learning Outcome 6.1: Students will behave in accordance with the professional and ethical standards of California State University, San Bernardino and the Department of Psychology.

Learning Outcome 6.2: Students will behave in accordance with APA standards covering all aspects of research activity including the ethical treatment of human and nonhuman subjects in study design, data collection, and the presentation of research findings.

Learning Outcome 6.3: Students will recognize that ethically complex situations can develop in the application of psychological principles.

Goal 7. Career Planning and Development

Students will emerge from the Psychology major with realistic ideas about how to implement their knowledge, skills, and values in occupational pursuits in a variety of settings.

Learning Outcome 7.1: Students will apply knowledge of psychology (e.g., decision strategies, life span processes, psychological assessment, types of careers) to formulate their career path, post-baccalaureate education, or both.

Learning Outcome 7.2: Students will identify preferred post-baccalaureate plans based on accurate self-assessment of abilities, achievement, motivation, and work habits, and will develop skills and experiences to help them achieve these goals.

Learning Outcome 7.3: Students will understand the importance of lifelong learning and personal flexibility to sustain personal and professional development as the nature of work evolves.

Goal 8. Interpersonal skills

Students will develop their interpersonal skills so that they can participate effectively in social interactions.

Learning Outcome 8.1: Students will work effectively and cooperatively in social settings (e.g., managing conflicts ethically, integrating diverse viewpoints).

Learning Outcome 8.2: Students will be able to identify their personal and professional values, demonstrate awareness of their feelings, emotions, motives, and attitudes based on psychological principles, and to evaluate their own thinking (i.e., metacognition).

Learning Outcome 8.3: Students will demonstrate effective interpersonal communication skills by using active listening, applying psychological concepts and theory to understand social interactions, adapting communication styles to accommodate diverse audiences, and providing constructive feedback to colleagues.

Goal 9. Diversity

Students will develop an appreciation and respect for individual uniqueness and diversity and individual differences in human behavior.

Learning Outcome 9.1: Students will demonstrate an understanding and sensitivity to individual differences, including an ability to interact effectively with people from diverse backgrounds and cultures.

Learning Outcome 9.2: Students will recognize how the diversity of individual differences shape research questions, research design, data collection, data analysis, data interpretation, and societal use of research.

Learning Outcome 9.3: Students will understand the nature and causes of prejudice and discrimination, including the societal impacts of privilege, power, and oppression on individual outcomes.

Learning Outcome 9.4: Students will demonstrate an understanding of applications of psychology to contemporary societal policy issues such as violence, mental illness, homelessness, or disabilities.

Goal 10. Commitment to learning

Students will be committed to life-long learning.

Learning Outcome 10.1: Students will demonstrate curiosity about behavior and develop skills for studying its causes.

Learning Outcome 10.2: Students will participate in activities that foster intellectual growth.

Learning Outcome 10.3: Students will recognize that psychological knowledge evolves and will have the desire to seek out empirically based information to apply to personal and professional contexts.

Appendix D

<u>Psychology Department Faculty and Research Programs</u>

Mark D. Agars
Professor
Pennsylvania State University
Industrial/Organizational Psychology

Social-cognitive and contextual approaches to the psychology of the workplace; Gender in the workplace and diversity management; The work and family interface; Challenges faced by low-wage workers and their families; Workplace creativity and innovation.

Dennis Amodeo
Associate Professor
University of Illinois at Chicago
Psychology, Behavioral Neuroscience

Neural mechanisms governing the ability to learn and behaviorally adapt to changing environmental conditions. Neural circuitry responsible for the behavioral inflexibility present in neuropsychiatric disorders such as autism and schizophrenia.

Leslie Amodeo
Assistant Professor
University of Illinois at Chicago
Psychology, Behavioral Neuroscience

Neurocognitive aspects of adolescent development and how drugs of abuse, such as alcohol and psychostimulants, can manipulate that neuro-maturational trajectory. Additionally, the neural circuitry underlying how we learn and make decisions using a rodent model.

Manijeh Badiee
Assistant Professor
University of Nebraska-Lincoln
Counseling Psychology

Women's empowerment and activism; Community-based mixed methods research; Empowerment of LGBTQI individuals; Multicultural issues in mental health treatment; Relational approaches to psychotherapy; Stereotypes of Middle Eastern individuals and their impact; Sexual assault prevention.

Brittany Bloodhart
Assistant Professor
Penn State University
Social Psychology and Women's Studies

How social processes motivate engagement in or denial of social and environmental injustices, and how attitudes about the environment are related to attitudes about sexism, racism, and other forms of prejudice. Her current work is looking at the role of moral values, moral emotions (e.g., empathy), social identity, and system justifications in attitudes toward sustainable and pro-environmental behaviors, and on several intervention programs to increase gender equity in academia.

Kelly Campbell
Professor
University of Georgia
Human Development and Family Studies

Interpersonal Relationships; Interpersonal chemistry in friendships and romantic relationships; Impact of being 'in love' on performance across domains (e.g., academics, athletics, creativity); Couple rituals, infidelity, and the meaning of marriage; Health disparities related to race, income, and sexual orientation.

David Chavez
Professor
University of California, Berkeley
Child Development; Clinical Counseling Psychology

Community-Based Participatory Research; Disenfranchised populations including ethnicity, social class, and sexual orientation and mental health; Developmental psychopathology; Violence in families and children.

John Clapper
Professor
Stanford University
Cognitive Psychology

Categories and concepts; Unsupervised learning; Attention and memory organization; Computational models of human learning.

Cynthia Crawford
Professor
University of Kentucky
Biopsychology

Animal and human models of drug addiction; Second messenger system pharmacology; Developmental neuropsychopharmacology.

Isamel Diaz
Associate Professor
Texas A&M University

Industrial/Organizational Psychology

Occupational Health Psychology (OHP) Leader and supervisor positive treatment and mistreatment Communication technology attitudes, usage, and employee outcomes Employee attitudes and well-being Contextual performance Incivility and mistreatment at work.

Stacy Forcino
Assistant Professor
Idaho State University
Clinical Psychology

Using behaviorally-based principles and practices to solve problems of childhood and the treatment of psychological disorders of childhood (e.g., Oppositional Defiant Disorder, Attention-Deficit/Hyperactivity Disorder, Sleep Disorders, Enuresis/Encopresis), as well as effective solutions to more common problems of childhood (e.g., noncompliance, bedtime problems, and difficulty with toilet training). Also, how to best train parents and factors that affect treatment adherence.

Donna Garcia
Professor
University of Kansas
Social Psychology

Impact of social inequality on psycho-social functioning; Social pressures that discourage people from challenging discrimination; Self-fulfilling role that awareness of their "social value" plays in people's outcomes.

Janelle Gilbert
Professor
George Mason University
Industrial/Organizational Psychology

Organizational processes; climate and culture; group dynamics and composition; work attitudes; leadership development; outcomes assessment; work and family.

Cari Goetz
Associate Professor of Psychology
University of Texas at Austin
Social and Evolutionary Psychology

Human Mating, including romantic relationships and sexual behavior and psychology; Intra-sexual competition among females, particularly examining the individual differences and contexts that predict indirect aggression among women.

Pablo Gomez
Associate Professor
Northwestern University
Cognitive Psychology

The measurement of cognitive processing, visual word recognition (letter and word processing in reading), sensory and response processes in decision making, and tactile attention.

Christina M. Hassija
Professor of Psychology
University of Wyoming
Clinical Psychology

Trauma and associated mental health conditions; Risk and resilience factors in PTSD following interpersonal trauma; Psychological and emotional consequences of sexual assault and intimate partner violence; Dissemination of evidence-based psychotherapies for PTSD via telemedicine.

Jacob Jones
Associate Professor
University of Florida
Clinical Psychology

Underlying neural mechanisms of neuropsychiatric symptoms in neurodegenerative disorders, such as Parkinson's disease. Utilization of structural neuroimaging methods and/or longitudinal statistical modeling to examine predictors of cognitive impairment, apathy and depression. One line of research is testing the hypothesis that disruptions in the microbiome (gut-brain health) contribute to cognitive impairment and white matter changes in Parkinson's disease. A second line of research focuses on relating neuropsychiatric symptoms to meaningful outcomes such as diagnostic markers of cognitive impairment and quality of life.

Hideya Koshino
Professor
University of Kansas
Cognitive Psychology

Cognitive psychology and cognitive neuroscience approaches to the study of working memory; Relations between working memory and attention; Use of imaging technology (e.g., fMRI) in studying brain functioning; The Default mode network and working memory network .

Miranda McIntyre
Assistant Professor
Purdue University

Social Psychology

Personality and individual differences, particularly those that involve interests; How people attend and respond to their social and non-social environments; How individuals' orientations toward their environments guide academic and career choices, with an emphasis on understanding participation and representation in science, technology, engineering, and mathematics (STEM) domains; Topics include social-cognitive processes, person-environment fit, gender differences and diversity, interpersonal perceptions, psychometrics, and personality measurement.

Janet Kottke
Professor
Iowa State University
Industrial and Organizational Psychology

Diversity and Diversity and diversity management; Models of organizational change; Business ethics; Personnel selection; Measurement; Diversity management.

Michael Lewin
Professor
Oklahoma State University
Clinical Psychology

Early maladaptive schemas and Cognitive vulnerability; Schema therapy; Cognitive behavioral therapy; Anxiety.

Jason F. Reimer
Professor
University of Nebraska - Lincoln
Cognitive Development

Language and memory development; Visual word recognition in children and adults; Reading acquisition; Development of cognitive inhibition.

Maria Santos
Assistant Professor
University of Wisconsin-Milwaukee
Clinical Psychology

Improving mental health services for Latinos and their families; Conducting psychosocial treatment research on an empirically-supported treatment for depression, Behavioral Activation (BA), developed for Latinos; Identifying factors that moderate the relationship between treatment and outcome and examined how BA works to achieve good outcomes;

Kenneth S. Shultz
Professor
Wayne State University
Industrial/Organizational Psychology

Psychological measurement issues applied to the world of work; Aging and work; Mid and late career issues; Transition to retirement; Bridge employment.

Jodie Ullman
Professor
University of California, Los Angeles
Quantitative Psychology

Multivariate statistics; Measurement and psychometrics; Applied multivariate statistical analysis with emphasis on structural equation modeling; Research design and methodology; Longitudinal patterns of substance use.

Appendix D Faculty External Grants for Current Self-Study Cycle (Fall 2020-Present)		
Principal Investigator	**Grant**	**Award Date**
Mark Agars	First 5 QRIS/QSSB Children & Families Commission of San Bernardino County	7/1/2020, 7/1/2021
	Tutoring & Assessment 6/21 San Bernardino County Superintendent of Schools	9/1/2020
	SBCSS QSSB/QRIS 20-21 San Bernardino County Superintendent of Schools	9/1/2020
	Science of Parenting Classes Making Hope Happen Foundation	10/1/2020, 8/1/2021
	BEFAST 20-21 San Bernardino County Superintendent of Schools	12/1/2020, 8/1/2021
	Yucaipa Science of Parenting Yucaipa Unified School District	4/1/2020
	ERS & CLASS Assessment Riverside County Superintendent of Schools	9/1/2021
	Students Deserve Success Tutoring Program San Bernardino County Superintendent of Schools	9/1/2021
	Workforce Development San Bernardino County Superintendent of Schools	10/1/2021
Brittany Bloodhart	Leveraging Field- Campaign Networks Colorado State University - National Science Foundation	5/1/2021
	Promoting Equity and Inclusion National Science Foundation	8/1/2021
Cynthia Crawford	CSUSB/CDU Smoke and Vape Free Scholars Initiative Tobacco Related Disease Research Program	12/14/2021
Christina Hassija	STEM en Familia	9/1/2021

	National Science Foundation	
Donna Garcia Cari Goetz	Advance DEPTH STEM National Science Foundation	1/1/2021
Pablo Gomez	Interaction of Sensory and Response National Science Foundation	8/1/2021
Jacob Jones	Microbiome Composition Parkinson's Disease National Institutes of Health	5/1/2021
Sanders McDougall Cynthia Crawford	U-RISE at CSUSB National Institutes of Health	3/1/2021
Maria Santos	Optimizing Engagement National Institutes of Health	3/1/2021
Jodie Ullman	A Mixed Method Study on Ethnicity-Specific Physical Pain Among Older Women The University Corporation	10/1/2021

CSUSB Psychology Program

Thank you so much for the opportunity to hear about the good work you are doing to serve our growing region. It was an honor to get to know your team, students, and partner teams on campus.

Below you will find my review summary following the template provided to me. Please let me know if there is any additional information I can provide.

It is an honor to serve beside you as partner in education for our region.

Education is freedom.
-Paulo Freire

Nathan Iverson, Ph.D.
Program Director
Industrial-Organizational Psychology
College of Behavioral and Social Sciences
Virtual Zoom Office Link
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California Baptist University, 8432 Magnolia Ave, Riverside, CA 92504

CSUSB Program Review Summary

I. Program Learning Outcomes and Curriculum
1. Psychology Knowledge Base
   i. Strong foundation across fields offered to students
2. Research Methods in Psychology
   i. Impressive research sequence
3. Application
   i. Given the SES of the region, this could be an area for growth to engage the community directly around the school in social services while a student.
4. Critical Thinking
   i. Impressive spectrum and intentionality in hiring faculty from diverse academic backgrounds
5. Information and Technology Literacy
   i. NA
6. Values in Psychology
   i. Strong reflection of inclusive APA values and language.
7. Career Planning
   i. Would recommend tracking placement rate of students in relevant work.
8. Interpersonal Skills
   i. Students were well-spoken
9. Diversity
   i. CSUSB is leader of student diversity in the region.
10. Commitment to life-long learning
    i. This example is modeled by faculty to be life-long learners.

II. Evidence of Student Learning
1.

III. Stakeholder Views of Program Effectiveness
1. Strengths
   i. Localized PAC advising
2. Areas for Growth
   i. Freshman I spoke with had not heard of PACC.
   ii. First – Time Freshman retention and 4 year graduation rate.
   iii. Faculty / Student Ratio
   iv. Some challenges in the student system view in the advising process.
      1. Consider listing name of advisors for students to schedule appoints with similar as one would book a therapy appointment.
   v. Offer scheduling of Psychology events on campus during the day for those who are not on campus in the evenings.
   vi. Expand email and call / SMS campaign to re-enroll student who owe a balance.

       vii.   Move to centralized University advising with program specific staff.
- IV.   Faculty Engagement
    1. Strengths
        i. Internal Grants for both Research and Teaching.
        ii. Faculty use language to describe CSUSB and the program saying *this is my forever home*, *I love our students* and *I love it here*. Faculty have a continuous attitude around their own personal growth and learning. They do not see teaching and research as exclusive to one another but rather integrate the two together. Faculty describe the department as welcoming. Strong Faculty guidance and mentorship through the promotion and tenure process.
        iii. Students often presenting at conferences with faculty.
    2. Areas for Growth
        i. Q2S changes were challenging from a change management perspective.
        ii. Break down DFW rates by professor to include in performance evaluation conversations. Use DFW data as a tool to help guide retention strategies and resources. Stratify DFW rates by demographics.
        iii. Expand concentration tracks to reflect diverse faculty interests.
    3. Advising
        i. Impressive Honors Program and Faculty Engagement in this. I have had personal experience advising alumni of this program and can attest to its rigor.
        ii. Strong Faculty involvement in faculty advising for both academic and career outcomes. Faculty shared that this has been an area of growth.
        iii. Any means of expanding this program to other universities or programs would be incredible.
        iv. Implement program specific exit surveys to build internal data collection strategies.
- V.   Program Resources
    1. More faculty recommended
        i. Expand adjunct pool to intentionally include alumni and PoC to reflect majority Latina student demographics.
    2. Strong relationship between advising and program.
    3. Strong Program Enrollment despite falling national enrollments.
    4. Look into raising entrance requirements for first-year students to raise graduation and retention rates.
    5. Build public facing Instructional Research Dashboard. Look into grants for raising Latino retention rates.
- VI.   Overall Comments
    1. In summary, the retention to graduation rates both at the 4 and 6 year levels would be the #1 area for growth. Significant positive change has occurred in this area. CSUSB does serve a unique and under-served community. Solutions for retention may require internal research strategies and initiatives perhaps collaboratively with faculty and students. A vision for CSUSB being a national

model for low SES student retention may be compelling for faculty, students, and donors.
2. Impressive retention rates among transfer students. Perhaps research what lessons these students applied which can be generalized to the non-transfer population.

2021-22 BA Psychology Committee Review Report
Reviewer:
Academic Program Review/Self-Study Review Committee

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:

In general, the Department of Psychology has assembled a most impressive, scaffolding system, comprehensive yet easily understood and flexible assessment strategy. There is a fine blend of Material Knowledge (including labs) and Theory alongside extensive manners by which both oral and written communications by the students are enhanced and through which the level and manner of feedback presented by the faculty not only allow for but encourage subject mastery. In the Assessment Processes, the Psychology Department applies a focused, yet flexible (to allow for evolution) as they clearly strive for continual instructional improvement to meet the needs of their students. However, what could have been made clearer in the self-study, were the materials that comprised the (student) Exit Survey as well as the direct methodology/methodologies in Closing the Loop. While no doubt the Psychology Department has evolved these components, the Self-Study would benefit from more details in these areas.

All Learning Program Learning Outcomes are clearly listed as is all relevant, corresponding PLO material. However, the information on the Institutional Learning Outcomes, including any alignment, is absent from the self-study report.

The Assessment Plans set forth by the Department of Psychology for its Academic Programs is sensible. The Assessment Plans are quite cogent and most relevant to the academic program and is clearly student centric and focused on an intent, demonstrated by the entirety of the Psychology Department, to have student success and continual improvement at its core.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:

The Psychology Department has clearly identified its strengths and areas of improvement over the past 2 academic years, which are the first 2 years since implementing its new post-Q2S Assessment Program, though here too, the noted exception above.

The future assessment plans of the Psychology Department are sound and, in recognition of the evolving mode of instructional delivery, they clearly recognize the growing online environment.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:

Indeed, the primary feature of the needs of Psychology as a department across all of their programs is that they need more faculty, both tenure track as well as lecturers. If the number of faculty are

increased, the level of direct, outside of the classroom faculty-student interaction could occur. As all of the evidence has clearly illustrated, one of the greatest means to increase graduation rates is to have more faculty-student interactions outside of the classroom.

We would like to remind the program—In fact, we are reminding every program/department in the current review cycle—that by the time the program is reviewed in the next cycle, they are expected to have implemented a full-fledged assessment plan, have conducted sufficient assessment of the learning outcomes of the program with multi-year data, and have engaged in close-the-loop activities.

For the next 5-year review, the APRC recommends a more detailed illustration on how the Department specifically utilizes the Outcomes and the methodology incorporated Closing the Loop strategies.

2021-22 BA Psychology College Dean Report
Reviewer:
College Dean

What areas of program strength and potential improvement have emerged in the self-study and external review reports?:
Program Strengths:

- Teacher-scholar orientation: On the whole, Department of Psychology faculty members are among the campus' most productive scholars. This is attributable to intentional recruitment, clear RPT expectations regarding teaching and scholarship, and an overall department culture that emphasizes excellence in teaching and research.
- Diversity of Programs: The department houses three distinct undergraduate programs in Psychology and three masters degree programs spanning core disciplinary areas aimed at preparing students for entry-level careers in Psychology and related fields as well as graduate studies in Psychology.
- Psychology Honors Program: Specific to majors in Psychology, students accepted into the Psychology Honors Program have additional access to research opportunities under the direct supervision of tenure-line department faculty. The program provides exceptional training for students interested in post-baccalaureate studies in Psychology.
- Culture of Assessment: In response to the previous external review that noted a sound departmental assessment infrastructure and the opportunity offered by Q2S, department leadership and faculty have implemented a more robust outcome assessment plan and have used/will continue to use collected assessment data to refine PLOs and stress continuous improvement.
- Affiliated Centers & Institutes: Psychology faculty oversee one center and two institutes. Each of these provide exceptional learning and research opportunities for students majoring in Psychology. Moreover, these C&I engage and support our campus and greater community through service.

Potential Areas for Improvement:

- Among the department's greatest challenges is managing growth. Even with the department's bifurcation into a Department of Psychology and a new Department of Child Development, Psychology's enrollment remains greater than any other major area of study on both the San Bernardino and Palm Desert campuses. This places a considerable strain on the department's human and material resources. Psychology is one of the college's three impacted programs. However, the impaction plan has not offered the relief we had hoped for.
- Workload Management: Q2S conversion and the corresponding 4:4 teaching load resulted in increased workload for college faculty. The budgetary pressures associated with COVID-19 further lessened the college's ability to provide meaningful reassigned time for research active faculty which has a disproportionate impact on Psychology faculty members given their relatively high levels of scholarly productivity. The college impaneled a working group to recommend a structured and equitable method to award reassigned time for faculty with a demonstrated scholarly impact.

- Student Advisement: A hallmark of Psychology's support for student success is the PAC which provided localized advising for Psychology's undergraduate students. Given the campus' centralization of advising services, the department may consider shifting the PAC's emphasis from conventional advisement to more holistic approaches for student success.

To what extent have student learning and/or program effectiveness improved as a result of actions by the program during this review cycle?:
As noted in the previous section and reflected in the Psychology self-study, the department empaneled a Psychology Outcomes Assessment Committee in Fall 2020 to collaboratively develop new program goals and learning outcomes. This corresponded with Q2S and was in response to changes in the program's curriculum, faculty expertise, and program identity. The Outcomes Assessment Committee completed its work and the department has now begun implementing the new program assessment plan. While the new plan's implementation is still in its formative stages, it seems apparent that it marks a significant improvement in gauging student learning, overall program effectiveness, and a focus on responsive and continuous program advancement.

What constructive feedback can be provided to the program faculty that will assist them in developing their next Plan of Action?:

- Continue to emphasize and foster a culture of assessment in the department that enlists colleagues from the diverse subdisciplines housed in Psychology at CSUSB.
- Contemplate the future role of the PAC as a vehicle for student success, particularly in light of the centralization of advisement.
- Work with campus partners to address courses with persistently high DFW rates and consider course redesign and additional student support where appropriate.
- Emphasize diversity, equity, and inclusion in curriculum, student success, and faculty recruitment and success.

Providing Department:
College of Social and Behavioral Sciences

2021-22 BA Psychology Plan of Action
Proposed Action:

2021-2022 Department of Psychology Action Plan

The Psychology Department has had an opportunity to review and reflect on the external reviewer's report following their visit in February 2021 and their reading of the Department 2020-2022 Self-Study Report. We have also reviewed the University Program Review Committee's and Dean of Social and Behavioral Sciences reports. We would like to thank Dr. Nathan Iverson, Dean Rafik Mohamed, and the Program Review Committee for their constructive feedback and recommendations. Below we list, in turn, each of the recommendations from the external review, the Dean, and/or the Program Review Committee's report and we discuss our plans for following up on these recommendations.

1. Assessing diversity, equity, and inclusion and implementing strategies to close equity gaps and foster a sense of belonging and inclusion.

The department will engage in ongoing assessment and evaluation of equity gaps among first-time freshmen, underrepresented minority, and Pell eligible students. Specifically, the department will assess equity gaps in retention, graduation, and DFWI rates. The department will work with the College of Social and Behavioral Sciences to develop strategies to ensure students have access to sources of instructional support to bolster student success in the classroom. The department will also identify ways to foster a sense of belonging and inclusion through activities and events that enhance faculty and student engagement, provide opportunities for professional development, and encourage interaction among students and alumni.

1. Timeline: These activities will begin in Fall 2022 and take place over the course of the next review period.
2. Responsible persons: Department chair and faculty, Dean
3. Anticipated cost: $5,000 for events
4. Resources needed: Chair and Instructor time

2. Implementation of Assessment Plan for Program Learning Outcomes

Since the prior review period, and upon the completion of the conversion from quarters to semesters (Q2S), the department has begun implementing its outcome assessment plan. In Fall 2020, the Psychology Department Outcomes Assessment Committee began implementing a seven-year plan to assess our Program Learning Outcomes (PLOs). This plan entailed identifying, describing, and prioritizing Program Learning Outcomes. During 2020-21, we identified ways to assess and began evaluation of PLO 2 Research Methods in Psychology. For the 2021-2022 academic year, the selected PLO to be defined and assessed is PLO 1, Psychology Knowledge. All learning outcomes are expected to have been fully defined and assessed by 2026-27. By our next self-study, we are expected to have implemented a full-fledged assessment plan, have conducted sufficient assessment of the learning outcomes of the program with multi-year data, and have engaged in close-the-loop activities.

Administer the department's exit survey annually and document findings in our next self-study report.

1. Timeline: These activities will begin in Fall 2022 and take place over the course of the next review period.
2. Responsible persons: Department chair, Department Outcomes Assessment Coordinator, department faculty
3. Anticipated cost: stipend for department outcomes assessment coordinator provided by the College of Social and Behavioral Sciences
4. Resources needed: Chair and Instructor time

3. Reconceptualize the Peer Advising Center to fit with the University's new centralized advising structure that provides a space for holistic mentoring and fosters community and a sense of belonging among students.

The Peer Advising Center will remain in Psychology. We will support approximately 6 peers through volunteer, course credit, and funded positions. The department will identify a faculty member to support the efforts of our peer advisors and is contemplating using a faculty as an interventionist to provide assistance and mentoring in the PAC. All peer mentors will also coordinate with the University's professional advising to ensure consistency in training. The PAC will be re-designed to also create a student space for student clubs and gatherings to foster a sense of community and belonging.

1. Timeline: These activities will begin in Fall 2022 and take place over the course of the next review period.
2. Responsible persons: Department chair and faculty
3. Anticipated cost: Funds for 6 peer advisors (currently provided through SSI funds via ASUA)
4. Resources needed: Chair and Instructor time

4. Continue hiring diverse tenure-track faculty to adequately serve matriculating students and ensure the quality of the degree.

During the 2021-2022 academic year, Psychology was granted one replacement line to support the replacement of a tenure-line biopsychology faculty and two additional positions to recruit for two full-time lecturers in biopsychology and general psychology (i.e., with preference for expertise in developmental psychology, research methods, and statistics). We have successfully hired one tenure-track faculty at the Associate rank to support our biopsychology program and extended an offer to an additional candidate who would potentially be brought in at the Full Professor rank. Our lecturer searches are concluding and we anticipate hiring up to three potential full-time lecturers (2 in general psychology and one in biopsychology. The department has been granted two additional recruitment lines for 2022-23 in the areas of developmental psychology (with the potential to reach advanced statistics courses) and industrial and organizational psychology. The department will continue to request tenure-line positions to support our growth and ensure timely replacement of retiring faculty to ensure continuity of

programs. We will also seek additional faculty support at our PDC campus to support our current needs and anticipated growth.

1. Timeline: These activities will begin in Fall 2022 and take place over the course of the next review period. Annual recruiting timeline (July-March)
2. Responsible persons: Department chair, search committees, Dean, Provost
3. Anticipated cost: dependent on number of searches approved, negotiated salaries and startup packages
4. Resources needed: tenure track faculty lines, search committee time, recruiting budgets, administration approval for searches

5. Engage in a department discussion about the realistic balance between the need for tenure-track faculty in the classroom and the faculty's engagement in scholarship.

The department will continue to engage in ongoing discussions about the realistic balance between the need for tenure-track faculty in the classroom and the faculty's intrinsic, desired engagement in scholarship. In Fall 2020, the College implemented a universal assigned time policy. Specifically, faculty lost one course release that was granted to all faculty to support professional activity and other opportunities for assigned time became more limited. As part of the quarters to semester conversion process, the university adopted a 4:4 teaching load. As such, faculty have a higher baseline course load than we did in the past. That said, Psychology still continues to have highly productive faculty, many of whom have external grants or significant service roles at the university outside of the department. The department will continue to work to identify ways to support time for faculty research and the College has begun to distribute new forms of assigned time internally to support faculty research development and reward research productivity.

1. Timeline: These activities will begin in Fall 2022 and take place over the course of the next review period.
2. Responsible persons: Department chair and faculty
3. Anticipated cost: To be determined
4. Resources needed: Chair and Instructor time

6. Continue to expand the adjunct pool to include alumni and diverse faculty that are reflective of CSUSB student population.

The Chair and Associate Chair have begun a new initiative to recruit additional part-time instructors with doctoral degrees as adjunct faculty. We have created an open position and advertisement for our part-time lecturer pool that is disseminated locally and nationally.

1. Timeline: These activities are already ongoing and will continue to take place over the course of the next review period.
2. Responsible persons: Department chair, Associate Chair, and faculty
3. Anticipated cost: None
4. Resources needed: Chair, Associate Chair and Instructor time

Providing Department:
Bachelor of Arts in Psychology