

Instructions: The first column below matches key words in TracDat where you will enter the requested information. The second column fully describes the information that the IPBT is requesting. It also represents the information you would see if you pressed the help button (a question mark) by each box in TracDat. You will be able to copy and paste or type in your information into the TracDat boxes. **SAVE OFTEN WHILE ENTERING INFO INTO TRACDAT!!!!** ALWAYS keep a soft copy of your work in your files to ensure that your work is not lost. You will save program review as a pdf through the print option of your browser. This is the document you will send to your Dean and it is the document that will be posted on the De Anza website. If you have questions, please refer to your workshop handout (<http://www.deanza.edu/slo/tracdat.html>) or contact: papemary@fhda.edu.

Section I: Overall program description (including CTE)

Section II: Overall student enrollment and success

Section III: Equity

Section IV: Assessment Cycle

Section V: Resource requests

In TracDat. Limit narrative to 100 words.

	Information Requested	
	Program Description	
	Department Name:	ENVIRONMENTAL STUDIES /SCIENCE
	Program Mission Statement:	The mission of the ES/ESCI Department is to provide students with a diverse offering of classes that meet the transfer needs of students, prepares students for careers in industry, and makes them aware, knowledgeable and strong stewards of the planet and the environment. We engage students in the study of climate change, energy management, resource management, pollution prevention and biodiversity. Our goal is to create and grow awareness and advocacy for protecting the environment and ultimately the health of the ecosystem that support life on earth.
I.A.1	What is the Primary Focus of Your Program?	College Transfer
I.A.2	Choose a Secondary Focus of Your Program.	Career/Technical/Vocational
I.B.1	# Certificates of Achievement Awarded	33
I.B.2	# Certificates of Achievement-Advanced Awarded:	26

I.B.3	# ADTs (Associates Degrees for Transfer) Awarded	0
I.B.4	# AA and/or AS Degrees Awarded:	24
I.B.5.	Trends in # Degrees Awarded	STRONG GROWTH- up 124% from 2018-2019- 83 vs. 37
I.B.6.	Strategies to Increase Awards	For CTE programs, continued outreach on and off campus for our three existing programs. Each of our CTE programs are seeing increased enrollment as well as increases in students declaring our CTE programs as an educational major or focus. The increase in students pursuing these programs will result in increases in student awards over the next few years. The new AS Environmental Science Degree replacing the WST certificate and degree program in Fall 2020 will provide students a transfer option to 4 year colleges that doesn't exist at the present time.
I.C.1	CTE Programs: Review of Perkins Core Indicator and SWP Outcomes Metrics	<p>For the ERM&P2 program, all core indicators are successfully above corresponding negotiated levels per the latest Perkins Core Indicator Report (2019-2020). This has been the case (the Program exceeding all negotiated levels) for at least the previous three years running. The highest levels of success (performance over negotiated levels) are seen in Core Indicators 5a and 5b, Nontraditional Participation and Nontraditional Completion.</p> <p>For the EMBS Program, Most SWP Core indicators- most noticeably technical achievement, enrollment, student awards, and employment are exceeding the negotiated levels. EMBS falls below the negotiated levels in indicators 5a- Non Traditional Participation and 5b Nontraditional Completers. We believe this correlates to expected levels of math expertise and proficiencies that are not met when students enter college but are required to be successful in energy efficiency and sustainable building careers.</p>
I.C.2	CTE Programs: Labor Market Demand and Industry Trends :	For the ERM& P2 program , continued growth is seen in air & water quality, water resources, recycling & waste management, hazardous materials management, land use planning & redevelopment, and climate change mitigation & adaptation, driven by government mandates & economic opportunities, especially at the state level. Trends affect both curriculum (content & course offerings) and enrollment management (number of course sections offered).

		<p><u>Advisory Board Input/Recommendations (ERM&P2 Program):</u> Monitor impending curriculum changes to the ES 50 introductory course and the ES 64 climate change course, as well as the new ERM&P2 lab course (ES 61L). Make adjustments as necessary/warranted.</p> <p><u>The EMBS Program,</u> continues to see strong growth in Energy and Facility Management career opportunities as a result of SB 350-California's Clean Energy and Pollution Reduction Act. SB 350 calls for 5 billion square feet of commercial floor space to achieve low energy usage and high emission reduction levels by 2030 with full implementation of SB 350 continuing through the year 2050. SB 350 will create a large number of career opportunities to meet Zero Net Energy (ZNE) building requirements. Facility Management career demand indicates a 30 to 1 ratio of Facility Management job postings for every 1 qualified candidate. New skills from an emerging clean energy workforce are required to meet the high goals and challenges of achieving high performance building operations in the built environment in California.</p>
I.D.1	Academic Services and Learning Resources: # Faculty Served	N/A
I.D.2	Academic Services and Learning Resources: # Students Served	N/A
I.D.3	Academic Services and Learning Resources: # Staff Served	N/A
I.E.1	Full Time Faculty (FTEF)	ESCI- 5.3; ES-3.6
I.E.2	# Student Employees	0
I.E.3	Full Time Load as a %	ESCI-31%; ES 69.5%
I.E.4	# Staff Employees	1- No change
I.E.5	Changes in Employees/Resources	No Change
	Enrollment	
II.A	Enrollment Trends	Just as elsewhere on campus, the number of class sections scheduled by the ES/ESCI Department has decreased. Enrollment continues to be strong in our ES/ESCI General Education classes and in our 3 CTE programs. Productivity was up in 2018-2019 for both ES and ESCI. ES Productivity was 506 vs. 456; ESCI Productivity was 555 vs. 547.

II.B	Overall Success Rate	<p>Last three years:</p> <p>ESCI- 85%/ 87% / 90%</p> <p>ES- 73% / 75% / 75%</p> <p>Overall Success rates are trending up. ES/ESCI Department Faculty and Staff take a hands on and individual approach with students to remove learning obstacles and differences to allow students to be successful.</p>
II.C	Changes Imposed by Internal/External Regulations	None
Equity		
III.A.	Program Success	<p>The ES/ESCI Department is fortunate to have the 1.5 acre Cheeseman ESA as a living Environmental Laboratory to enhance student learning. The ESA allows all students to learn about nature and ecology in an urban setting without having to deal with transportation that might not be accessible to some students. The ability to hold environmental science/studies lab classes on campus not only increases enrollment but also student success rates. The Cheeseman ESA allows additional faculty, staff and student mentors to participate in individualized guidance and mentorship.</p> <p>For our CTE programs, the ability to access Statewide Strong Workforce and Perkins funding provides leading edge tools and resources allowing students to learn in a lab setting. This differentiates our students by providing real life experiences to supplement classroom education by making available equipment students would use in the workplace.</p>
III.B.	Enrollment Trends	<p>ES/ESCI Enrollment of Targeted Populations is similar to, and tracks that of the College.</p> <p>African American : College- 4%; ES- 4%; ESCI -3%</p> <p>Filipinx: College- 6%; ES 5%; ESCI-5%</p> <p>Latinx: College- 25%; ES-26%; ESCI-20%</p> <p>Pacific Islander: College- 1% ES-1%; ESCI- 0%</p> <p>Enrollment trends in all groups are basically flat to up. Latinx student enrollment has grown from 19.3% in 16-17 to 23.1% in 2018-2019; African American student enrollment from 3.2% in 16-17 to 4% in 18-19.</p>

		The ES/ESCI Department has 10 GE transfer courses which continue to be popular with students regardless of their major. Many of our classes provide hands on participation in an outdoor setting instead of pure lecture in the classroom. Many students find the versatile and creative learning environment desirable while achieving their GE Transfer requirements to 4 year colleges
III.C.	Success, Non-Success and Withdraw Rates	<p>The African American ESCI non-success rate gap tracks that of the college. The ES non-success rate gap is almost double that of ESCI. Withdraw rates in ES classes is 29%- almost 15 % higher than the College or ESCI classes. This could be attributed to EMBS CTE classes requiring higher levels of math proficiency and expertise. This is a common non-success rate trend among all student groups in EMBS- both targeted and non-targeted. Math skills are required and critical to success in Energy Efficiency and Sustainable Building Science careers.</p> <p>One strategy to improve non-success rates with all groups (targeted and non-targeted) would be to hold specific math tutoring sessions to remove the frustration students have mastering basic math skills while attending Environmental Studies and Science classes that require higher levels of proficiency in math. This is a particular challenge in our STEM focused CTE programs.</p>
III.D.	Equity Planning and Support	All faculty will participate in early identification of students struggling in class. They reach out to provide feedback, identify resources the students can avail themselves of, and direct them to our division counselor for additional help.
III.E.	Departmental Equity Planning and Progress	<p>The ES/ESCI department is committed to addressing the equity gap. The departments provide textbooks, computers and dedicated spaces for student to use in the Kirsch Student Resource Center. Instructors have been using the facilities on campus including the Cheeseman ESA - as an alternative to off campus field trips. Faculty and Staff have also been incorporating more hands on lab activities to make material more relevant.</p> <p>Instructors are making off campus field trips, when scheduled, both optional and at no cost to students including trips to the Monterey Bay Aquarium and the Marine Mammal Center. The departments provide textbooks, computers and dedicated spaces for student to use in the Kirsch Student Resource Center. Instructors have been using the facilities on campus including the Cheeseman ESA - as an alternative to off campus field trips. They have also been incorporating more hands on lab activities to make material more relevant.</p> <p>Instructors are making off campus field trips, when scheduled, both optional and at no cost to students including trips to the Monterey Bay Aquarium and the Marine Mammal Center.</p>
III.F. Yes/No Box	Assistance Needed to close Equity Gap	Internal Plans already in place

	Assessment Cycle	The ERM&P2 CTE Program has completed 100% of all SLO Assessments for each class they offer. Due to the number of new course offerings and changes to existing courses in the EMBS program and the new ESCI AS Degree program, many SLO assessments need to be completed this year. In the case of the EMBS program many of the existing SLOs have been consolidated or changed and need to be archived or deleted.
IV.A	SLOAC Summary	The ES/ESCI Department needs to continue to focus on and improve its performance as it relates to SLOACs. This will be a major focus area for the Department in 2020-2021
IV.B	Assessment	ES 6- Introduction to Environmental Law- SLO # 1- “Demonstrate the ability to communicate the elements, principles and practices involved with California's approach to addressing global warming/global climate change, the COR was changed to include an final exam” After implementation of a new final exam relating to the COR change for this class, 70% of students taking the Final Exam achieved at least a score of 70% (grade= C, passing) on the exam.
	Resource Requests	See attached spreadsheet
V.A	Budget Trends	The growth in enrollment and student awards in our three CTE programs has allowed for greater access to State Strong Workforce funding. The increase in spending budgets to support CTE lab classes has improved the quality of those labs, allowing students to use tools they would use in a real workplace setting. This has resulted in higher levels of student success and retention. Additionally, graduating students are finding careers shortly after earning a certificate or degree due to the increased skills and expertise they're receiving.
V.B	Funding Impact on Enrollment Trends	Increased funding to enhance student learning with tools and equipment in our CTE classes and labs has increased enrollment in each of our three programs. The number of students declaring majors or educational focus in our CTE programs continues to grow as we are able to purchase state of the art tools that track technology trends in the workplace.
V.C.1	Faculty Position(s) Needed	We would need to replace any faculty vacancies due to retirement to sustain the department's commitment to closing the equity gap, and in recruiting, retaining and ensuring the success of all students, and educating and engaging students in current and very relevant environmental issues.
V.C.2	Justification for Faculty Position(s):	The inability to replace existing faculty would impact our ability to improve student success rates in all categories. In the case of our growing CTE programs, the inability to replace either of our CTE Program Coordinators would negatively impact growing enrollment in ES CTE classes. ES CTE course enrollments have grown to 43% of total ES Dept. enrollment in 2018-2019 from 25% in 2016-2017.
V.D.1	Staff Position(s) Needed	None Needed Unless Vacancy

V.D.2	Justification for Staff Position(s):	The inability to replace the current ES/ESCI Staff position would have significant negative impact on the ability to maintain and grow the Cheeseman ESA as a key student learning asset. This would negatively impact enrollment and student success rates in our ES and ESCI classes- especially lab classes.
V.E	Equipment Requests	<p><u>Equipment Justification for ERM&P2 Program:</u> Equipment is needed to properly train students in this CTE program for jobs and careers in the fields of environmental protection and resource management, fields which are heavily dependent upon field and lab work. Without this equipment, students will lack critical training looked for in the real world. The program's Advisory Board recommends continued expanded training using the latest equipment as a critical need.</p> <p><u>Equipment Justification for EMBS Program:</u> Our Program Advisory Board requires a curriculum that provides students with hands on learning that replicates that in the workplace. The ability to improve our lab classes by procuring the needed and required equipment better prepares students for careers after completion of the program. Employers hiring our students require proficiencies in key technology and sustainable building trends immediately as students enter the workforce. Being able to purchase equipment and software for use in our labs better prepares and differentiates our students above others seeking employment.</p> <p><u>Equipment Justification for ESCI AS Degree and Cheeseman ESA-</u> Students majoring in Environmental Science require more than classroom education. The requested tools, supplies and resources allow us to maintain and grow the Cheeseman ESA as a leading edge resource laboratory for Environmental Biology, Restoration Ecology, Wildlife Science, and Environmental stewardship. The Cheeseman ESA allows the ES/ESCI Department to hold field trips on campus so disadvantages students do not need transportation to attend off campus field trips</p>
V.F	Facility Request	See Department resource request spreadsheet for ETS and Facility support required
V.G	Other Needed Resources	See Department resource request spreadsheet for other requested resources
V.H.1	Staff Development Needs	N/A
V.H.2	Staff Development Needs Justification	N/A
VI.	Closing the Loop	The ES/ESCI department are committed to their goals of decreasing the equity gap and increasing student success, meeting the transfer needs of students, preparing students for careers in Energy Management and Building Science and Environmental Resource Management and Pollution Prevention and educating all our students to be strong stewards for environmental issues
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