



The mission of Merritt College is to enhance the quality of life in the communities we serve by helping students to attain knowledge, master skills, and develop the appreciation, attitudes and values needed to succeed and participate responsibly in a democratic society and a global economy

2020-2021

Annual Program Update

Natural History and Sustainability

I. Introduction and Directions

The Peralta Community College District has an institutional effectiveness process which consists of the following components: a District-wide Strategic Plan which is updated every six years; Comprehensive Program Reviews which are completed every three years; and Annual Program Updates (APUs) which are completed in non-program review years. While there are individualized Program Review Handbooks for Instructional units, Counseling, CTE, Library Services, Student Services, Administrative units, and District Service Centers, there is one Annual Program Update template for use by everyone at the colleges which is completed in the Fall semester of non-program review years.

The Annual Program Update is intended to primarily focus upon planning and institutional effectiveness by requesting that everyone report upon the progress they are making in attaining the goals (outcomes) and program improvement objectives described in the most recent program review document. The Annual Program Update is therefore a document which reflects continuous quality improvement. The Annual Program Update serves a critical role in the Integrated Planning and Budgeting cycle of the college in that it provides a vehicle in which to identify and request additional resources that support reaching the stated goals (outcomes) and program improvement objectives in the unit's program review.

Throughout this document, the term "program" is used to refer to any of the following institutional structures: discipline, department, program, administrative unit, or unit.

If you have questions regarding data, please contact Nathan Pellegrin, Director of Research and Planning (npellegrin@peralta.edu).

If you have questions regarding SLOs, PLOs, SAOs or ILOs, please visit the [SLOAC webpage](#), or contact the SLOAC committee member for your division:

Division 1 - Evan Nichols (anichols@peralta.edu)

Division 2 – Laura Forlin (lforlin@peralta.edu)

Division 3 – Heather Casale (hcasale@peralta.edu).

If you have questions regarding the curriculum section, please contact Nghiem Thai (nthai@peralta.edu), chair of the [Curriculum Committee](#).

If you have questions regarding other material in the APU, please contact your Dean or Manager.

This document contains hyperlinks to external documents, spreadsheets, and data dashboards. Some of the links will not work unless you are signed in to Office 365 through the [Peralta Faculty & Staff Portal](#).

You will need the following items in order to complete the Annual Program Update document at the colleges:

- [Program Review or APU document](#) from AY 2019-20.
- [Budget Information](#) for the current and prior fiscal year.
- Any comments or feedback provided during the program review validation process.
- College Goals and Peralta District Goals (see below).
- [Institution Set Standards](#).
- [College 2018 Educational Master Plan Update](#).
- [Guided Pathways Plan](#)
- [Student Equity Plan](#).
- Data drawn from program review dashboards and/or other sources relevant to your department, service area or administrative unit (see below).

Merritt College Institution-Set Standards 2020-2021

Institution-set standards are used to evaluate the quality of the institution as to success with respect to student achievement in relation to the institution's mission. The evaluation of student achievement performance may include different standards for different programs, as established by the institution.

Metric	Definition	Set Standard
Course Completion (Success)	the number of student completions with a grade of C or better divided by the number of student enrollments	66%
Certificates	Number of certificates earned in an academic year	222
Degrees	Number of associate degrees earned in an academic year	322
Transfer	Number of students who transfer to a 4- year college/university	187
Licensure (CE)	Examination pass rates in programs for which students must pass a licensure examination in order to work in their field of study	70%
Employment (CE)	The job placement rate of student completing a degree or certificate in a CE program in the	Macro-Region Employment

	year after graduation.	Rate, by Program SOC
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College Profile

Student Body Demographics

	2017-18	2018-19	2019-20
Annual Unduplicated Count of Students	12,336	12,861	12,130
Gender			
Female	64%	64%	63%
Male	34%	34%	34%
Decline to State/ Unknown	2%	2%	3%
Race/Ethnicity			
American Indian	< 1%	< 1%	< 1%
Asian	19%	20%	19%
Black / African American	23%	23%	22%
Hispanic / Latino	31%	32%	33%
Pacific Islander	1%	< 1%	< 1%
Two or More	5%	6%	5%
Unknown / NR	4%	4%	5%
White	16%	16%	15%
Age			
18 and Under	15%	15%	16%
19-24	35%	35%	35%
25-29	16%	17%	16%
30-34	11%	11%	11%
35-54	17%	17%	17%
55 and Over	6%	6%	5%

Course Success Rates

	2017-18	2018-19	2019-20*
Total Enrollment (Duplicated Count)	33,288	33,637	32,928
Overall Success Rate	70%	70%	68%
Gender			
Female	70%	70%	69%
Male	69%	69%	66%
Decline to State/ Unknown	77%	74%	64%
Race/Ethnicity			
Black/African-American	62%	62%	60%
Asian	81%	80%	81%
Hispanic	68%	68%	64%
Native American	66%	72%	53%
Pacific Islander	61%	71%	63%
Two or More	65%	67%	68%
Unknown	72%	73%	66%
White	78%	78%	75%
Age			
Under 16	83%	91%	84%
16-18	73%	75%	69%
19-24	65%	66%	64%
25-29	70%	69%	68%
30-34	73%	73%	73%
35-54	74%	73%	71%
55-64	74%	71%	66%
65 and Over	77%	77%	60%

*Includes 'EW' grades

II. Program Overview

Mission Statement

Please verify the mission statement for your program. If your program has not created a mission statement, provide details on how your program supports and contributes to the College mission.

“The mission of NHS is to educate students about the biodiversity and natural resources of the Bay Area and beyond in order to create an enlightened community of residents and naturalists. We pledge to do this in an inclusive and equitable way, and we commit to ensuring nature’s long-term future.”

Faculty and Staff

List your Faculty and/or Staff. Indicate if they are part-time or full-time. (If names are already listed, they were imported from last year’s APU/PR. Add or remove persons as needed to reflect current personnel).

Name	Faculty/Staff	PT/FT
Brad Balukjian	Faculty	PT
Paul Rogé	Faculty	PT
Yael Ehrenberg	Faculty	PT
Ben Nelson	Faculty	PT
Jim O'Connor	Faculty	PT
Lisa DiGirolamo	Faculty	PT
Allie Weill	Faculty	PT
Daniel Edelstein	Faculty	PT
Richard Grasseti	Faculty	PT
Jenna Baughman Ekwealor	Faculty	PT

III. Program Goals

In this section, indicate programs goals, the status of each, and how they align with College and District strategic goals. Following are the strategic goals for Peralta CCD and Merritt College.

Peralta District Strategic Goals

- P1. Advance student access, equity, and success.
- P2. Engage and leverage partners.
- P3. Build programs of distinction.
- P4. Strengthen accountability, innovation, and collaboration.
- P5. Develop and manage resources to advance our mission.

Merritt College Strategic Goals

- M1. **Completion** - Increase number of degrees and certificates by 20% over the next 5 years.
- M2. **Transfer** - Increase transfers to CSU and UC by 6% annually. (Reach approx. 35% in 5 years).
- M3. **Time to Completion** - Reduce the number of excess units earned by students.
- M4. **Employment** - Maintain at least 82% of students attaining employment in the field of study.
- M5. **Equity** - Reduce the achievement gaps for African-American, multiethnic, and male students.

Below are your Program Goals from your most recent Program Review or APU, if available. Indicate whether the goal has been completed (C), is in progress (IP), no longer applicable (NA), or new (NEW). Be sure to state goals which are *measurable* and *time-based*. Indicate which College and District goal your program goal aligns to. If your goal has been completed, what evidence supports completion of this goal? How did you measure the achievement of this goal?

Before going through goals, I'd like to take some time to provide historical context for this program. Natural history/environmental studies has a long and proud tradition at Merritt (and it's rare for a community college to offer such a specialized curriculum in this area) dating back to the first Nature Study class in 1959 (I spent a fun afternoon in the library archives going through old course catalogs to exhume evidence of this first offering). By the 1990s, the program was thriving (see attached flyer, Document 1, from the 1996 Spring Semester) as an interdisciplinary entity between the biology, environmental studies, and landscape horticulture departments. The principal faculty involved were Charles Ford, Robin Freeman, and Ron Felzer.

When I (Brad Balukjian) arrived at Merritt in the Fall of 2017, the program was in decline. Charles Ford was long gone, Ron was teaching only one class per semester in retirement, and

Robin had retired as the only full-time faculty member in ENVMT in 2013 and was never replaced. As a result, ENVMT repeatedly had classes canceled and could not fill a single section of on-campus instruction.

I saw an opportunity. Knowing that the Bay Area is the nation’s leader in the green economy, in early 2018 I began the work of revitalizing the program under the banner of a new name, Natural History & Sustainability (NHS). More than two years, 179 Curricunet proposals, and thousands of work hours later (literally thousands of hours), we have a growing, healthy, inter-disciplinary program with three Certificates of Achievement across two departments: Conservation & Resource Management (ENVMT), Natural History & Resources (BIOL), and Urban Agroecology (ENVMT). We also have an advisory board of industry partners with 23 professionals representing 20 prospective employers.

With growing enrollment, NHS is in need of a commitment from the highest levels of the Merritt administration to begin institutionalizing some of the programmatic work to ensure the program’s stability and future. As of now, the entire program is being run by part-time faculty working in extra-service assignments funded through Strong Workforce. Students have already completed two-year plans mapping their progress to completion of a certificate and are relying on the support and mentoring of part-time faculty to help see them through (each student has been assigned to a faculty mentor). In order for NHS to be successful, certain positions, such as Program Director and a full-time faculty member, need to be hired and institutionalized.

This is the first APU/Program Review to be filled out for NHS. In recent years, it has been unclear what constitutes a “program” at Merritt (is it a department? A discipline? A degree or certificate?) and as such, in the past NHS activities were covered in separate program reviews for BIOL and ENVMT. Following discussions with the VPI, deans, and others, we have made the decision to write a separate APU for NHS beginning with this year, and will share the results with the chairs of BIOL, ENVMT, and LHORT.

Program Goal	Status (C, IP, NA, NEW)	Applicable College Goal(s)	Applicable District Goal(s)	If completed, describe supporting evidence, including measurements of achievements.
Graduate ≥ 8 students with a Certificate of Achievement in each of our three programs (Conservation & Resource Management; Natural History & Resources; Urban Agroecology) by Spring 2022 (Total cohort of ≥ 24 students)	New	M1, M3	P1, P3	
≥ 82% of graduates of Spring 2022 cohort will have attained employment in our field of study by the end of Spring 2023	New	M4	P1, P2, P3	

Institutionalize the Program Director position and hire 1 full-time faculty member by the end of Fall 2021.	New	M1, M3, M4	P1, P5	
Student body will be diverse along multiple axes of identity (gender, ethnicity, age, etc) by the end of Spring 2021 to ensure equity gaps are addressed	New	M5	P1	

IV. Facilities Utilization

Describe your current utilization of facilities, including labs and other space. Confirm previously reported content.

The NHS program is an interdisciplinary program primarily spread between the Biology, Environmental Management and Technology, and Landscape Horticulture departments. As such, our primary facilities are the Barbara Lee Science building and the Landscape Horticulture classrooms and grounds. In non-COVID times, many of our class sessions are held off-campus in the field. The Self-Reliant House, the former home to the Environmental Sciences program, could be an excellent base for our program, but is in need of a major investment for repairs.

V. Program Update Data

In this section you will review and reflect upon the data for your program. Use data which measure performance on outcomes relevant to the mission and goals of your program, which will vary according to which area of the college your program is in.

In your response, refer to data applicable to your program obtained from the APU dashboards and/or other sources.

APU Data Dashboards:

- [Course Completion and Retention Rates Dashboard – Instruction](#)
- [Course Completion and Retention Rates Dashboard – Student Services](#)
- [Enrollment Trend and Productivity Dashboard](#)
- [Degrees and Certificates Dashboard](#)

For departments or programs in the Student Services area, refer to reports provided by institutional data systems (i.e., PeopleSoft or SARS), results of student surveys, or external reports (i.e. [IPEDS](#) or [Launchboard](#)). Include the number of students served over an academic year and summarize their demographics.

For departments in the Business and Operations areas, use data which track the key function provided to the College, such as facilities usage for events, tickets received and closed, the number of invoices process or the time to disbursement.

Use historical data (3 years is recommended, if available) to estimate a baseline, then use this to project activity and inform requests for the coming year.

Describe any significant changes and discuss what the changes mean to your program. Consider whether performance or service gaps exist for disproportionality impacted students. Focus upon the most recent year and/or the years since your last comprehensive program review. Cite data points from the program review dashboards or other data sources relevant to your service, business, operations or administrative area to support your answer. If you wish, you may include screenshots of the dashboard to show filtered results containing the relevant figures. Instructions on taking screenshots for [Windows](#) and [Mac](#))

Since BIOL course metrics will be included with the BIOL program review, I will focus here on the data for ENVMT courses.

Looking at the data from the past three years, ENVMT has outperformed Merritt at-large in both completion and retention rates (78.6% vs. 71.8% and 93.3% vs. 84.2% respectively).

When I came to Merritt in 2017-18, ENVMT enrollment was down to 65 students. Beginning the work of creating this program, that number increased by 166% in one year, to 173 students in

2018-19. In 2019-20 the number stood at 158.

Since it is not easy to disaggregate the natural history courses from the Biology department using the BI Tool, to get an accurate sense of our student demographics we conduct a survey of our students each semester. The most recent data available are from Fall 2019 (APU Document 4), as the pandemic prevents us from collecting data this past Spring.

Productivity increased from 11.6 to 14.0 from 2017-18 to 2019-20, but is still below the campus average of 15.5. That being said, I reject the emphasis placed on the productivity metric, especially for CE programs, which require very specialized training in atypical pedagogical settings (labs, outdoors, field, heavy reliance on equipment, etc). We are never funded based on productivity, nor are we required to hit the 17.5 mark. Districts can and have been financially solvent with productivity below 17.5 (this can be done by addressing spending in other areas of the budget). The difference between enrollment expectations in CE vs General Ed classes is reflected in our union contract, which specifies minimum class sizes of 20 for CE but 25 for General Ed.

Describe the program's progress on Service Area Outcomes and/or Administrative Unit Outcomes (AUOs) since the last Program Review or APU. For instructional programs, describe the program's progress on Student Learning Outcomes (SLOs) and, if your discipline offers a degree or certificate, please describe the department's progress on Program Learning Outcomes (PLOs).

Below is a list of the main classes offered in our program that have been taught in the past two years (since Fall 2018) that would be covered in other departments' APUs, along with an assessment of their SLO progress:

BIOL 9 (SLOs 1 and 2 assessed; to be taught Spring 2021)
BIOL 15 (SLO 1 assessed; taught Fall 2020)
BIOL 29 (SLO 1 and 3 assessed; taught Fall 2020)
BIOL 60A (not taught; to be taught Spring 2021)
BIOL 60C (SLO 1 and 2 assessed)
BIOL 61E (SLO 1 assessed)
BIOL 61K (SLO 1, 2, and 3 assessed)
BIOL 62S (SLO 1 assessed)
BIOL 80C (SLO 1 assessed)
ENVMT 1 (SLO 1, 2, and 3 assessed; taught Fall 2020)
ENVMT 2 (SLO 1, 2, 3, and 4 assessed)
ENVMT 2L (SLO 1, 2 assessed)
ENVMT 3 (SLO 4 assessed)
ENVMT 5 (SLO 1, 2, 3 assessed)
ENVMT 12 (SLO 1 assessed)
ENVMT 16 (SLO 2 assessed)
ENVMT 35 (SLO 1, 2, 3 assessed)
ENVMT 35L (SLO 1, 2, 3, 4 assessed)
ENVMT 55 (SLOs 1, 2, 3 assessed)

Our Program Learning Outcomes are assessed using Student Learning Outcomes of several core classes. Here is how our SLOs map to our PLOs:

Conservation and Resource Management:

ENVMT 2 and ENVMT 55 SLOs map to PLO 1

BIOL 15, COPED 476F, ENVMT 2, ENVMT 2L, ENVMT 56, and ENVMT 57 SLOs map to PLO 2

COPED 476F, ENVMT 2L, ENVMT 56, ENVMT 57 SLOs map to PLO 3

COPED 476F, ENVMT 1, ENVMT 2L, ENVMT 57 SLOs map to PLO 4

Urban Agroecology:

ENVMT 1, ENVMT 2, ENVMT 3, ENVMT 5, ENVMT 35, and ENVMT 35L SLOs map to PLO 1

ENVMT 2, ENVMT 2L, ENVMT 3, ENVMT 5, ENVMT 35, ENVMT 35L SLOs map to PLO 2

ENVMT 1, ENVMT 2L, ENVMT 5, ENVMT 35, and ENVMT 35L SLOs map to PLO 3

ENVMT 2, ENVMT 3, ENVMT 5, and ENVMT 35 SLOs map to PLO 4

Natural History and Resources:

BIOL 29 and ENVMT 2 SLOs map to PLO 1

BIOL 29, ENVMT 2, and ENVMT 2L SLOs map to PLO 2

BIOL 29, ENVMT 1, ENVMT 2, and ENVMT 2L map to PLO 3

Describe the **results of** your department/program/service assessment of student and Program Learning Outcomes/AUO/SAO. Indicate when and where dialogue is occurring. Discuss **changes/updates/resource requests** made to your program based on the assessment of outcomes of the SLOs/PLOs/SAOs/AUOs assessed in the past year and discuss their alignment with the [ILOs](#).

Assessing SLOs and PLOs has informed our pedagogy and allowed for improvements to our teaching and courses. Here are some specific ways in which we have used assessments to improve our work:

- In BIOL and ENVMT courses, case studies are being used more to demonstrate key concepts.
- In BIOL 29, exams were shifted from open-book to closed-book with an improvement in scores.
- In BIOL 9, an instructor took Peralta equity training course to address equity gaps in the classroom.
- In BIOL and ENVMT courses, more active learning techniques are being adopted (think-pair-share, kinesthetic learning activities) to deepen learning.

The following item is for instructional programs only

Discuss how your PLOs align with the [ILOs](#).

Here is how each of our Certificate PLOs align with Merritt's ILOs:

Conservation and Resource Management:

PLO 1 aligns with Critical Thinking

PLO 2 aligns with Communication

PLO 3 aligns with Critical Thinking

PLO 4 aligns with Communication

Natural History and Resources:

PLO 1 aligns with Critical Thinking
PLO 2 aligns with Communication
PLO 3 aligns with Critical Thinking

Urban Agroecology

PLO 1 aligns with Civic Engagement and Ethics
PLO 2 aligns with Critical Thinking
PLO 3 aligns with Communication
PLO 4 aligns with Cultural Awareness

VI. Curriculum

Note: If your department, program, or unit does not have a curricular component, please skip to the Section VII.

Curriculum review is an integral part of the program review process. Instructional departments and programs must consider the state of their curricula (i.e., courses, certificates, and degrees) in order to engage in meaningful assessment, planning, and continuous quality improvement.

In accordance with the [State Chancellor's Office Program and Course Approval Handbook \(7th Edition\)](#), California community college curricula must meet five criteria:

1. Appropriateness to the mission of the California Community Colleges (as established in [California Education Code § 66010.4](#))
2. Community, service area, or student need
3. Adherence to accreditation and higher education standards
4. Availability of adequate resources to maintain the course or program (including offering all required courses for a program at least once every two years)
5. Compliance with federal and state statutes and regulations (notably Title 5 of the California Code of Regulations)

PCCD [Board Policy 4020](#) and [Administrative Procedure 4020](#) require that curricula be evaluated regularly through program review and annual program updates on a three-year cycle. For Career Education programs, however, this policy is superseded by [California Education Code § 78016\(a\)](#), which requires reviews every two years.

This section of the APU requests information about the status of course and program updates, improvement plans based on curriculum review, and prospective curriculum development. The Curriculum Committee shall evaluate the responses as part of the validation of APU completion and the prioritization of resource requests.

Curriculum Review

Consult [CurriQunet](#) and the [Course Curriculum Review Status](#) or [Program Curriculum Review Status](#) spreadsheets to determine when a course or program was last updated or deactivated.

Courses that have not been offered in the past three years should be deactivated to ensure that the college catalog presents a current and accurate inventory of actual course offerings at Merritt. Likewise, if certificates and degrees have not been awarded in recent years, or the required courses have not been offered regularly enough for students to complete, consider the relevance and viability of those programs for potential deactivation.

Modifications

Indicate courses reviewed/updated in the past academic year (2019-2020), following the example in red. Add additional rows as needed in the table below.

Course Number	Course Title	Reviewer
BIOL 9	Marine Biology	Balukjian
BIOL 15	Environmental Biology	Balukjian
BIOL 29	Introduction to Biodiversity	Balukjian
BIOL 60A	Natural History of the Local Parks	Balukjian
BIOL 60B	Natural History of Mt Diablo State Park	Balukjian
BIOL 60C	Herpetology	Balukjian
Biol 61E	Natural History of Tidepools	Balukjian
BIOL 61H	Natural History of Butterflies and Moths	Balukjian
BIOL 61I	Natural History of Bryophytes	Balukjian
BIOL 61K	Natural History of Lichens	Balukjian
BIOL 62S	Natural History of Islands of California	Balukjian
BIOL 80A	Biology of Raptors	Balukjian
BIOL 80B	Bird Songing	Balukjian
BIOL 80C	Ornithology	Balukjian
ENVMT 1	Environmental Careers	Balukjian
ENVMT 2	Introduction to Sustainable Environmental Systems	Balukjian
ENVMT 2L	Introduction to Sustainable Environmental Systems Lab	Balukjian
ENVMT 3	Social Issues in Agriculture	Balukjian
ENVMT 5	Bay Area Food Culture	Balukjian
ENVMT 8	Introduction to Outdoor Education	Balukjian
ENVMT 12	Environmental Racism and Justice	Balukjian
ENVMT 14	Environmental Impact Reports	Balukjian
ENVMT 16	Introduction to Healthy Community Systems	Balukjian
ENVMT 35	Introduction to Urban Agroecology	Balukjian
ENVMT 35L	Introduction to Urban Agroecology Lab	Balukjian
ENVMT 40	From Tree to Sea	Balukjian
ENVMT 44	Introduction to Watershed Restoration	Balukjian
ENVMT 55	Principles of Conservation and Land Management	Balukjian
ENVMT 56	Mgmt of Public Parks and Natural Resources	Balukjian
ENVMT 57	Park Operations Practices and Skills	Balukjian

Indicate programs reviewed/updated in the past academic year (2019-2020), following the example in red. Add additional rows as needed in the table below.

Program Title	Program Type	Reviewer
Conservation and Resource Management	Certificate of Achievement	Brad Balukjian
Natural History and Resources	Certificate of Achievement	Brad Balukjian
Urban Agroecology	Certificate of Achievement	Brad Balukjian

Deactivations

Indicate courses deactivated in the past academic year (2019-2020), following the example in red. Add additional rows as needed in the table below.

Course Number			Course Title	Reviewer
BIOL	005	Botany		
BIOL	022A-B	Human Dissection Laboratory		
BIOL	035	Introduction to Microscopy		
BIOL	037	Genomics Theory		
BIOL	038	Practical Genomics		
BIOL	062A-H	Natural History of California		
BIOL	080A-H	Birds of Central California and the Bay Area		
BIOL	047	Strategies for the Biology Teaching Assistant		
BIOL	348NB	Biology Review for Pre-Nursing Students		
ENVST	048OQ	Natural History of Japan		
ENVST	048PD	Natural History of the Maritime Provinces and Newfoundland, Canada		
ENVST	049	Independent Study in Environmental Studies		
ENVST	060A	Natural History of the Bay Area: The Local Parks		
ENVST	060B	Natural History of the Bay Area: Mt. Diablo State Park		
BIOL	013	Principles of Ecology		
BIOL	062T	Ecology of Mono Lake and the Mono Craters		
BIOL	062U	Natural History of the Giant Sequoia in Yosemite and Sequoia/Kings Canyon National Parks		
BIOL	062W	Natural History of the Ice Age National Scenic Trail and Ice Age National Scientific Reserve, Wisconsin		
BIOL	862W	Natural History of the Ice Age National Scenic Trail and Ice Age National Scientific Reserve, Wisconsin-Field Study		
BIOL	064I	Natural History of Point Reyes National Seashore		
BIOL	065F	Natural History of Tahiti (French Polynesia)		
ENVST	060C	Natural History of the Bay Area: Herpetology		
ENVST	060D	Natural History of the Bay Area: Fall Herpetology		
ENVST	076A-D	Native Americans and the Bay Area Environment: Pre-European, Mission, Rancho and Anglo, and Contemporary Periods (see below)		
ENVST	078A	American Indians and the Ecology of Hopi/Navajo Land		
ENVST	080A	Raptors of Central California and the Bay Area		
ENVST	080B	Bird Singing: The Ecology of Bird Songs and Identification by Ear		
ENVST	080C	Fundamentals of Ornithology and Birding in Central California/Bay Area		
ENVMT	038ABC	Natural Building		
ENVMT	050	Special Projects in Ecological Planning, Implementation and Maintenance		
ENVMT	210A/B	Environmental Photography and Photo Monitoring I, II		

ENVMT	501	Sustainable Environmental Systems Projects		
ENVMT	034	From Dams to Greywater: California Water Systems and Alternatives		
ENVMT	848NA	Special Projects in Ecological Design, Installation and Maintenance		
BIOL	061G	Natural History: Mammals of the Greater Bay Area		
BIOL	080D	Ecology of the California Condor		
BIOL	048NU	Waterbirds of Central California and the Bay Area		
BIOL	062K	Natural History of the Ancient Bristlecone Pine Forest		
BIOL	062R	Ecology of Yosemite Valley		
BIOL	062V	Ecology of the Mammoth Lakes Sierra and the Ritter Range		
BIOL	062X	Natural History of Headwaters Forest		
BIOL	062Y	Natural History of Arches National Park		
BIOL	065C	Natural History and Gaucho Culture of Uruguay		
BIOL	065D	Natural History of New South Wales, Australia		
ENVMT	011	Sustainable Urban and Regional Planning		

Indicate programs deactivated in the past academic year (2019-2020), following the example in red. Add additional rows as needed in the table below.

Program Title	Program Type	Reviewer
Bay Area Master Naturalist	Bay Area Master Naturalist	Brad Balukjian
Natural History	Natural History	
Ecological Restoration And Watershed Management	Ecological Restoration And Watershed Management	
Ecological Restoration And Watershed Management	Ecological Restoration And Watershed Management	
Ecological Restoration, Ranger, Naturalist And Outdoor Education	Ecological Restoration, Ranger, Naturalist And Outdoor Education	
Environmental Management And Technology	Environmental Management And Technology	

Green Building And Energy Management		Green Building And Energy Management	
Greening The Urban Environment: Design, Planning, Environmental Justice		Greening The Urban Environment: Design, Planning, Environmental Justice	
Human Ecology, Policy, Planning And Environmental Justice		Human Ecology, Policy, Planning And Environmental Justice	
Ranger/Naturalist Outdoor Education		Ranger/Naturalist Outdoor Education	
Urban Farming And Agro Ecology		Urban Farming And Agro Ecology	
Environmental Management Fundamentals		Environmental Management Fundamentals	
Greening The Urban Environment		Greening The Urban Environment	
Urban Agroecology		Urban Agroecology	

Curriculum Improvement

Based on ongoing curriculum review, describe plans for **program-level** improvement in terms of any of the following considerations:

- Advancing **student equity and achievement** for disproportionately impacted students.
- Fostering **intersegmental alignment** and **guided pathways** through articulation, course sequencing, and program mapping.

- Implementing innovative **pedagogies, delivery methods/modalities, or educational resources and technologies.**

Through team meetings and analysis of assessment data, NHS has adopted several strategies for reducing the equity gap. Some specific examples:

- In several classes (BIOL 29, ENVMT 5) the instructors have scheduled one-on-one meetings with each student to address their specific needs in an environment that builds trust and provides privacy.
- With the onset of distance learning wrought by the pandemic, our instructors have gone through great lengths to increase access to materials for students who cannot participate synchronously. This includes Zoom office hours, discussion threads on Canvas, and timely posting of all synchronously taught material.
- In BIOD 29, ENVMT 1, and other courses, readings specifically focusing on systemic racism in the environmental sector has been incorporated into the curriculum.
- All students pursuing a Certificate of Achievement have formed a “2020 cohort” and have each been assigned to a faculty mentor, who helps them develop a personalized career plan (see Document 2).

Curriculum Development

Indicate new courses to be proposed and/or historical courses to be reactivated within the next academic year (2021-2022), following the example in red. Add additional rows as needed in the table below.

Title	Description	Justification	Anticipated Effective Term
ENVMT 58	New course in GIS mapping	The ability to use GIS software to create maps is an indispensable tool for all budding environmental workers. It has broad application in all areas of the job market.	Fall 2021

Indicate new programs slated for development within the next academic year (2021-

2022), following the example in red. Add additional rows as needed in the table below.

Title	Description	Justification	Anticipated Effective Term

The Curriculum Committee shall prioritize the review and approval of new courses and programs that are identified in this section of the APU.

VII. Funded Resources

For each resource allocation request from previous year's APU, indicate whether it was funded. Describe the outcomes and accomplishments for any requests which were funded.

Brief description of resource request	Was request funded? (Yes or No)	Funding Source (Specify Fund or Grant)	Total Award Amount	Outcome/Accomplishment
Program Director	Yes	SWF Round 4	\$30,000	Ongoing
Program Coordinator	Yes	SWF Round 4	\$8,000	Ongoing
Guest Speakers for Classes	Yes	SWF Round 4	\$2,250	Ongoing
Student Transportation	Yes	SWF Round 4	\$1500	Ongoing

Brief description of resource request	Was request funded? (Yes or No)	Funding Source (Specify Fund or Grant)	Total Award Amount	Outcome/Accomplishment
Publishing (brochures, etc)	Yes	SWF Round 4	\$1500	Ongoing
Advertising for program	Partially	SWF Round 4	\$5500	Ongoing

VIII. Resource Requests

In the tables below, please add resource requests for your program for the **2021-22 fiscal year**. Indicate if the request is being made as part of the response to the COVID-19 pandemic. If you are submitting multiple requests under the same category, prioritize them by assigning a rank to each request ('1' indicating the highest priority request). Include only one request per row; if additional rows are needed, insert new rows in the table ([how to add rows](#)).

Personnel Resource Requests

Personnel Sub-Category (Full-Time or Part-Time Faculty, Classified, Student Worker)	Description/Justification	Percent Time	Estimated Annual Salary Costs	Estimated Annual Benefits Costs	Total Estimated Cost	Priority Rank (1=Highest priority)	COVID-19 Related (Yes/No)
Full-Time Faculty	NHS is one of only three CE programs without a full-time faculty member; with about five sections per semester, there is sufficient load to justify hiring a full-timer.	1.0	\$60,000	\$20,000	\$80,000	1	No
Program Director	The administrative work of this program requires that this position continue to be funded, albeit at a reduced rate if a full-time faculty member is hired.	0.2	\$14,500	\$1,450	\$15,950	1	No
Program Coordinator	Responsible for coordinating cohort events, communications (newsletter, advertising, etc), and workforce opportunities	N/A	\$9,000	\$800	\$9,800	2	No
Faculty Site Coordinator	Responsible for working with advisory board partners for workforce development through COPED 476F class	N/A	\$5,000	\$500	\$5,500	2	No
Urban Agroecology Co-Lead	Mentor Urban Agroecology students through their career plans; attend all relevant meetings	N/A	\$4,000	\$400	\$4,400	2	No

Personnel Sub-Category (Full-Time or Part-Time Faculty, Classified, Student Worker)	Description/Justification	Percent Time	Estimated Annual Salary Costs	Estimated Annual Benefits Costs	Total Estimated Cost	Priority Rank (1=Highest priority)	COVID- 19 Related (Yes/No)
Urban Agroecology Co-Lead	Mentor Urban Agroecology students through their career plans; attend all relevant meetings	N/A	\$4,000	\$400	\$4,400	2	No

Resource Requests (Non-Personnel)

Resource Categories

- Professional Development (Department wide)
- Professional Development (Personal/Individual)
- Required Reasonable Accommodation
- Service Contract
- Supplies: Software
- Supplies: Books, Magazines, and/or Periodicals
- Supplies: Instructional Supplies
- Supplies: Non-Instructional Supplies
- Supplies: Library Collections
- Technology & Equipment: New
- Technology & Equipment: Replacement
- Other

Resource Category (select from above list)	Description/Justification	Total Estimated Cost	Priority Rank (1=Highest Priority)	COVID-19 Related (Yes/No)
Technology & Equipment: New	PPE (gloves, wipes, face shields, etc)	\$2,500	1	YES
Professional Development (Personal/Individual)	Guest speakers for classes	\$2,250	2	No
Other	Transportation for field trips	\$1,500	2	No
Other	Food for cohort events and advisory board meetings	\$1,500	3	No
Other	Advertising costs/campaign	\$5,000	2	No

IX. Participants

Please provide the list of members who participated in completing this program review.

Brad Balukjian

Thank you for your time and effort in completing the Annual Program Update!