



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

### 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](mailto:npellegrin@peralta.edu)). If you have questions regarding other material in the APU, please contact your Dean or Manager.

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

- The most recently completed comprehensive [Program Review or APU document](#).
- 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.

Performance Measure	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 year after graduation.	Macro-Region Employment Rate, by Program SOC

## College Profile

### Student Body Demographics

	2017-18	2018-19	2019-20
Annual Unduplicated Count of Students	12,318	12,854	12,125
<b>Gender</b>			
Female	64%	64%	63%
Male	34%	34%	34%
Decline to State/ Unknown	2%	2%	3%
<b>Race/Ethnicity</b>			
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%
<b>Age</b>			
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)	31,446	31,926	26,996
Overall Success Rate	70%	70%	76%
<b>Gender</b>			
Female	70%	70%	76%
Male	69%	69%	75%
Decline to State/ Unknown	75%	75%	80%
<b>Race/Ethnicity</b>			
African-American	62%	63%	70%
Asian	81%	80%	85%
Hispanic	68%	68%	73%
Native American	67%	72%	64%
Pacific Islander	61%	71%	75%
Two or More	66%	67%	76%
Unknown	67%	66%	73%
White	78%	78%	84%
<b>Age</b>			
18 and Under	83%	83%	84%
19-24	66%	67%	75%
25-29	73%	74%	80%
30-34	75%	77%	82%
35-54	77%	77%	82%
55 and Over	76%	76%	79%

\*Excludes 'EW' grades

## 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 the Division of Math, Science, and Applied Technology (MSAT) Division at Merritt College is to ensure student access and equity and success by supporting the highest quality of instructional services to programs and departments within the division. (Including online offerings and using technology in innovative ways to reach students).

### Faculty and Staff

List your Faculty and/or Staff. Indicate if they are part-time or full-time.

Currently the Division of Math, Science and Applied Technology employs over 80 employees consisting of faculty and staff (both part time and full time). 17 tenured faculty, 56 Adjunct faculty and 6 classified staff.

Name				Faculty/Staff	PT/FT
SUBJECT	CATL DESCR	INSTRUCTOR	Part-time PT/ Full time FT / Classified CL		
DIV II		Anderson, Sinead	CL		
CHEM		Sano, Tim	CL		
LANHT		Hill, Niambi	CL		
BIOL		Sidzinska, Kinga	CL		
LANHT		Bull, Maril	CL		
LANHT		Sealund, Molly	CL		
BIOL 10	INTRO TO BIOLOGY	OCHONG,E	PT		
BIOL 10	INTRO TO BIOLOGY	ZERMENO,J	FT		
BIOL 15	ENVIRONMENTAL BIOL	NELSON,B	PT		
BIOL 1A	GENERAL BIOLOGY	SUAREZRODRIGUEZ,M	FT		
BIOL 2	HUMAN ANATOMY	BHAGWAT,V	PT		
BIOL 2	HUMAN ANATOMY	DAMECARROLL,J	PT		
BIOL 2	HUMAN ANATOMY	FOULADIANTABRIZ,N	PT		
BIOL 20A	HUMAN ANATOMY & PHYS	ASEMOTA,V	PT		
BIOL 20A	HUMAN ANATOMY & PHYS	KRYLOVA,I	PT		
BIOL 20A	HUMAN ANATOMY & PHYS	LAL,R	PT		
BIOL 20A	HUMAN ANATOMY & PHYS	RAUCH,N	FT		
BIOL 20A	HUMAN ANATOMY & PHYS	SEGMEN,E	PT		
BIOL 20B	HUMAN ANATOMY & PHYS	MCCRAY,A	FT		

BIOL 20B	HUMAN ANATOMY & PHYS	RODRIGUEZ,J	FT		
BIOL 24	BASIC HUMN ANAT/PHYS	MUHLINGHAUS,C	PT		
BIOL 3	MICROBIOLOGY	BLOOM,K	PT		
BIOL 3	MICROBIOLOGY	ROWNING,B	PT		
BIOL 3	MICROBIOLOGY	SCOTT,S	FT		
BIOL 4	HUMAN PHYSIOLOGY	ROOKER,C	PT		
BUS 10	INTRO TO BUSINESS	MOFIDI,F	FT		
BUS 1A	FINANCIAL ACCOUNTING	SHAHBAZI,S	PT		
BUS 70	INTRO TO MARKETING	ZENDEHNAM,V	PT		
BUS 74	INTRO TO ADVERTISING	MAULTSBY,C	PT		
BUS 76	E-COM/ENTREPRENEUR	BAILEY,J	PT		
CHEM 12A	ORGANIC CHEMISTRY	TOHIDI, M	PT		
CHEM 1A	GENERAL CHEMISTRY	DUFFEY,K	PT		
CHEM 30A	INTRO GENERAL CHEM	COOPER,L	PT		
CHEM 30A	INTRO GENERAL CHEM	HOLLOWAY,R	PT		
CIS 1	INTRO TO CIS	BELL,E	PT		
CIS 1	INTRO TO CIS	ROGERS,C	PT		
CIS 1	INTRO TO CIS	VARNADO,M	PT		
CIS 205	COMPUTER LITERACY	JOHNSON,D	PT		
CIS 205	COMPUTER LITERACY	KENNEDY,J	PT		
CIS 221	Cyber Safety/Online Identity	COX,S	PT		
CIS 42	SPREADSHEET APPLICATIONS	HANRAHAN,M	FT		
CIS 5	INTRO COMPUTER SCI	BROOKS,B	PT		
CIS 52	Cloud Security Fundamentals	MATHER,T	PT		
CIS 59	Applications in Info Security	HENGELS,J	PT		
CIS 6	INTRO COMPUTER PRGM	BROWN,C	FT		
CIS 72	Systems and Network Admin	AYFER,O	PT		
ENVMT1	ENVIRON CAREERS	BALUKJIAN,B	PT		
ENVMT5	OAKLAND FOOD CULTURE	EHRENBERGHELLION,N	PT		
GEO1 1	INTRO PHYS GEOLOGY	WILLIAMS,T	FT		
LANHT1	INTRO LH W/LAB (DAY)	LEE,L	FT		
LANHT10	Insect Pests	DUNBAR,E	PT		
LANHT13E	ARBOR. (EVENING)	FORLIN,L	FT		
LANHT14	LAND CONST W/LAB-DAY	MCGINNIS,D	PT		
LANHT18LA	Landscape Design Laboratory	GRAMPP,C	FT		
LANHT26	PRUNING	CHURGEL,P	PT		
LANHT29	PLANTING DESIGN	MCFARLAND,T	PT		
LANHT501	URBAN COMM GARDEN	BRANCA,T	PT		
LANHT5EA	FALL NATV PLANTS-EVE	WINCHESTER,S	PT		
LANHT81	Arborist Equipment Fundamental	MAUTNER,A	PT		
LANHT85	Intro to Climbing/ Aerial Tree	LIM,K	PT		
LANHT9A	SKETCHUP PRO I	ZHANG,L	PT		
MATH 1	PRE-CALCULUS	BAN,S	FT		

MATH 1	PRE-CALCULUS	GREEN,M	PT		
MATH 1	PRE-CALCULUS	SAYAVEDRA,A	PT		
MATH 13	INTRO TO STATISTICS	HOANG,T	PT		
MATH 13	INTRO TO STATISTICS	KHAJA,W	FT		
MATH 13	INTRO TO STATISTICS	LAMHA,Q	PT		
MATH 13	INTRO TO STATISTICS	LAWSON,D	PT		
MATH 13	INTRO TO STATISTICS	LEBOW,E	PT		
MATH 13	INTRO TO STATISTICS	SHAH,S	PT		
MATH 203	INTERMEDIATE ALGEBRA	HARDAKINBERG,M	PT		
MATH 50	Trigonometry	MEDINA,E	PT		
PHYS 2A	GENERAL PHYSICS	SIMMONS,D	PT		
PHYS 4A	GEN PHYSICS W/CALCULUS	RENBARGER,T	FT		
RLEST14	RE INVESTMENTS	GRANT,R	PT		
RLEST250	BRE Salesperson/Broker Exam Pr	RATKOVICH,J	PT		
RLEST2A	PRIN OF REAL ESTATE	FORKNER,M	FT		
RLEST4A	LEGAL ASPECTS OF RE	OGDEN,C	PT		

## 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.



List your Program Goals from your most recent Program Review or APU. Indicate whether the goal has been completed (C), is in progress (IP), or no longer applicable (NA). 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?

Program Goal	Status (C, IP, NA)	Applicable College Goal(s)	Applicable District Goal(s)	If completed, describe supporting evidence, including measurements of achievements.
1. Manage the division within the performance based funding allocation model: Stay within the allotted FTEF allocation when possible, increase the number of completion awards, Provide opportunities for marginalized student populations	IP	M1, M2, M5	P1, P4, P5	Division II has remained within its FTEF allocation, but the number of degrees and certificates has not increased significantly. There are equity gaps regarding the 2 to 1 female to male ratio.
2. Program development. Support new programs within the division develop curriculum and promote programs and courses	IP	M1, M2, M3	P1, P3	Natural History and Sustainability, Digital Marketing certificate, Math support courses for transfer level math, STEM core, Credit bearing cannabis cultivation certificate
3. Process improvement – decrease the number of late payments within the division – ensure that timesheets are submitted in a timely manner. Epafs are moved, monitor budget regularly, track payments.	IP	M1, M2, M3, M4, M5	P4, P5	Verbal orders continue to be an issue in the division. Epafs and
4. Monitor and support academic programs –	IP	M1, M2, M5	P3, P4, P5	File sharing and digital signatures using Adobe has

<p>use file sharing system, collect syllabi, office hours, other documents, engage in regular communications with faculty and staff via email communications.</p> <p>within the division using sharepoint file sharing software</p> <ul style="list-style-type: none"> <li>- Syllabi, office hourse, roster submission dates textbooks etc</li> <li>- SLO asses</li> </ul> <p>Monitor attendance, office traffic of the division office and lanht areas</p>				<p>been established.</p>

### **Facilities Utilization**

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

The MSAT division operates classes throughout the entire campus. We have several math and business courses that are routinely taught in the A building and the P building. Most classes require a smart classroom and improvements have been adequate. There CIS department utilizes two computer labs (P218 and P106) that are used for lab purposes. Faculty office space is limited in the P building.

The majority of classes are taught in the Barbara Lee Science and Allied Health Building (S building). The S building houses the bulk of the biology, math, chemistry, and physical science courses are housed here. There is a state of the art Biology lab, Chemistry lab, Physics/Physical Sciences lab, Through grant funding, the math department redesigned a classroom space to support a discovery based learning teaching approach. The majority of the MSAT faculty teach classes on the 3<sup>rd</sup> and 4<sup>th</sup> floor of the S building, and faculty share office suites and cubicles (1 on 3<sup>rd</sup> floor, 2 on 4<sup>th</sup> floor)

Division office and conference room is utilized by the faculty and staff on a regular basis. A more efficient way to schedule the conference room must be developed. The division office is rarely staff consistently due to normal business hours. The flow of office traffic should be monitored and assessed regularly for efficiency and to address staffing issues. All students support forms should be scanned and filed. The MSAT division shares this space with the Allied Health and Public Safety Division. Staffing issues with this division have impacted the efficiency

MSAT division.

The learning center – Many math and science faculty regularly work and hold office hours in the learning center located on the first floor of the library. Students report that the learning center is often understaffed and in need of more experienced tutors. Faculty who hold office hours in the learning center seem satisfied, but need additional private offices to meet with the students.

There are plans to build out some of the unused shell space in the S Building to develop a math office suite and study lab for the students. As the math department is one of the largest supporters of Science courses across the college, there is a need to find a space where they can better serve students.

The MSAT Landscape Horticulture department and Natural History and Sustainability programs are taught on the in the H building horticulture compound. This is an 8 acre facility with a green house, laff house and classrooms and lab space for instruction. The facility operates all year and is accessed separate from the main campus. Although the facility operates effectively, it is hard to monitor without some form of technology to connect remotely with staff.

There is a bond measure aimed at developing a new Horticulture compound. Construction is to begin in 2021. There are also plans to remodel the Self Reliant House which will serve the NHS program moving forward.

Since the onset of the COVID – 19 pandemic, there have been limited usage of any of the campus facilities. The college is generally open from 10 am to 1 pm on Tuesdays and Thursdays. Most instructors and staff are able to carry on with work remotely.

## 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.

*For Instructional programs*, refer to data obtained from the APU dashboards in the response box. If you wish, you may include screenshots of the dashboard to show filtered results containing the relevant figures.

### [Link to APU Data Dashboards](#)

*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 and 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.

The Division of Math, Science and Applied Technology supported 5074 students in the 2019 – 2020 academic year. Students receive instruction in the following areas: Astronomy, Biology, Business, Chemistry, Computer Information Systems and Cybersecurity, Geology, Geography, Landscape Horticulture, Math, Natural History and Sustainability, Physics and Real Estate. Of these students, 3145 students are female and 1801 were male. Although there is almost a 2 to 1 ratio of female to male enrollments, retention rates are the same at about 47%. There is an equity gap in course completion from female to male of 4 percentage points (72% F, 68%M).

The MSAT division serves two age demographics. The 19 – 24 age range and the 35 – 54 age group are most represented in the division. While retention rates are slightly higher in the 19 – 24 age group, the students in the 35 – 54 age range seem to complete at a slightly higher rate. (See division 2 enrollment data 2019 – 2020. Jpg)

With regard to ethnic background, the most represented groups in enrollments are as follows: Hispanic / Latino 1543, Black / African American 1118, Asian 957, White 883

With these four groups, 83% of the total enrollment can be captured. It should be noted that while completion rates for Asian and White groups are at 80%, LatinX and African American success rates are both 15% points lower at 65% Retention percentages for all four groups range from 49% to 45%

Data has also been captured for the MSAT division in the following areas:

- College Course completion 2018 – 2019 70%
- College Course retention rate 2018 – 2019 79%
- Mode of delivery
- Pel grant students
- Cal Promise students
- Foster youth
- First generation
- SAS students
- International students
- Out of state students
- Low income students

It is the aim of the Division of Math, Science and Applied technology to serve students adequately among all demographics. This will take a concerted effort to identify the student needs on a personal basis. As we continue to strive towards equity, we will evaluate our efforts and make improvements based on our findings.

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

#### Administrative Unit Outcomes / Program Improvement Objectives

1. Manage the division within the performance based funding allocation model: Stay within the allotted FTEF allocation when possible, increase the number of completion awards, Provide opportunities for marginalized student populations
2. Program development. Support new programs within the division develop curriculum and promote programs and courses
3. Process improvement – decrease the number of late payments within the division – ensure that timesheets are submitted in a timely manner. Epafs are moved, monitor budget regularly, track payments.
4. Monitor and support academic programs – use file sharing system, collect syllabi, office hours, other documents, engage in regular communications with faculty and staff via email communications.

within the division using sharepoint file sharing software

- Syllabi, office hourse, roster submission dates textbooks etc
- SLO asses

Monitor attendance, office traffic of the division office and lanht areas

## **Funded Resources**

Describe the outcomes and accomplishments from previous year's funded resource allocation request.

<b>Brief description of funded resource</b>	<b>Funding Source (Specify Fund or Grant)</b>	<b>Total Award Amount</b>	<b>Outcome/Accomplishment</b>
Guided Pathways training		\$500	
Office computer monitor / peripherals		\$6,000	Ergonomical workspace for the divison II office

## Resource Requests (Personnel)

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. Include only one request per row; if additional rows are needed, insert new rows in the table ([link MS Word help documentation on how to add rows](#)). If there are no resource requested, leave the boxes blank.

### Personnel Resource Requests

<b>Personnel Category</b> (Full-Time or Part-Time Faculty, Classified, Student Worker)	<b>Description/Justification</b>	<b>Percent Time</b>	<b>Estimated Annual Salary Costs</b>	<b>Estimated Annual Benefits Costs</b>	<b>Total Estimated Cost</b>	<b>COVID-19 Related (Yes/No)</b>
<b>Student worker (2)</b>	Assist division in taking messages, assisting the staff assistant etc.	100%	19,320.00	n/a	19,320	

Resource Requests Continued On Next Page



## **Resource Requests (Non-Personnel)**

- Professional Development: Department wide PD needed
- Professional Development: Personal/Individual PD needed
- Required Reasonable Accommodation
- Service Contracts
- 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

<b>Resource Category</b>	<b>Description/Justification</b>	<b>Total Estimated Cost</b>	<b>COVID-19 Related (Yes/No)</b>
<b>PD: Division Wide – CANVAS online teaching and learning</b>	<b>Funds will enable faculty to enroll in EDT courses and other PD to enhance their teaching in the online learning environment</b>	<b>10000</b>	<b>YES</b>
<b>Service Contract to remodel DIV II/III office</b>	<b>Barriers must be put in place to conduct business face to face post COVID 19.</b>	3000	YES
<b>Technology and Equipment – New</b>	Video conferencing software for staff assistant and division dean – post covid – 19 there will be an increased need to communicate with faculty staff and students using video conferencing. / 2 emergency laptops in case of emergencies (CHEM)	5000	YES
<b>Technology and equipment – replacement</b>	Replace old projector with new technology that will enable individuals to attend the meetings virtually	5000	YES
<b>Supplies – Non-instructional</b>	Clear signage should be purchased to help students navigate through the S Building Social distancing materials should be purchased for all common spaces (including bathrooms)	1000	YES
<b>Service Contracts – replace all hand dryers and drinking fountains in the S Building – install more hand sanitizers</b>	Hand dryers and drinking fountains are in disrepair and should be replaced		YES

Resource Category	Description/Justification	Total Estimated Cost	COVID-19 Related (Yes/No)
<b>Hand sanitizers and face masks for the public</b>	Emergency materials needed for members of the public who have issues with their PPE	2000	YES
<b>Supplies: Software – License to edit PDF files</b>	2 year licenses needed for division staff assistants (2) lab coordinators (2) and dean to edit pdfs	1000	YES
<b>Service Contract – build out S Bldg shell space with Math lab / Math department offices</b>	The math department currently does not have a dedicated space for their offices or to serve students. Smaller departments in the college have dedicated spaces in the S bldg. (CHEM/ PHYS/ GEOL / GEOG)	200000	NO
<b>Professional Development: Individual PD needed</b>	The CHEM lab technician needs remedial and extensive training in using technology effectively in the workplace. Training in computer basics, excel, using email, attending virtual meetings, spreadsheets, etc are needed asap	1500	YES

## **Participants**

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

**Jason Holloway, Sinead Anderson**