Instructional Program

Engineering

What is Program Review?

Program review is a key element of integrated planning at VC. It provides programs with an opportunity for reflection and improvement. Programs analyze data on key metrics that are derived from the VC Educational Master Plan. Then, they identify successes and areas for improvement. They develop goals/initiatives for how they will improve, and if necessary, request resources that are necessary to meet those goals/initiatives.

What is not included in Program Review?

The following should not be requested through program review:

1. Day-to-day operational requests (e.g. routine maintenance requests, broken chairs, etc.).
2. Requests for ongoing, recurring expenses (e.g. requesting the same supplies that were purchased in previous years).
3. Requests that are not directly tied to VC's Educational Master Plan Goals.

Day-to-day and/or recurring maintenance and facilities requests should be made through the Facilities, Maintenance & Operations Department.

Day-to-day and/or recurring requests for supplies should be made through the program's Division budget, in consultation with the Division Dean/Manager.

Ventura College Educational Master Plan Goals

Goal 1: Continuously improve educational programs and services to meet student, community, and workforce development needs.

Goal 2: Provide students with information and access to diverse and comprehensive support services that lead to their success.

Goal 3: Partner with local and regional organizations to achieve mutual goals and strengthen the College, the community and the area's economic vitality.

Goal 4: Continuously enhance institutional operations and effectiveness.

Goal 5: Implement the Ventura College East Campus Educational Plan.

Section A - Course Success Rate

Examine your program's course success rate data. Ventura College has set a standard of 66.7% for its course success rate.

1. Was your program's 2015 course success rate higher than the college standard of 66.7%?
   ☒ Yes ☐ No

2. Was your program's 2015 course success rate higher than the overall college success rate?
   ☒ Yes ☐ No

3. Is your program's course success rate increasing, decreasing, or remaining constant?
   ☐ Increasing ☐ Decreasing ☒ Remaining Constant

4. Are there gaps between demographic groups (ethnicity, gender) in your program's course success rate?
   ☐ Yes ☒ No

5. Briefly describe the reason(s) for the trend in your program's course success rate, and for any gaps between demographic groups (1,000 characters max).

Course success rates remain high and without gaps between demographic groups.
ENGRV12 has lower success rates than other Engineering courses.

Based on your data analysis above, enter 1-2 initiatives below that describe how your program will increase its course success rate.

Initiative	Data		Resources Needed to Meet Initiative						
What will your program do to increase its course success rate?	Which metric(s) will this initiative improve?	How many students will this initiative directly impact?	Do you need additional resources to meet this initiative?	If yes, what type of resources?	Brief description of resources needed	Cost Estimate	Source of Cost Estimate	Has this request been made in a prior year?	If yes, which year(s)?
Provide students with access to reliable equipment the same as that used in industry.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☐ Equity gaps ☒ SLO's	All engineers	☐ Yes ☐ No	☐ Equipment ☐ Supplies ☐ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Replace outdated and unreliable scales with two (2) accurate and precise scales capable of measuring up to 600 grams with an accuracy of 0.01 grams	$ 1,100.00	Website	☐ Yes ☐ No	
Provide students with access to reliable equipment the same as that used in industry.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☐ Equity gaps ☒ SLO's	All engineers	☐ Yes ☐ No	☐ Equipment ☐ Supplies ☐ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Acquire Four (4) Omega Strain Data Logger OM CP-BRIDGE110-1000 plus software, batteries, terminals replacing manual equipment from the 1940's.	$ 2,640.00	Website	☐ Yes ☐ No	2015

Section B - Degrees and Certificates Awarded

VC has set a standard to award a minimum of 1,178 degrees and certificates each year. Programs that have awarded fewer than 15 degrees/certificates over the past five years may be placed on discontinuance.

1. Does your program offer a degree or certificate of achievement?

   ☒ Yes ☐ No

   If yes, please examine the degree and certificate data, and skip to question 3. If no, please answer question 2.

2. How does your program contribute to Ventura College's meeting of its standard of awarding 1,178 degrees and certificates each year? (e.g. providing general education, IGETC, CSU-GE courses, etc.) (1,000 characters max). *After answering this question, skip to section C.*

3. Describe the trend in the number of degrees/certificates that your program has awarded over the past 5 years, and the reasons for the trend. In particular, if any active degree/certificate is on program warning, please address the reason(s) why it is on warning and your plan for improvement.

The number of certificates and degrees has been steadily rising over the past five years, with a spike in 2015-2016 to double the number from the previous years. This increase was due to a concentrated effort to determine which individuals were eligible for a certificate or degree and to seek them out.

Engineering students are primarily focused on transfer.

4. Are there gaps between demographic groups (ethnicity, gender) in the number of degrees and certificates awarded by your program?

   ☒ Yes ☐ No

5. If yes, please describe the gaps, and the reasons for any gaps between demographic groups (1,000 characters max).

There is a low number of females awarded a degree or certificate. However, this number is consistent with the demographic groups studying engineering.

The percentage of white students earning degrees or certificates is lower.

Based on your data analysis above, enter 1-2 initiatives below that describe how your program will increase the number of degrees and/or certificates it awards to students.

Initiative	Data		Resources Needed to Meet Initiative						
What will your program do to increase the number of degrees and/or certificates it awards to students?	Which metric(s) will this initiative improve?	How many students will this initiative directly impact?	Do you need additional resources to meet this initiative?	If yes, what type of resources?	Brief description of resources needed	Cost Estimate	Source of Cost Estimate	Has this request been made in a prior year?	If yes, which year(s)?
Engage and interest more students in testing the properties of diverse engineering materials and increase the number of students earning degrees and certificates.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☒ Equity gaps ☒ SLO's	All engineers	☐ Yes ☐ No	☐ Equipment ☐ Supplies ☐ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Materials Engineering universal test machines were built in the 1940's. They are permanently placed in the lab, require several lab sessions for training, can need up to an hour of preparation, and are intimidating to uninitiated student	$ 23,556.00	Quote from Pasco Scientific	☐ Yes ☐ No	2014 Purchased one machine Requesting additional machines
Provide equipment necessary for students to complete required coursework. Engage and interest more students in testing the properties of diverse engineering materials and increase the number of students earning degrees and certificates.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☐ Equity gaps ☒ SLO's	All engineers	☐ Yes ☐ No	☐ Equipment ☐ Supplies ☐ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Magnetic disks and bimetal plates for polishers. These disks and plates are required equipment for the polishers in the laboratory.	$ 2,248.00	Quote from Buhler	☐ Yes ☐ No	

Section C - Student Learning Outcomes

1. Are there any courses your program offers that have never been assessed?
   ☐ Yes ☒ No
2. If yes, list the courses and explain why they haven't been assessed. (1,000 characters max)

3. What percentage of your program's courses have assessed at least half of their SLO's?
   100 %
4. Have you made any changes to courses based on the results of SLO assessments?
   ☒ Yes ☐ No
5. If yes, briefly describe the changes were made and the impact they had on student learning. (1,000 characters max)

   Subject topics have increased in number while decreasing the student effort by having more, but smaller, topics and student assessments. We are covering the required UC/CSU subject matter more efficiently. Past initiatives have introduced increased automation, making material and laboratory experiences more student friendly. This has improved student learning and increased retention. The newer laboratory equipment has resulted in increased number of female students.
6. How many courses have assessed SLO's, implemented a change, and then re-assessed the SLO's (i.e. "closed the loop")?
   7 courses
7. How closely have you adhered to your SLO rotational plan? (Examine TracDat "Adherence to Assessment Cycle" Report)
   ☒ Completely ☐ Mostly ☐ Partially ☐ Not at All

8. Did anything impede your ability to adhere to your SLO rotational plan? (Examine TracDat "Adherence to Assessment Cycle" and "Adherence to PSLO Assessment Cycle" Reports) (1,000 characters max)

NO

9. How does your program facilitate the achievement of the college's institutional learning outcomes? (1,000 characters max)

Engineering courses expose students to current and future academic responsibilities as well as introducing future career responsibilities.

Engineering courses heavily emphasize scientific and quantitative reasoning as well as critical thinking and problem solving in all courses.

10. How many department/program meetings have you held in the previous year in which SLO's have been discussed?
    3 meetings

2016-2017 Instructional Program Review

Based on your data analysis above, enter 1-2 initiatives below that describe how your program will improve student learning.

Initiatives	Data		Resources Needed to Meet Initiative						
What will your program do to improve student learning?	Which metric(s) will this initiative improve?	How many students will this initiative directly impact?	Do you need additional resources to meet this initiative?	If yes, what type of resources?	Brief description of resources needed	Cost Estimate	Source of Cost Estimate	Has this request been made in a prior year?	If yes, which year(s)?
Actively engage all, and especially female, students in engineering laboratories.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☒ Equity gaps ☒ SLO's	All engineers	☐ Yes ☐ No	☐ Equipment ☐ Supplies ☐ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Purchase two (2) Durston Rolling Mills. The rolling Mill replaces manual, unmeasurable methods of strain hardening soft metals (e.g. hammering copper wire)	$ 2,700.00	Quote from American Jewelry Supply	☐ Yes ☐ No	2014 Got funded by VC Foundation Grant Requesting additional rolling mills
Provide full access to microscope/camera/computer stations.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☐ Equity gaps ☒ SLO's	All Engineers	☐ Yes ☐ No	☐ Equipment ☐ Supplies ☐ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Acquire three (3) desktop computers Currently, only three of the six computer/microscope/camera stations have computers. Three computers are required to allow full use of the stations.	$ 3,600.00	Grant Jones	☐ Yes ☐ No	

Section D - Previous Year Initiatives

Click here to view previous year initiatives.

Section E – 2016-2017 Program Initiative Prioritization

Initiatives from the sections above will automatically populate the table below. Please prioritize them to indicate which initiatives are the top priorities for your program.

Initiative		Data		Resources Required to Meet Initiative						
Priority	What will your program do to improve student achievement and learning?	Which metric(s) will this initiative improve?	How many students will this initiative directly impact?	Do you need additional resources to meet this initiative?	If yes, what type of resources?	Brief description of resources needed	Cost Estimate	Source of Cost Estimate	Has this request been made in a prior year?	If yes, which year(s)?
5	Provide students with access to reliable equipment the same as that used in industry.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☐ Equity gaps ☒ SLO's	All engineers	☒ Yes ☐ No	☒ Equipment ☐ Supplies ☐ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Replace outdated and unreliable scales with two (2) accurate and precise scales capable of measuring up to 600 grams with an accuracy of 0.01 grams	$ 1,100.00	Website	☐ Yes ☒ No	
6	Provide students with access to reliable equipment the same as that used in industry.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☐ Equity gaps ☒ SLO's	All engineers	☒ Yes ☐ No	☒ Equipment ☐ Supplies ☐ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Acquire Four (4) Omega Strain Data Logger OM CP-BRIDGE110-1000 plus software, batteries, terminals replacing manual equipment from the 1940's.	$ 2,640.00	Website	☒ Yes ☐ No	2015

Initiative		Data		Resources Required to Meet Initiative						
Priority	What will your program do to improve student achievement and learning?	Which metric(s) will this initiative improve?	How many students will this initiative directly impact?	Do you need additional resources to meet this initiative?	If yes, what type of resources?	Brief description of resources needed	Cost Estimate	Source of Cost Estimate	Has this request been made in a prior year?	If yes, which year(s)?
1	Engage and interest more students in testing the properties of diverse engineering materials and increase the number of students earning degrees and certificates.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☒ Equity gaps ☒ SLO's	All engineers	☒ Yes ☐ No	☒ Equipment ☐ Supplies ☐ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Materials Engineering universal test machines were built in the 1940's. They are permanently placed in the lab, require several lab sessions for training, can need up to an hour of preparation, and are intimidating to uninitiated student	$ 23,556.00	Quote from Pasco Scientific	☒ Yes ☐ No	2014 Purchased one machine Requesting additional machines
2	Provide equipment necessary for students to complete required coursework. Engage and interest more students in testing the properties of diverse engineering materials and increase the number of students earning degrees and certificates.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☐ Equity gaps ☒ SLO's	All engineers	☒ Yes ☐ No	☒ Equipment ☐ Supplies ☐ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Magnetic disks and bimetal plates for polishers. These disks and plates are required equipment for the polishers in the laboratory.	$ 2,248.00	Quote from Buhler	☐ Yes ☒ No	

Initiative		Data		Resources Required to Meet Initiative						
Priority	What will your program do to improve student achievement and learning?	Which metric(s) will this initiative improve?	How many students will this initiative directly impact?	Do you need additional resources to meet this initiative?	If yes, what type of resources?	Brief description of resources needed	Cost Estimate	Source of Cost Estimate	Has this request been made in a prior year?	If yes, which year(s)?
3	Actively engage all, and especially female, students in engineering laboratories.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☒ Equity gaps ☒ SLO's	All engineers	☒ Yes ☐ No	☒ Equipment ☐ Supplies ☐ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Purchase two (2) Durston Rolling Mills. The rolling Mill replaces manual, unmeasurable methods of strain hardening soft metals (e.g. hammering copper wire)	$ 2,700.00	Quote from American Jewelry Supply	☒ Yes ☐ No	2014 Got funded by VC Foundation Grant Requesting additional rolling mills
4	Provide full access to microscope/camera/computer stations.	☒ Course Success Rate ☒ Degrees/ Certificates Awarded ☐ Equity gaps ☒ SLO's	All Engineers	☒ Yes ☐ No	☐ Equipment ☐ Supplies ☒ Technology ☐ Facilities ☐ Professional Development ☐ Student Workers **Use page 13 for faculty/staff hiring requests*	Acquire three (3) desktop computers Currently, only three of the six computer/microscope/ camera stations have computers. Three computers are required to allow full use of the stations.	$ 3,600.00	Grant Jones	☐ Yes ☒ No	

Section F - Full-Time Faculty Hire Requests

Priority	Request Type	Discipline/Program	Brief Description	Has this position been requested in a past year?	If so, which year(s)?
1	Select One			Select One	
2	Select One			Select One	
3	Select One			Select One	
4	Select One			Select One	

Section G - Classified Hire Requests

Priority	Request Type	Position	Full-Time or Part-Time	Brief Description	Salary and Benefits Cost	Has this position been requested in a past year?	If so, which year(s)?
1	Select One		Select One			Select One	
2	Select One		Select One			Select One	
3	Select One		Select One			Select One	
4	Select One		Select One			Select One	

Section H – Process Assessment

How have the changes in the program review process this year worked for your area?

Information has been easily accessible and the system streamlined. There has been less frustration and better interaction with department members.

How would you improve the program review process based on this experience?

Keep the process consistent in future years.

Appeals

After the program review process is complete, your program has the right to appeal the ranking of initiatives (i.e. initiatives that should have been ranked high but were not, initiatives that were ranked high but should not have been), the division's decision to support/not support program discontinuance, or the process (either within the department/program or the division) itself.

If you choose to appeal, please complete the Appeals form (Appendix E) that explains and supports your position. Forms are located at the Program Review VC website.

The appeal will be handled at the next higher level of the program review process.

Section I – Submission Verification

Preparer:

Michelle Millea

Dates met (include email discussions):

SEP 7, 9 15, 23, OCT 3, 5, 6, 7

List of Faculty who participated in the program Review Process:

Michelle Millea
George Warren
Jeff Wood

Preparer Verification:

_____

I verify that this program document was completed in accordance with the program review process.

Dean Verification:

_____

I verify that I have reviewed this program review document and find it complete. *The dean may also provide comments (optional):*

Submit