

## PROGRAM REVIEW UPDATE 2016-2017

**Program: ENGR (Engineering)**

**Division: MSEPS**

**Date: October 3, 2016**

**Writer(s): Keith Level**

**SLO/SAO Point-Person: Keith Level**

**Audience:** Deans, Vice Presidents of Student Services and Academic Services, All Planning and Allocation Committees. This document will be available to the public.

**Purpose:** To document significant program accomplishments, plans and needs between Triennial Program Reviews. This update should provide a snapshot of your program.

**Uses:** This update will be used to inform the campus and community about your program. It will also be used in the processes of creating Dean's Summaries, determining College Planning Priorities and allocating resources.

**Time Frame:** This update should reflect on program status during the 2015-16 academic year. It should describe plans starting now and continuing through 2017-18.

**Topics:** The first section of this Program Review Update focuses on general program reflection and planning. The second, third and fourth sections focus on reflection and planning regarding Student Learning Outcomes. Only instructional programs need to complete Sections 2, 3, and 4.

**Scope:** While this Program Review Update does ask for some analysis of data, detailed data reports in the form of appendices should be reserved for the Triennial Program Review.

**Instructions:**

- 1) Please fill in the following information as completely as possible.
- 2) If the requested information does not apply to your program, please write "Not Applicable."
- 3) Optional: Meet with your dean to review this document before October 10, 2016.
- 4) Send an electronic copy of this form to the Program Review Committee Chair and your Dean by October 10, 2016.

### Part One: Program Snapshot

**A. Have there been any significant changes to your program, your program's data or your program's needs since the previous Program Planning Update?**

**If there are any changes, describe the relevant information and its significance in the space below.**

These changes might have originated from within the program or because of an external source (the institution or the state, for example). Possible sources of relevant information might include, but are not limited to, the following:

- Data generated by your program
- Data from the Office of Institutional Research (<http://goo.gl/Ssfik2>)
- CEMC Data
- Retirements
- State Mandates
- Labor Market Data
- SLO/SAO Data (<http://goo.gl/jU2yIz>)

**Significant Changes:**

1. Enrollments continue to grow
2. Retirement of Carolyn Baranouskas at the end of Fall 2016
3. Potential Sabbatical for Keith Level during Fall 2017 and Spring 2019
4. Engineering Technology Program now serving its 3<sup>rd</sup> cohort of Veterans Students

**Data from Office of IR / CEMC Data**

Data show an increase in Student Headcount of 42% between 2010-2015 in ENGR courses  
Data show an increase in Total Enrollment of 31% between 2010-2015 in ENGR courses  
Data show that Latinos now make up 34% of all ENGR enrollments, an increase from 23% in 2010.

### Retirements

1. Carolyn Baranouskas is retiring from teaching ENGR 22 after Fall 2016 semester
2. Keith Level is applying for Sabbatical Leave for Fall 2017 and Spring 2019

### State Mandates

### Labor Market Data

### SLO Data

## B. What objectives, initiatives, or plans from the 2015 Program Review Update have been achieved and how?

### *PRU 2015 stated:*

- Maintain growth trend for ENGR 10 courses
  - Plan an effective expansion of some course offerings.
  - Continue to effectively teach, and plan (where possible) courses for Veterans Cohort classes.
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- ENGR 10 enrollments continue to be strong, both in Spring 2016 and Fall 2016
  - Offering ENGR 44 during Fall semester is still under consideration, though may be delayed if Keith Level is granted a sabbatical leave for Fall 2017.
  - ENGR 10 is currently being taught to the 3<sup>rd</sup> cohort of Veterans. ENGR 22 will be taught to the 3<sup>rd</sup> cohort during Spring 2017. ENGR 37 will be taught to the 2<sup>nd</sup> cohort during Spring 2017.

## C. Discuss at least one example of how students have been impacted by the work of your program since the last program review update (if you did not already answer this in Question B).

More ENGR courses offered, including multiple sections of courses (ENGR 44 has added one additional lab section during Spring semester), and courses formerly exclusive to veterans' students have opened up to include some non-veterans' students. ENGR courses in the Academic Year 2016-17 make up 1.43 FTEF, compared to 1.08 FTEF just a few years ago.

## D. What obstacles has your program faced in achieving objectives, initiatives, or plans?

1. People / unassigned time
2. Scheduling

No unassigned time is available anywhere in ENGR, and it has been this way since 2008 (the previous Engineering instructor received 2.0 CAH unassigned time every semester during his entire time at LPC). A full-load in Engineering requires teaching 4-5 technical classes each semester, a condition which doesn't exist in many other Math/Science disciplines. As the only full-time instructor in Engineering, Keith Level teaches 4-5 courses every semester, plus performs multiple other duties that are not covered in the additional 5 hours/week time which are part of the contract. This particular issue has been included in every ENGR program review and program review update for the last 5+ years, yet still hasn't been addressed, let alone discussed.

Careful scheduling is essential to a successful engineering transfer program and a successful veterans' cohort program. The amount of careful scheduling of Engineering courses, especially in coordination with other required courses for engineering transfer, has not been adequate.

**E. What are your most important plans (either new or continuing) for next year?**

Staffing for additional course sections and to replace Keith Level's load, should he be granted a sabbatical, during Fall 2017.  
Continuing to develop and grow the Makers Space  
Continue to expand laboratory equipment for use in ENGR 44 and ENGR 46.  
Possibly add an additional section of an Engineering course which is currently only offered once per academic year (ENGR 35, ENGR 44, ENGR 46)

**F. Instructional Programs: Detail your department's plans, if any, for adding DE courses, degrees, and/or certificates. For new DE degrees and/or certificates (those offered completely online), please include a brief rationale as to why the degree/certificate will be offered online.**

There are no immediate plans to offer DE courses in Engineering.

**G. Do plans listed under Question E or Question F connect to this year's planning priorities (listed below)? If so, explain how they connect.**

***Planning Priorities for 2016-17***

- ***Establish regular and ongoing processes to implement best practices to meet ACCJC standards***
- ***Provide necessary institutional support for curriculum development and maintenance***
- ***Develop processes to facilitate ongoing meaningful assessment of SLOs and integrate assessment of SLOs into college processes***
- ***Expand tutoring services to meet demand and support student success in Basic Skills, CTE and Transfer courses.***

ENGR provides about 25-30 Transfer students in Engineering each year.  
Keith Level's proposed sabbatical leave Curriculum development and maintenance  
SLO assessments are an on-going challenge.

**H. Instructional programs: Did your program meet its program-set standard for successful course completion? \_X\_ yes \_no**

(This data can be found here: <http://goo.gl/Ssfik2>)

**If your program did not meet your program-set standard, discuss possible reasons and how this may affect program planning or resource requests.**

***Not applicable***

**I. Units with SAOs: Using SAO data from last year, describe the impacts of SAO practices on student learning, achievement, or institutional effectiveness. Describe the practices which led to the success. (Copy the box below if you would like to discuss multiple examples). SAO data can be found here: <http://goo.gl/jU2yIZ>**

SAO: see below

Describe the quantitative or qualitative results:

Discuss any actions taken so far (and results, if known):

Discuss your action plan for the future:

Keith Level and Jennifer Decker, adjunct Engineering instructor, will meet during Fall Semester 2016 to discuss both CSLO changes and the creation of, and mapping of, PSLOs. Keith Level will also create CSLOs for ENGR 37, a recently created course that is part of the veterans' ASMET program.

**Part Two: Course-Level SLO Assessment Schedule**

**THIS SECTION HAS BEEN REMOVED. PLEASE SKIP TO PART THREE.**

**Part Three: Assessment Results  
(Instructional Programs Only)**

1. Describe an example of how your program used **course SLO data (SLOs)** from last year (2015-16) to impact student learning or achievement. (Copy the box below if you would like to discuss multiple examples).

Course:
Course SLO:
Describe the quantitative or qualitative results:
Discuss any actions taken so far (and results, if known):
Discuss your action plan for the future:

2. Degree/Certificate granting programs only: Describe an example of how your program used **program-level SLO data (PSLOs)** from last year (2015-16) to impact student learning or achievement. (Copy the box below if you would like to discuss multiple examples).

Degree/Certificate: <i><b>Not applicable</b></i>
Program SLO:
Describe the quantitative or qualitative results:
Discuss any actions taken so far (and results, if known):
Discuss your action plan for the future:

## Part Four: Program Curriculum Map (Instructional Programs with Degrees/Certificates Only)

### Background: Program-level Student Learning Outcomes

Program-level Student Learning Outcomes (PSLOs) are defined as the knowledge, skills, abilities, or attitudes that students have at the completion of a degree or certificate. Faculty within a discipline should meet to discuss the expected learning outcomes for students who complete a particular series of courses, such as those required for a certificate or a degree. PSLOs should be the big things you want students to get out of a degree or certificate. PSLOs should be developed throughout the program and in multiple courses. Discussions might also involve colleagues in other programs regarding prerequisites and transfer courses or community stakeholders regarding job expectations.

It is recommended that each program have 3-6 PSLOs. Discipline faculty members might need to have a more comprehensive list based on the requirements of external stakeholders (employers, state requirements, etc.). For most programs, PSLOs are only assessed through linked course-level SLOs. You might assess PSLOs in a capstone project or capstone course that many students complete when earning a certificate or degree. Alternatively, you could assess development of a set of skills as students advance through different courses in your program (ENG 1A -> ENG 4 or 7).

Program-level outcomes should

1. **describe** what students are able to do after completing a degree or certificate;
2. be **limited** in number (3-6 outcomes);
3. be **clear** so that students and colleagues can understand them;
4. be **observable** skills (career-specific or transferable), knowledge, attitudes, and/or values;
5. be **relevant** to meet the needs of students, employers, and transfer institutions;
6. be **rigorous** yet realistic outcomes achievable by students

## Curriculum Map Directions

**Note: If you have multiple degrees/certificates, choose one to map. If you have already submitted mapping to the SLO committee and do not wish to make changes, you may copy that mapping into this chart or attach the map you already created.**

1. In the boxes across the top row, review all the non-GE courses required for your degree/certificate. (including those that aren't in your discipline). Make any desired changes to those courses. (Electives do not need to be included, though they may).
2. In the left column, write the program learning outcomes you have drafted for your program.
3. In the boxes in the center of the page, mark the course SLO that maps to the program SLO you have identified. Each program SLO should map to multiple courses in your program.

<b>Example: English Associate's Degree for Transfer</b>						
<b>Program Learning Outcomes</b>	<b>Required Courses in Degree/Certificate</b>					
	Eng 4	Eng 7	Eng 35	Eng 41	Electives* (Eng 20, 32, 45, 44)	MSCM 1*
1. Identify and evaluate implied arguments in college-level literary texts.	x					
2. Write an academic essay synthesizing multiple texts and using logic to support a thesis.	x	x				
3. Write a research paper using credible sources and correct documentation.	x	x				x
4. Analyze an author's use of literary techniques to develop a theme.			x	x	x	

\*Including electives is optional.

Your Program's Map

Degree or Certificate: <b>Associates of Science Degree in Mechanical Engineering Technology</b>													
Program Learning Outcomes (3-6 recommended)	Required Courses in Degree/Certificate												
	MATH 55/38/20	ENGR 10	PHYS 2A	WLDT									
1. <b>TBD</b>													
2.													
3.													
4.													
5.													
6.													

1. Did you make any changes to your existing mapping? (circle one)

Yes

No

**This degree/certificate did not have previous mapping**

2. If you answered "yes" to Question 1, explain what changes you made.

3. Reflection Questions: The following questions are for the consideration of your program as you look at your completed chart. You do not need to record your responses here. If you discuss these questions with others (for example, at a department meeting), you may want to take minutes documenting your discussion.

- a. How many courses help students achieve each program outcome? Do students have enough opportunities to achieve the outcome?
  - b. In which course(s) are students likely to demonstrate satisfactory achievement of each program outcome? In other words, which courses(s) might be an official or unofficial capstone requirement?
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- a. Program Level outcomes do not yet exist for the AS degree program in Mechanical Engineering Technology.
  - b. The courses most likely to represent an unofficial capstone requirement are either Welding Courses or Engineering Courses (ENGR 22, ENGR 37)