

2018 INSTRUCTIONAL ANNUAL PROGRAM PLANNING WORKSHEET

CURRENT YEAR: 2017-2018

CLUSTER: 1 – SCIENCES AND MATH

NEXT SCHEDULED CPPR: 2019 CURRENT DATE: 2/8/2018

PROGRAM: CHEMISTRY

LAST YEAR CPPR COMPLETED: 2014

The Annual Program Planning Worksheet (APPW) is the process for:

- reviewing, analyzing and assessing programs on an annual basis
- documenting relevant program changes, trends, and plans for the upcoming year
- identifying program needs, if any, that will become part of the program's resource plan
- highlighting specific program accomplishments and updates since last year's APPW
- tracking progress on a Program Sustainability Plan if established previously.

Note: Degrees and/or certificates for the same program may be consolidated into one APPW.

This APPW encompasses the following degrees and/or certificates:

AS- Chemistry

GENERAL PROGRAM UPDATE

Describe significant changes, if any, to program mission, purpose or direction. *If there are not any, indicate: NONE.*

No significant changes to program, mission, or purpose.

PROGRAM SUSTAINABILITY PLAN UPDATE

Was a Program Sustainability Plan established in your program's most recent Comprehensive Program Plan and Review?

Yes ☐ If yes, please complete the Program Sustainability Plan Progress Report below.

No ☒ If no, you do not need to complete a Progress Report.

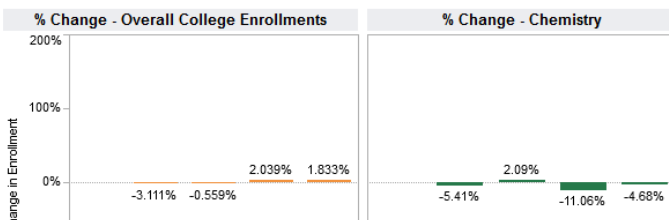
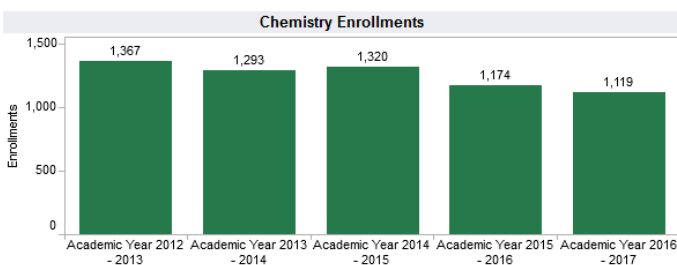
If you selected yes, please complete the Program Sustainability Plan Progress Report below after you complete the Data Analysis section. That data collection and analysis will help you to update, if necessary, your Program Sustainability Plan.

DATA ANALYSIS AND PROGRAM-SPECIFIC MEASUREMENTS

Your responses to the prompts for the data elements below should be for the entire program. If this APPW is for multiple degrees and/or certificates then you MAY want to comment on each degree and/or certificate, or discuss them holistically for the entire program being sure to highlight relevant trends for particular degrees and/or certificates, if necessary. Responses in this document need only reference the most recent year's available data.

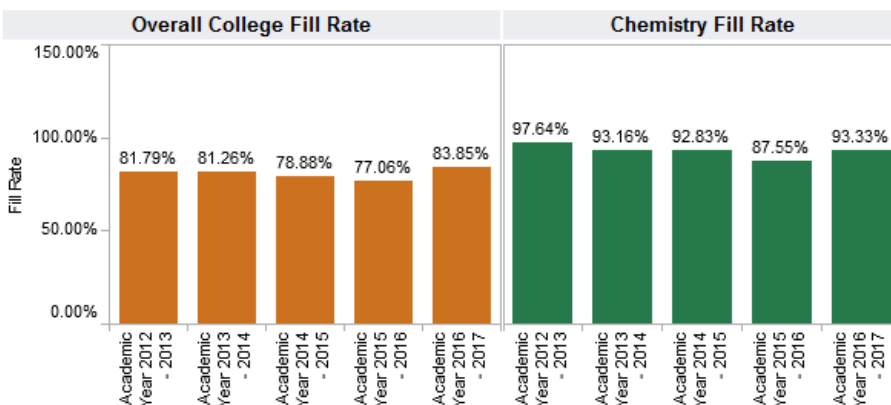
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General Enrollment (Insert Aggregated Data Chart)



Comment: Chemistry enrollments have dropped 18% since 2012-2013 (compared to 4.4% college-wide, minus dual enrollment). The decline in chemistry may have several causes other than fewer students. New first call classrooms and a new FT-TT faculty member may help stem the decline in enrollment, although 2 chemistry faculty have significant reassign time this academic year and one PT chemistry faculty member is transitioning to earth/ocean sciences.

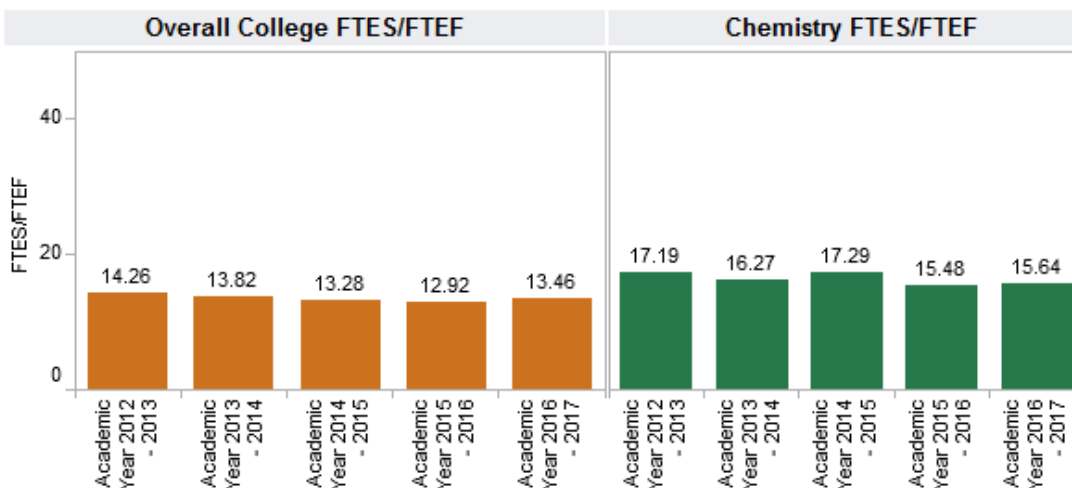
General Student Demand (Fill Rate) (Insert Aggregated Data Chart)



Despite the decline in overall enrollment, the fill rates in chemistry remain high due to effective management of our section offerings.

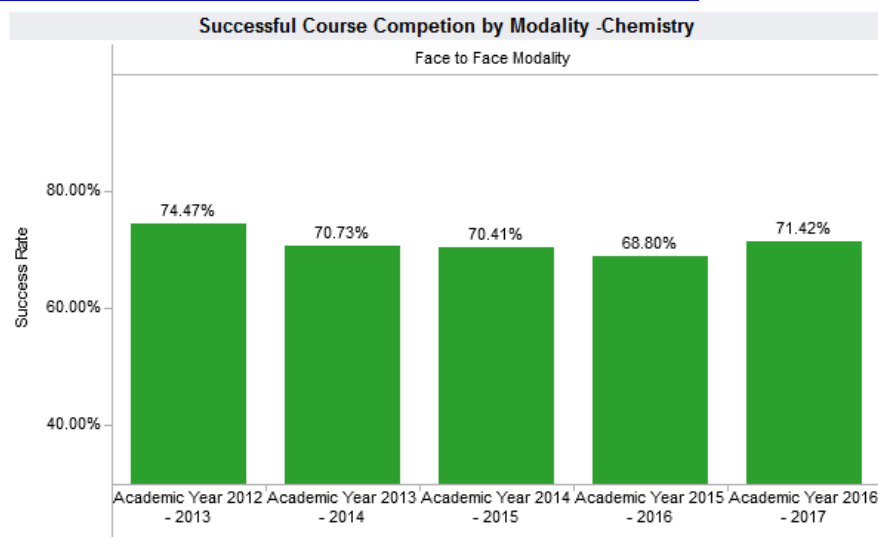
General Efficiency (FTES/FTEF) (Insert Aggregated Data Chart)

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While the efficiency of the department has declined, this is partially due to increased access in greater offerings of evening and hybrid classes. Chemistry is still well above the college efficiency average and target of 15.0.

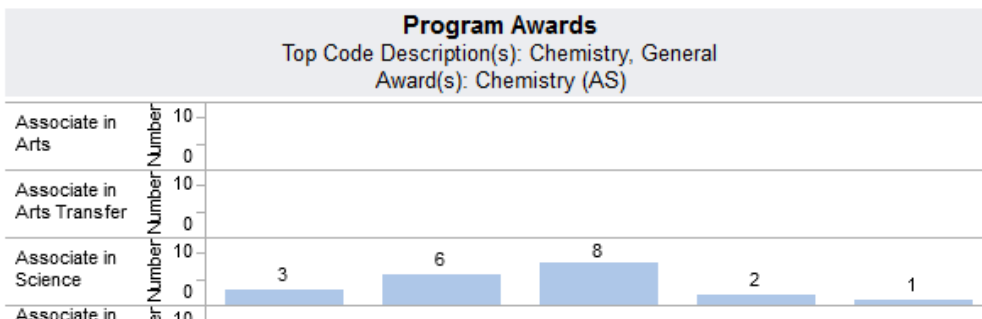
Student Success—Course Modality (Insert Data Chart)



The chemistry program has only offered one course, Chem 201P, fully online and this course only has one section per semester. Therefore, there is not enough data to compare modalities.

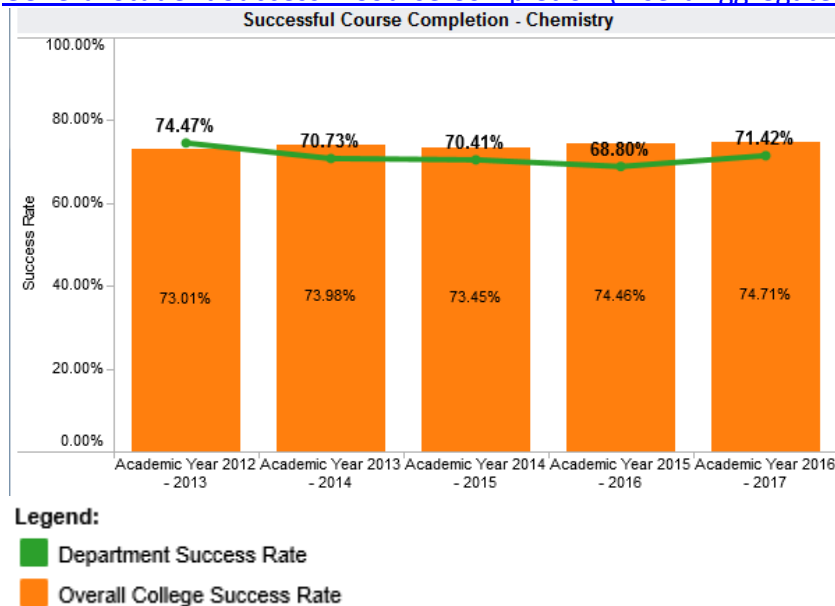
Degrees and Certificates Awarded (Insert Data Chart)

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Most of our students are not chemistry majors, and the service nature of our courses is evident in the low number of degrees awarded. It is not possible to award a chemistry A.D-T unless math and physics lower units for courses. That change does not seem feasible at this time. Chemistry faculty do tout the benefit of a chemistry AS to students in chem 212, our capstone courses.

General Student Success – Course Completion (Insert Aggregated Data Chart)



Chemistry student success is lower than the overall college values (73.7-75.7%). Chemistry is hard, so it's not surprising that our success numbers are low. It's better than math, though!

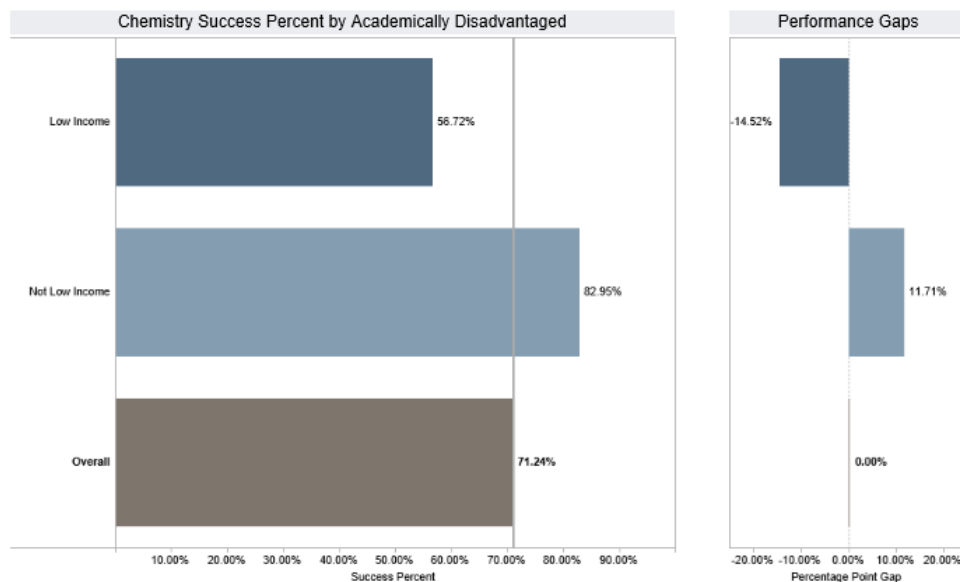
Review the [Disaggregated Student Success](#) charts; include any charts that you will reference. Describe any departmental or pedagogical outcomes that have occurred as a result of programmatic discussion regarding the data presented.

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Chemistry Department Success Rates Disaggregated by income status



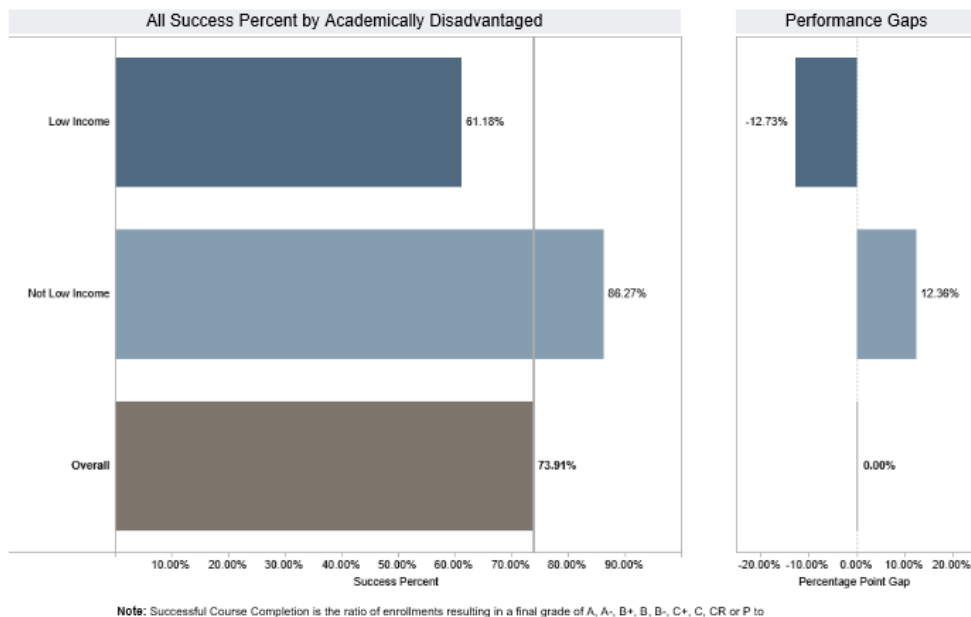
Successful Course Completion by Student Subpopulation



College Success Rates Disaggregated by income status



Successful Course Completion by Student Subpopulation



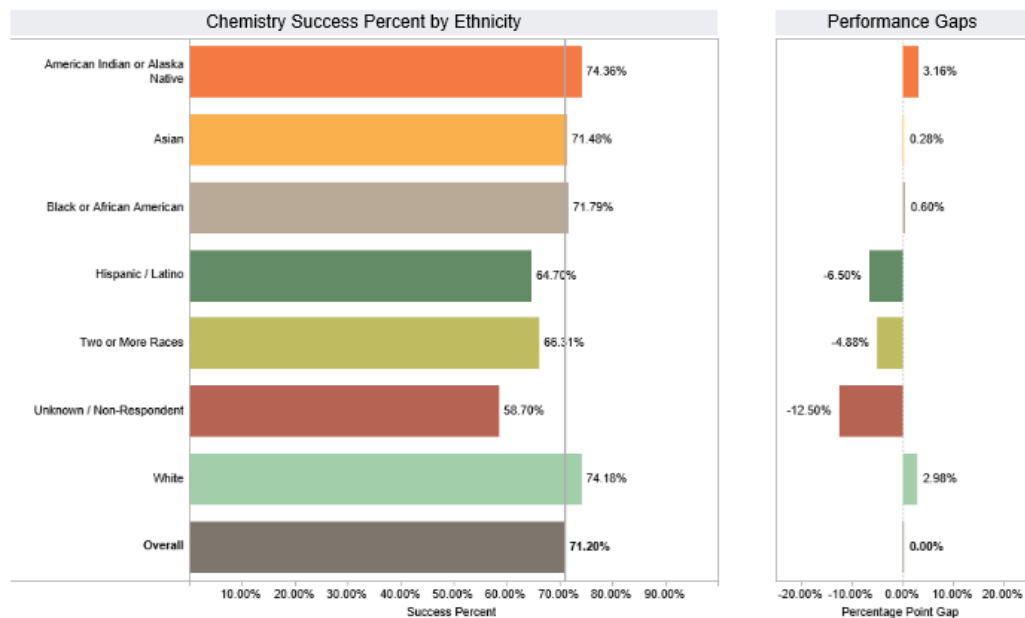
Low income students have a larger equity gap (14.52%) in chemistry than college-wide (12.73%) by a small amount. This could be due to economic barriers of higher cost textbooks and the necessity of chemistry students to attend labs, which take more time than lecture, and may reduce students' abilities to work enough hours at their jobs to support themselves.

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Chemistry Department Success Rates Disaggregated by ethnicity



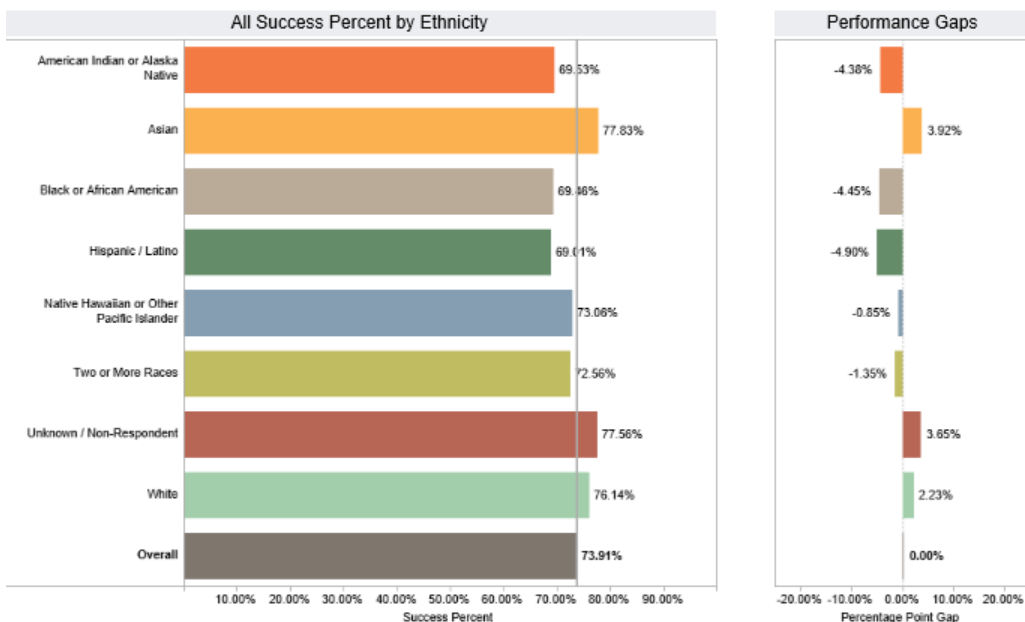
Successful Course Completion by Student Subpopulation



College Success Rates Disaggregated by ethnicity



Successful Course Completion by Student Subpopulation



Students who identify as black or African American, Hispanic/Latino, two or more races, or unknown are negatively disproportionately impacted in the chemistry department compared to other ethnicities. This impact is greater in the chemistry department than college-wide. It is unknown how much this impact is effected by the lower sample size in the chemistry department.

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OTHER RELEVANT PROGRAM DATA (OPTIONAL)

Provide and comment on any other data that is relevant to your program such as state or national certification/licensure exam results, employment data, etc. If necessary, describe origin and/or data collection methods used.

PROGRAM OUTCOMES ASSESSMENT CHECKLIST AND NARRATIVE

CHECKLIST:

- ☐ SLO assessment cycle calendar is up to date.
- ☐ All courses scheduled for assessment have been assessed in eLumen.
- ☐ Program Sustainability Plan progress report completed (if applicable).

NARRATIVE:

Briefly describe program changes, if any, which have been implemented in the previous year as a direct result of the Program or Student Services Learning Outcomes Assessment. *If no program changes have been made as results of Program or Student Services Learning Outcomes Assessment, indicate: NONE.*

Delivery: Chem 201P, changed to fully online for the fall session 2017 as an experiment.

Scheduling: Chem 201A/201B was not offered in summer 2017 due to staffing issues, but Chem 201B will be offered in summer 2018.

Facilities: The opening of the 2600 building has taken some stress from scheduling, allowing classes to be offered at a greater variety of times to fit students' needs. The division uses rooms 2606, 2607, and 2609. However, the new rooms in the 2600 building are not ideal for teaching chemistry classes. They do not have instructor benches with sinks for conducting demonstrations and most of the rooms do not have periodic tables (the department temporarily installed one in 2606). In rooms 2606 and 2607, the projection capabilities do not allow for dual projection of separate content from the two projectors, so that an instructor cannot display computer graphics on one screen while displaying work on the document camera on the other screen. This is useful for teaching material with a large number of structural content, such as Chem 201B, 212A, and 212B. It is also challenging to write the solutions to chemistry problems that take up a lot of space, which is required in Chem 201B. Therefore, the new instructional building has not removed as much of the stress from scheduling as necessary for the program.

Staffing: A new full-time tenure-track chemistry instructor was hired starting fall 2017. In addition, the department is currently in recruitment for another full-time tenure-track chemistry instructor to start fall 2018.

Staffing: One part-time faculty member has shifted from teaching chemistry classes to teaching earth science classes, which has negatively affected staffing. In addition, it is anticipated that there may be a retirement in the department soon.

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PROGRAM PLANNING / FORECASTING FOR THE NEXT ACADEMIC YEAR

Briefly describe any program plans for the upcoming academic year. These may include, but are not limited to the following: *(Note: you do not need to respond to each of the items below). If there are no forecasted plans for the program, for the upcoming year, indicate: NONE.*

- A. New or modified plans for achieving program-learning outcomes.
- B. Anticipated changes in curriculum, scheduling or delivery modality.

Chemistry anticipates moving a section of 201B to the blended format in the near future.

Chemistry faculty will be working with the rest of the division to develop a course for Environmental Science majors to complete that ADT.

The chemistry department is working to add a Chem 201BX course, which will be a supplemental problem-solving class to support students in Chem 201B. The department has also been discussing the possibility of helping student success by increasing contact time in lab for Chem 201A and Chem 201B.

- C. Levels, delivery or types of services
- D. Facilities changes

The division scheduling will be easier with additional first call classrooms. It is hoped that the AV/projection systems can be improved to make the new rooms more usable.

The 2300 building is in need of renovation and this is planned to some level during the 2018 calendar year. Maintaining open space for students and having a room for testing and meeting with students are priorities. Moving our PT chemistry faculty into 2300 offices is another priority that should occur this term.

The frustration with our existing photocopier could be alleviated with a new or migrated machine that doesn't require repair on such a frequent basis.

- E. Staffing projections

Chemistry is currently (Feb 2018) recruiting for a FT TT position to start in fall 2018. This is a partial replacement for a retiring tenured faculty, a PT faculty who is reducing his teaching load to one term a year, and another PT faculty that will no longer be teaching chemistry.

- F. Other

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PROGRAM SUSTAINABILITY PLAN PROGRESS REPORT

This section only needs to be completed if a program has an existing Program Sustainability Plan. Indicate whether objectives established in your Program Sustainability Plan have been addressed or not, and if improvement targets have been met.

Area of Decline or Challenge	Identified Objective (Paste from PSP)	Planning Steps (Check all that apply)	Has the Improvement Target Been Met?
Enrollment		☐ Identified ☐ Resources Allocated ☐ Implemented	---
Student Demand (Fill Rate)		☐ Identified ☐ Resources Allocated ☐ Implemented	---
Efficiency (FTES/FTEF)		☐ Identified ☐ Resources Allocated ☐ Implemented	---
Student Success – Course Completion		☐ Identified ☐ Resources Allocated ☐ Implemented	---
Student Success— Course Modality		☐ Identified ☐ Resources Allocated ☐ Implemented	---
Degrees and Certificates Awarded		☐ Identified ☐ Resources Allocated ☐ Implemented	---

If Program Sustainability Plan is still necessary, provide a brief description of how you plan to continue your PSP and update your PSP to remove any objectives that have been addressed and include any new objectives that are needed.

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OPTIONAL SURVEY

Please take 15 minutes to complete the IPPR Survey. Your assessment will serve to help us make the form and process better.

Thanks,

The IPPR Committee

Survey Link: <https://www.surveymonkey.com/r/J79W8GW>