COLLEGE OF THE REDWOODS | PROGRAM REVIEW Instructional Program Review Template

Year : 2019-2020 Plan Type: (select a plan type) Program : Biological & Environmental Sciences **Save My Work**

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Reviewed on 12/6/2019 by R-EUREKA\Stephanie-Burre

Program Information | Data Analysis | Critical Reflection of Assessment Activities | Evaluation of Previous Plans | Planning | Resource Requests | Author Feedback | PRC Response

Curriculum & Assessment Data

Assessment (click here to go to the assessment planning page)

Upcoming Assessments (plan)

Course	Outcome	Last Assessed	2020F	2021S	2021F	2022S	2022F	2023S	2023F	2024S
BIOL-1	1	2018F	☑	☑	☐	☑	☑	☐	☑	☐
BIOL-1	2	2018F	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-1	3	2019S	☑	☑	☑	☑	☑	☑	☑	☐
BIOL-15	1	2018S	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-15	2	2019S	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-15	3	2014-2015	☑	☑	☑	☑	☑	☑	☑	☑

BIOL-15	4	2019S	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-15	5	2019S	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-18	1	2019S	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-18	2	New	☐	☑	☑	☑	☐	☑	☑	☑
BIOL-18	3	2019S	☑	☑	☑	☑	☐	☑	☐	☑
BIOL-18	4	2019S	☑	☑	☑	☑	☐	☑	☐	☑
BIOL-2	1	2019F	☑	☑	☐	☑	☐	☑	☑	☐
BIOL-2	2	2019F	☑	☐	☑	☑	☑	☑	☑	☐
BIOL-2	3	2017F	☑	☑	☐	☑	☐	☑	☑	☑
BIOL-20	1	2017F	☑	☐	☑	☐	☑	☐	☑	☐
BIOL-20	2	2017F	☑	☐	☑	☐	☑	☐	☑	☐
BIOL-20	3	2019F	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-20	4	2019F	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-20	5	2019F	☑	☑	☑	☑	☑	☐	☑	☑
BIOL-21	1	2019F	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-21	2	New	☑	☑	☑	☑	☑	☐	☑	☑
BIOL-21	3	New	☑	☐	☑	☑	☑	☑	☑	☑
BIOL-27	1	2018S	☑	☑	☑	☑	☑	☑	☑	☐
BIOL-27	2	2018S	☑	☑	☑	☑	☑	☑	☑	☐
BIOL-27	3	2018S	☑	☑	☑	☑	☑	☑	☑	☐
BIOL-27	4	2018S	☐	☑	☑	☑	☑	☑	☑	☐
BIOL-3	1	2017S	☐	☑	☑	☑	☑	☑	☑	☑
BIOL-3	2	2017S	☐	☑	☑	☑	☑	☑	☑	☑
BIOL-3	3	2018S	☑	☑	☑	☑	☑	☑	☑	☑

BIOL-3	4	2018S	☑	☑	☑	☑	☑	☑	☑	☐
BIOL-4	1	2019F	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-4	2	2019F	☑	☑	☑	☐	☑	☑	☑	☑
BIOL-4	3	2018F	☑	☑	☑	☐	☑	☑	☑	☑
BIOL-4	4	2019F	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-4	5	2018F	☑	☑	☑	☑	☐	☑	☑	☑
BIOL-40	1	New	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-40	2	New	☑	☑	☑	☑	☑	☑	☐	☑
BIOL-40	3	New	☐	☐	☑	☑	☑	☑	☑	☑
BIOL-41	1	2019F	☐	☐	☑	☑	☑	☑	☑	☑
BIOL-41	2	2019F	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-5	1	2019S	☐	☑	☑	☐	☐	☑	☑	☐
BIOL-5	2	2018S	☐	☑	☑	☐	☐	☑	☑	☐
BIOL-5	3	2018S	☐	☑	☑	☐	☐	☑	☑	☐
BIOL-5	4	2018S	☐	☑	☑	☐	☐	☑	☑	☐
BIOL-6	1	2018S	☑	☑	☑	☐	☑	☑	☐	☑
BIOL-6	2	2018S	☑	☑	☑	☐	☑	☑	☐	☑
BIOL-6	3	2017S	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-6	4	2017S	☑	☑	☐	☑	☑	☐	☑	☑
BIOL-7	1	2017F	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-7	2	2017F	☑	☑	☑	☑	☑	☑	☑	☑
BIOL-7	3	2017F	☑	☑	☑	☑	☑	☑	☑	☐
BIOL-7	4	2017F	☑	☑	☑	☑	☑	☑	☑	☐
BIOL-8	1	2015-2016	☐	☑	☑	☐	☑	☑	☐	☑

BIOL-8	2	2018F	☐	☑	☑	☐	☑	☑	☐	☑
BIOL-8	3	2015-2016	☐	☑	☑	☐	☑	☑	☐	☑
BIOL-8	4	2017F	☐	☑	☑	☑	☑	☑	☐	☑
ENVSC-10	1	2020F	☑	☑	☑	☑	☐	☑	☐	☑
ENVSC-10	2	2018F	☑	☑	☐	☑	☐	☑	☐	☑
ENVSC-10	3	New	☑	☐	☑	☑	☑	☐	☑	☑
ENVSC-10	4	2019F	☐	☐	☑	☑	☑	☐	☑	☑

What courses, if any, are not on track with regard to a 4-year assessment cycle? Explain if this is a consequence of how often the course is offered or other mitigating factors such as outcome updates that may have changed the assessment cycle.

Most course outcomes (99%) have been assessed in the current 4-year cycle (Fall 2016 to Spring 2020). Most of the course CLOs have already been assessed for the current 4-year cycle, but a few are scheduled this year (see plans) to ensure the cycle is completed by Spring 2020.

Degree-level assessments are on track for the two Liberal Arts science degrees (LA-Science, LA-Science Exploration). One outcome for each program is scheduled for the 2019-2020 academic year. This will complete the current 4-year cycle.

The Biology ADT degree has only been existence for two years, but 4 of the 5 degree PLOs have already been assessed. Assessment of the 5th on is planned for Fall 2019.

# of course SLO reports submitted during 2018-2019. 24

# of degree/cert PLO reports submitted during 2018-2019. 3

Curriculum

Course	Course Outline of Record Approval Date	Status	Online Approval Date	Status	Interactive TV Approval Date	Status

84.2 % of Course Outlines of Record up to date.

Explain any mitigating circumstances.

Indicate if you have submitted updated Course Outlines of Record this fall.

If there is no plan for updating outdated curriculum, when will you inactivate?

BIOL 7S is a new approved course (for Fall 2019). The spotlight information reported here is incorrect, as the COR is brand new.

BIOL 2 and BIOL 15 are both now in the workflow in eLumen. The transition to eLumen has impacted the pace at which the revisions are occurring, as faculty manage the learning curve caused by this new curriculum tool. Because Biology/ENVSC faculty are one of the first groups in the Division to explore and use this new system, they are helping to elucidate a successful eLumen workflow. The updates for both courses will be complete by Fall 19.

Did the Program Advisory Committee meet in the last year? (select response)

3.1 What changes have been made to the program based on assessment findings? You may include results from your closing the loop reports that map to your program.

Repeated assessment results from LA-Science degree, PLO #4: "Communicate clearly about science, in speech and/or in writing, using technical language and a format appropriate to the discipline, as well as common language for the lay-public." as well as collegial communication regarding assessment generally (archived in Biology Department meeting Agendas and Notes on GoogleDocs), have led to the following changes:
-Science faculty are discussing "science specific" writing courses as a supplement to science classes. A writing support course for BIOL 7 (Physiology) has been developed and approved through the curricular process. This new course (BIOL 7S) is being team taught by English and Biology faculty in Fall 2019 as a concurrent support course. This pilot may lead to similar support courses in other STEM disciplines.
-Science faculty are working with Guided Pathway Coordinators to develop a Core Course for STEM meta-majors that includes an introduction to STEM disciplines and job opportunities, STEM-specific study skills and technical skills (e.g., scientific method,

3.2 Describe assessment findings/observations that may require further research or institutional support.

Assessment results from all lab courses reveal the need for a variety of teaching/learning strategies in order to help students find the tools that are best suited to their own needs. There are myriad ways to support active learning in the classroom, and several of our resource requests reflect an ongoing need to expand our active-learning resources. These range from the more mundane and inexpensive ("active-learning baskets" with clickers, clay, whiteboards, markers, etc.) to the more technological and expensive (virtual reality head sets and software for anatomy and physiology).

A variety of observations continue to nag at faculty regarding equity gaps, yet our assessment data are not clearly identifying these gaps nor offering solutions. Anecdotally, Native American students show interest in STEM majors but seem to drop out of classes early; retention in the early pre-nursing courses (BIOL 1 and 6) seems lower than in the "capstone course" BIOL 7 and the drops may be disproportionately Hispanic and Hmong students; single-working mothers with children in CR daycare have greater schedule constraints and difficulty accessing desirable pre-nursing courses, etc. Faculty continue to discuss solutions.

Summary of Section 3
How will your assessment findings impact planning for the next year?

Major themes for next year`s planning are 1) working on student written communication, 2) determining how to best identify and address equity gaps in our programs, and 3) helping students identify and orient to a major that suits their interests early on, and provide the resources that keep students on track for success in these majors.