Agenda and Evaluation Report for
Audit & Review Face-to-Face Meeting
University of Wisconsin-Whitewater
Environmental Science Majors and Minors, 2022-2023

Date: 3/14/2023
Time: 3:30PM CST
Place: LT4120, the Deans Conference Room

Invited: Provost John Chenoweth; Dean Frank Goza (L&S); Department Chair/Program Coordinator Dale Splinter; faculty and staff in the Environmental Science program; Audit & Review Team Chair Lynn Gilbertson; Audit & Review team members Edward Gimbel, Kim Kostka; Assessment Representative Katy Casey

Attended: Provost John Chenoweth, Dean Frank Goza, Dale Splinter, Margo Kleinfeld, Peter Jacobs, Edward Gimbel, Andrea Romero, Lynn Gilbertson

1) Call to order at 3:30 PM CST.

2) Introductions

3) Overview of review team evaluation, program comments
Program was commended for their efforts in developing the self-study and the impactful work that they are engaging in for the benefit of students in the program.

4) Discussion of Review Team's evaluation:

   a) Diversity remains a challenge in the program. Is it possible to more fully engage with a diverse student body in ways that do not require uncertain external grant funding?

Program provided additional initiatives/possibilities from a recent meeting such as engaging in STEM bootcamp, connecting with the McNair Program, and teaching BIO 120 in Spanish. The program has a rich history of faculty mentoring to support students at all stages of the program.

Dean provided commentary on future options related to budget and outreach.

Provost provided commentary supporting a shift in focus from diversity to inclusive practices, particularly highlighting the impact of efforts with existing students in the classroom setting.

   b) How are funds allocated to support student learning in the program? Provide an update on the external requests for equipment and resources.

Program reported that funds were sufficient, but limit in resources to expand and be creative. The biggest concerns were travel funding to engage students in rich field experiences and attaining more advanced technology. Currently the department is able to utilize the nature spaces near campus and existing equipment for field experiences. There seems to be a tricky balance between resources for rich experiences and high enrollments in single sections.

Dean expressed continued concerns about resources given existing budget situation and encouraged the program to craft a list of equipment needs.

Provost provided commentary regarding prioritizing needs and identified the necessity of communication to facilitate resource conversations with donors. The provost further highlighted the opportunity to tie needs to community to support investment and provided the Rock River watershed as an example.

Dean and Provost encouraged the program to continue to communicate needs to administration so that needs are known and can be included in big picture needs/asks across campus.

Program and Dean expressed significant concerns with web presence in supporting awareness of program's exceptional work. Provost indicated web presence is part of an ongoing conversation with consideration for resources, freedom/control of content/updates, and currency/necessity of material.

    c) Provide information that demonstrates how your program is unique and/or valued in the region and state?

Program identified "uniqueness" as providing a breadth of coursework promoting the interdisciplinary nature of the field compared to other programs in the state that emphasize the hard sciences. Their focus is on undergraduate experiences with small courses and a strong tradition of faculty mentoring. There is great opportunity to highlight the exceptional experiences that the program provides.

Dean was incredibly proud of the department and expressed that the department has been nominated for department of the year, won a system diversity award, as well as many other individual accolades such as a recent Fulbright Scholar.

Program coordinator provided exceptional appreciation for the program advisory board and attributed the existence/maintenance of the program to their efforts.

5) **Recommended Actions**: The evaluation report lists four recommended action (see page 13, point 4) related to assessment, retention, funding, and communicating value.

A&R committee members provided an opportunity for clarification on the recommended actions to support development of program response in the next self-study.

6) **Recommended Result**: *Continuation with minor concerns*
   - **Please make use of the detailed comments in the evaluation report (below).**
   - **Please select all applicable boxes and fill in the appropriate year:**
     ⊠ **Next FULL self-study will be due to the Dean on October 1, 2027 and to the Assessment Office on November 1, 2027.** No progress report.

A&R Committee members, Dean, and Provost strongly commended the program for the exceptional work and contribution to the University and student experience. The essence of comments in the report and meeting were to support the program in continuing their exceptional work and encourage the program to identify opportunities to highlight unique achievements/experiences/inclusive practices, communicate resource needs as they align with university mission/priorities, and seek areas for efficiency/feasibility in assessment practices.

7) Adjourn at 4:33PM CST.

Review team report is attached below, including Recommended Actions and instructions for Progress Reports (if required).

University of Wisconsin-Whitewater
Review of Audit & Review Self-Studies
Undergraduate Programs, 2022-2023

Date of Evaluation _____12/16/2022_____Short Self Study (SS*)_____
Program:___**Environmental Science**_____ Major ☒   Minor ☐

Evaluations submitted by: Lynn Gilbertson; Louis Fucilla; Edward Gimbel; Kim Kostka; Katy Casey
Review meeting attended by: Lynn Gilbertson; Louis Fucilla; Edward Gimbel; Kim Kostka; Katy Casey

I. General Program Information

1. The program's mission statement reflects the nature and scope

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

2. The program is aware and reflective of changes affecting improvement since the last review.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0
First self-study for the program	0

3. Characteristics of the program set it apart from others when compared regionally and nationally. The unique aspects of the program attract students.

Sufficient Evidence	0
Some/Partial Evidence	4
No/Limited Evidence	1

4. The program has been responsive to actions recommended from the previous Audit and Review Reports; Progress Reports have been submitted, if relevant.

Sufficient Evidence	4
Some/Partial Evidence	1
No/Limited Evidence	0
First self-study for the program	0

5. The program has achieved or maintained program-level accreditation or has considered seeking it, where appropriate (only select N/A if there is no accreditation available).

Sufficient Evidence	0
Some/Partial Evidence	0
No/Limited Evidence	0
N/A	5

General Comments related to Section I

The Environmental Science program responded to recommendations from past Audit and Review Committee members. That is not to say that the work they have done is complete, but it's a good start. Most commendable are the efforts to track graduates, consistent use of their UWW-based advisory board, and creation of and deployment of an action plan.

3. The strengths of the department and programs are well-articulated. It may be worth reviewing the offerings of other programs in the state to get a better sense of the comparative advantage that UWW brings to students.

I.2 responses here suggest program is reflective about changes that have occurred since last review. I.3 I'm between sufficient and some/partial evidence here. Program does a good job to discuss it's strengths. Would be really curious to see what program would get in terms of responses from students to the question of why ES at UWW. I.4 we need to give ES program credit for degree of responsiveness to past recommendations from A&R.

The program might consider collecting comparative data on regional or national programs to better support requests for resources and to understand the position on the program amidst other institutions.

II. Alignment within the University

1. The program contributes to the fulfillment of UW-Whitewater's Mission and Strategic Plan.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

2. The program supports general education and/or proficiency programs at the University.

Sufficient Evidence	4
Some/Partial Evidence	1
No/Limited Evidence	0

3. The program is collaborative and supports other academic programs across the College and/or University.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

General Comments related to Section II

The cross disciplinary nature of this program is to be commended and celebrated. It is clear the program is intentional about student access and success given the development of the new ENVSCI 100 course since the last review. There is also clear evidence of utilization of an advisor board.

II.2 It looks like the program offers one GenEd course. Is the program planning to offer additional GenEd courses or would the program be able to participate in teaching core course like Individual & Society or World of Ideas?

By design, this interdisciplinary program is collaborative across departments, uses general education curriculum, and provides ENVSCI 200 as a general education course to the university, and proves a good example of the Wisconsin Idea.

2. ENVSCI 200 is a valuable course for the university. Given student interest in environmental issues, are there more opportunities for the development of general education courses that could serve the general student body and help attract new environmental science students?   3. The interdisciplinary nature of the program makes it a real asset to the university.

III. Program Goals & Accomplishments

1. Goals and objectives were identified and undertaken to improve/advance the program.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

2. Goals currently in place will contribute to the program's advancement. Criteria for determining success were measurable and attainable.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

3. The program has a process for setting and assessing goals and making decision about changes to the program.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

General Comments related to Section III

There was a comment about establishing a budget line, does the department not have a budget? What are the needs of the program?
Good progress on goals to bring students into the major earlier with the 1-cr ENVSCI 100 course. Good progress on goal to develop curriculum for field experience with the ENVSCI 300 course. No progress yet on existing goal to establish a budget for the program. The goal to create an external steering committee shows promise; encouraging.
2. The goal of establishing an outside steering committee is an excellent idea.
This is a general comment on part III of the report. This is well-done by the program. They have demonstrated that goals/objectives were identified and implement (1), that goals will continue to advance the program and are measurable and attainable (2) and that they have a process is place for setting and assessing goals (3).

IV. Curriculum

1. The program has a clearly articulated, efficient, and purposeful curriculum.

Sufficient Evidence	4
Some/Partial Evidence	1
No/Limited Evidence	0

2. The program prepares students in majors, minors, and related emphases tracks in post-graduation and other applicable experiences.

Sufficient Evidence	4
Some/Partial Evidence	1
No/Limited Evidence	0

3. Appropriate assessment data were used in making curricular revisions.

Sufficient Evidence	3
Some/Partial Evidence	2
No/Limited Evidence	0

4. Students participate in the high impact practices.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

General Comments related to Section IV

2. I did not read a description of how the program prepares students in a way unique to this program. I agree that lifelong learning and internships are important, but wanted to learn more about the goals of the students in this program, and how you help them get there. 3. Good example of the impact of a curricular change on student development. Curricular changes seemed primarily based on the advisory boards perceptions of program needs

Regarding the use of assessment data, it seems that the study of student progress on the assessment of scientific method and the carbon cycle are establishing some baseline data. It's not clear from the assessment report and the A&R report how the department will use that data to move students forward with those learning goals. Good participation in HIPs across the curriculum.

1. The curricula are complex, but this is to be expected in interdisciplinary majors with a variety of available emphases. The various checklists and 4-year plans are helpful in navigating this complexity. 4. I would like to see a bit more information about the capstone course. Also, was the discontinuation of e-Portfolios premature? Are there ways to better integrate the portfolio into advanced coursework?

1.4 More of a question about HIPs in ES report. I recall earlier in report program mentions a 1-credit experiential learning course. Where does that fall here?

The program should be commended for their emphasis on high impact practices and experiential learning.

V. Assessment of Student Learning

1. The program has clearly articulated learning outcomes for students.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

2. Student learning outcomes are "mapped" to the curriculum.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

3. The program provided a timeline indicating when faculty and staff assess SLOs. The timeline is manageable and sustainable.

Sufficient Evidence	3
Some/Partial Evidence	2
No/Limited Evidence	0

4. The program collected a variety of appropriate assessment data allowing judgements about the extent to which students are achieving learning outcomes.

Sufficient Evidence	1
Some/Partial Evidence	4
No/Limited Evidence	0

5. Program faculty consider assessment data in making changes to the curriculum, students' learning outcomes, and/or other aspects of the program.

Sufficient Evidence	2
Some/Partial Evidence	3
No/Limited Evidence	0

6. Student learning outcomes are aligned with the LEAP Essential Learning Outcomes in a way that is reasonable and meaningful.

Sufficient Evidence	4
Some/Partial Evidence	1
No/Limited Evidence	0

7. Overall, the program has an appropriate assessment plan for measuring students' progress in attaining the outcomes.

Sufficient Evidence	3
Some/Partial Evidence	2
No/Limited Evidence	0

General Comments related to Section V

3. 2 SLOs were evaluated in 5-year, which suggested the plan should be revised to include assessment of all 6 for the next evaluation. 4. There did not seem to be sufficient, or a variety of data, collected during the review period. Significant time was spent on 2 SLOs, and the follow work proposed for 2019 was not completed.

Therefore, it is not clear that students are achieving the learning outcomes. 7. The plan should be revised to create something that is possible to implement and manage during a 5-year period.

SLO3 has data but that data has not been studied; plans to study this in Summer 2023. While the SLO1 and SLO2 data are described, there doesn't seem to be action plan to address the mismatch in where students are for those, vs where the program thinks they should be. The assessment subcommittee is working on assessment plans that will involve ENVSCI 200 and ENVSCI 300.

3. Given the five year timeline for assessing SLO 1 and 2, consider the timeline for assessing SLOs 3-6, all beginning this academic year. Is this a realistic timeline. (Note: the department has done a good job of spreading the responsibility for assessment across a number of faculty members. 3. I would encourage the department to prioritize following through with the plan to assess the final capstone papers.

1.4 The assessment plan is detailed, linked to the curriculum and it really appears the ES program is putting a lot of effort into doing assessment work. The only question I would raise is that may SLOs are being assessed in the same way (writing assessment with common rubric) and has the program considered other ways of assessing student learning? There may be a justification for using a similar approach and so ES may want to articulate that in future self-studies.

There is clear alignment of SLO's with ELOs. The template was clear and efficient.

VI. Student Recruitment, Enrollment, Retention, and Graduation: A. Trend Data

1. [MAJORS ONLY] Five-year enrollment and graduation trends reflect program vitality and sustainability.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

2. [MAJORS ONLY] Credits-to-degree show that students can complete the degree in four years, or reasonably efficiently.

Sufficient Evidence	2
Some/Partial Evidence	3
No/Limited Evidence	0

3. [MAJORS ONLY] As a follow up to program enrollment and graduation, describe the strategies used to recruit and retain students.

Sufficient Evidence	4
Some/Partial Evidence	1
No/Limited Evidence	0

4. Composition of students approximates or exceeds the diversity of students at the University.

Sufficient Evidence	1
Some/Partial Evidence	4
No/Limited Evidence	0

5. Students can enroll in appropriate courses and proceed without delaying graduation.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

6. Claim that the program is oversubscribed, undersubscribed, or at optimum level is justified or supported by examples or data.

Sufficient Evidence	4
Some/Partial Evidence	1
No/Limited Evidence	0

General Comments related to Section VI.A

3. Recruitment strategies were shared and are not unique to this program. Retention is sustained through HIPs and the program does a good job embedding these practices into their program. There were attempts to diversify student experience with two grant applications- are other efforts made to address lower representation of URM students in the program? Overall, it seems the program is mindful of enrollment numbers and demographics. 6. It seems the program is undersubscribed. I was a little confused at the program's description of manageable course load. It seems they are expecting courses of 12- is that accurate? Additionally, they reported a class of 32 is "impossible"?

It would be helpful to see how students' progress to the major. It sounds like there are three populations: students who come to the program as freshmen, students who enter as transfer students, and students who arrive late to the major. When evaluating credits to degree it might be helpful to disaggregate the data on these three groups. Regarding the composition of the students, the program has about half the URM students as a percentage compared to the university as a whole.

3. Are there opportunities to recruit students through more low-level, gened course offerings? 2. and 5. Given the wide availability of elective courses in the program, the credit to degree numbers might bear further scrutiny by the department if/when those numbers are available. 4. Diversity remains a challenge in the program. Is it possible to more fully engage with a diverse student body in ways that do not require uncertain external grant funding?

VI.4 Given that there is a slight difference in minority student enrollment university wide and in the ES program, what might the program do to increase engagement with non-white students? It may not lead to additional majors and thus may not change overall student composition in next self-study but would show effort on behalf of the program to address the issue. Additionally, what about another components of diversity like gender or first gen status? Program may exceed university in these areas and should be given credit for it if so.

VI. Student Recruitment, Enrollment, Retention, and Graduation:

B. Demand for Graduates

1. [MAJORS ONLY] Placement information indicates that program graduates find employment or continue their education.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

2. Data suggests that employment opportunities for graduates of this program will remain strong.

Sufficient Evidence	4
Some/Partial Evidence	1
No/Limited Evidence	0

General Comments for VI.B

The program collects data on students plans post-graduate. It is not clear how the program uses the information to better understand the program and student experiences.

There is evidence that the program is making an effort to track its graduates. Graduates are finding employment and/or enter graduate school.

VI.1 program deserves praise for strong record of placing students in jobs or in grad school.

VII. Resource Availability & Development:
A.   Faculty and Staff Resources

1. Information on numbers of full and part-time faculty and staff are provided. Expertise of teaching staff are aligned with the needs and future vision for the program.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

2. Information is provided about changes in the faculty since the last Audit and Review.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

3. The program has identified staffing changes and anticipated areas of potential future need.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

General Comments related to section VII.A

Program instructors come from a variety of departments, so as long as departments have capacity, the program should continue to have the staff to support it.

1-3 These items are difficult to respond to for an interdisciplinary program, but the advisory board seems well-equipped to do the necessary work of the programs.

VII. Resource Availability & Development:
B. Student Resources

1. The program has adequate personnel, student help, and service and supplies to serve its undergraduate students.

Sufficient Evidence	2
Some/Partial Evidence	3
No/Limited Evidence	0

2. The program has adequate facilities equipment, technological, and library resources to effectively serve its students.

Sufficient Evidence	2
Some/Partial Evidence	3
No/Limited Evidence	0

General Comments for VII.B

It is not clear how the equipment budget will support student learning and/or experiences in the program without sufficient data to make that case. What is missing in the student experience? Do student struggle to meet SLOs because of lack of resources?

The program makes clear a need for a supplies and expenses budget to support the delivery of instruction in the ENVSCI 300 and ENVSCI 400 courses.

The establishment of a budget line for the program is a pressing need.

VII.2 not a knock on the program but I think they are identifying a real need here in terms of having their own equipment and supplies budget. It seems like such a budgetary request is tied directly to student learning.

The department should be commended for looking externally to community partners to address equipment/tech needs.

VIII. Conclusions and Recommendations from the Department or Program

1. Areas of strength are discussed.

Sufficient Evidence	3
Some/Partial Evidence	2
No/Limited Evidence	0

2. Areas of improvement and continued progress are discussed.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

3. Recommendations and resources are discussed.

Sufficient Evidence	5
Some/Partial Evidence	0
No/Limited Evidence	0

General Comments for VIII

I disagree that a strength of the program is evidence of "(4) utilizing assessment to make informed curricular decisions." The development of 2 courses for the Env. Resource Mgt emphasis is a promising development. As courses are added, are others pruned back, or is the program on a trajectory to rely less on courses from other departments?

VI. Reviewer Conclusions

1. Strengths of the Program

A model interdisciplinary program that seems to have broad support among its faculty. Good work with their advisory board to incrementally improve the program.

Robust curricula in each of the emphases drawing on the expertise of both environmental science faculty and outside faculty. A commitment to preparing students with the skills that they need to succeed beyond UWW.

ES program has many strengths. 1) They have developed a curriculum that is connected to assessing student learning. 2) They show good evidence of being reflective around curriculum design and assessment of student learning. 3) The evidence submitted by the program shows that they are very successful at placing students into jobs or grad school post-graduation.

It is clear that the program faculty/staff have put forth effort to refine their curriculum and assessment plan, be responsive to student needs, develop/maintain experiences, and be resourceful as a group.

2. Areas for Work or Improvement

The program is working with marketing to improve their website. There is a rational need for a budget line of their own. No details are provided about how the program will work to establish the budget line. Earlier in the report, the plans to create an external advisory team was mentioned. Great idea! The program has lots of data on student performance on SLO1 and SLO2, but it was not clear how they are using the data to improve student performance on these measures. While the program seemed disappointed, I think some of the assessment data was positive: the assessment report data showed most students had moved from no/little articulation/proficiency at the ENVSCI 200-level to very few in that category for the ENVSCI 400-level course. That's a win, even though not all students were at the expected "accomplished" level.

Expanding assessment efforts to remaining SLOs. Securing funding from internal and external sources for needed equipment.

These are few and minor next to the overall strengths of the ES program: 1) consider using different methods to assess student learning. 2) consider efforts to increase minority student enrollment or include additional information on composition of majors.

Continue to identify strategies to increase belonging and inclusiveness to encourage underrepresented students to join the major.

3. Other comments/questions

A&R should support ES program in its request for a supplies and equipment budget. Program makes a compelling case that such supplies will be used to enhance/expand student learning.

4. Recommended Actions (please specify):

1) Revisit the assessment plan for usability, feasibility, and sustainability. Consider a review of the SLOs to identify a number that can be evaluated in a 5-year cycle. Identify methods of assessment that already exist in the program to assess the SLOs (e.g., existing embedded assessments like the capstone).

2) Identify strategies to increase underrepresented student representation and retention in the program.

3) Work to secure funding for needed equipment.

4) Continue work focused on raising the profile of these important programs by communicating the unique value of the program in the region, state, and/or nation. Consider updates to marketing materials, such as the program's website.

5. Recommended Result

Insufficient Information in the self-study to make a determination; revise self-study & resubmit.	0
Continuation without qualification. Next self-study will be a shortened one focusing on the Recommended Actions from the current report.	2
Continuation with minor concerns. Progress report may be required, at the discretion of the review team.	3
Continuation with major concerns in one or more of the four areas; submit annual progress report to the College Dean & Associate Vice Chancellor for Academic Affairs on progress addressing the major concerns	0
Withhold recommendation for continuation, place on probation, and require another complete Audit & Review self-study within 1-3 years, at the Committee's discretion.	0
Withhold recommendation for continuation, place on probation, recommend placing in receivership within the college, and require another complete Audit & Review self-study within 1-3 years at the Committee's discretion.	0
Non-continuation of the program.	0
Report not submitted; refer to Provost for action.	0