



## **Program Review Report**

Program: Associate and Bachelors of Environmental Science

College: Biology, Chemistry, & Environmental Science

Review Date: February 2, 2023

A self-study for associate and bachelor degrees in Environmental Science, offered via the Department of Biology Chemistry, & Environmental Science, was completed by Dr. Sushmita Nandy and reviewed by the 2024 Program Review Committee in the Fall 2023 semester.

Many recommendations came from peer reviewers using a rubric to rate the strengths and weaknesses of the program. Beginning on page 2 is a list of criterion reviewers scored as either in “early development” or “fails to meet” criteria on the Program Review Rubric. In some cases, a recommendation and/or expectation for improvement is articulated by peer reviewers. For your upcoming program report, pay special attention to comments in Criterion 2, 4.1, 4.6, 5, 6, 7.2, and 7.5. Some of these items could be addressed as part of the departmental strategic plan briefly outlined in 5.2.

Your next program report and check in will be scheduled in May 2024. At this time, the program will need to highlight progress made on the recommended action items that begin on page 2. It will also identify any changes in planned actions that may have occurred because of substantial changes to the program or its context. Use the Interim Report Template to report your progress for the upcoming review. The aforementioned template and an example information type/detail expected is available under the Job Aids link at the bottom of the Academic Program Review website (<https://nmmc.edu/home/academics/office-of-the-provost/academic-program-review/>).

Larry Guerrero, Interim Provost  
Vice President for Academic Affairs  
AVP for Student Success

**Criterion 1: Mission & Introduction**

1. Provide an overview of the program and the context of where it is housed within the institution (what department, etc.). Describe the hierarchical structure of the department in which the program is housed.

2. Align your program mission and vision with NNMC's mission and vision. What changes has the program made to the mission statement since inception, the last review, or in the last 5-7 years? Why were these changes made? Are any revisions planned?

Rubric Category	Exemplary (3)	Acceptable (2)	Early Development (1)	Fails to Meet Criteria (0)
1.1	The overview thoroughly (includes succinct description that explains what program is designed to teach, how it supports student success and its goals) articulates how it fits into the larger department in which it is housed.	The overview adequately describes how it fits into the larger department in which it is housed.	The overview discusses how the program fits into the larger department in which it is housed but fails to make clear connections. It discusses plans to develop or improve the program.	Administrative oversight of the program within the department is not apparent within the review.
1.2	The review has a clearly defined mission that is fully aligned with departmental and College missions. Elements of the College's strategic plan are clearly integrated into the program. If applicable, the review clearly articulates changes made to the mission in the last 5-7 years and describes how the program will anticipate and make future changes based upon College and departmental influence. If less than 5 years, explain why. There is a clear strategy for responding to industry needs and the strategic direction of the College.	The review has a clearly defined mission that is aligned with departmental and College missions. The review articulates changes made to the mission that are over 7 years old and describes how the program will anticipate and make future changes. If less than 5 years explain why.	The review has a mission that is partially aligned with the departmental and/or College mission(s). The review either articulates program changes made to the mission OR anticipates future changes.	The review has no defined mission or a mission that is vaguely articulated or not aligned with departmental or College missions. Administrative oversight of the program mission is not apparent.

**Review Comments:** The reviewers were split on our scores. Two reviewers gave the mission & introduction a score of 2 because the language was heavy on BCES (the department) when much more can be said about the ENVS program. The other reviewer gave a score of 1 because the NNMC mission and vision could have been more clearly correlated/aligned.

## Criterion 2: Student Learning Outcomes Assessment & Curriculum

1. List your program level student learning outcomes. Have any changes been made to these outcomes since the last review or in the last 5-7 years? Why or why not? Describe how the program level student learning outcomes pertain to the program's mission.
2. Provide a curriculum map that details an overall view of the assessment plan. List clearly described measures or assessment instruments and their alignment with appropriate learning outcomes. Include both direct (how students directly demonstrate learning) and indirect (any method of collecting data that requires reflection on student learning, skills, or behaviors, rather than a demonstration of it) measures/assessment instruments, target performance levels and measures themselves (rubrics, exit surveys, for example) that clearly align with learning outcomes. In addition to assessment points, identifying where the outcomes are introduced and practiced is encouraged.
3. How is the program's curriculum developed? Describe the course pathway(s) students take to achieve this degree. Be sure to highlight any key or course courses and provide Curriculum Efficiency documentation as evidence. Also discuss any successes or challenges with length of term or modality adjustments.
4. Describe what was learned from your assessment measures or instruments. Summarize your findings since the program began, in the past 5-7 years, or since the last review (whichever is most applicable).
5. Explain actions or improvement plan results since the last review or in the past 5-7 years. Demonstrate these actions/improvements are linked to the findings.
6. If applicable, what courses in your program are tied to general education requirements at the institution? How many students from outside the department are taking courses in the program to fulfill general education/elective requirements? (IR will be able to provide Table 2.9 as evidence).
7. How do program faculty participate in assessment? What is the process? Have any changes been made to encourage participation since the last review or in the past 5-7 years?

Rubric Category	Exemplary (3)	Acceptable (2)	Early Development (1)	Fails to Meet Criteria (0)
2.1	The review articulates historical and current program outcomes. Outcomes are measurable, appropriate and comprehensive. Shifts or changes in outcomes are substantiated. If less than 3 years, an explanation is provided.	The review articulates historical and current program outcomes that reasonably focus on the key knowledge, skills, and values students learn in the program. Outcomes are measurable. Shifts or changes in outcomes are substantiated. If less than 1 year, an explanation is provided.	The review discusses historical and current program outcomes. Outcomes are measurable.	The fails to have explicitly stated outcomes or the outcomes are very incomplete, overly detailed or broad, inappropriate, or otherwise unmeasurable.

<b>2.2</b>	The curriculum map contains a complete list and clear description of assessment measures aligned with outcomes. Map includes where learning outcome concepts are introduced, practiced and assessed. Each outcome has at least two assessment measures, one direct and one indirect. Targets and ideal performance levels are implemented and maintained for the past three years. Measures are appropriate as evidenced by tools (rubrics, exit surveys, etc.) that clearly align with learning outcomes.	The curriculum map contains at least one assessment measure for each outcome. Targets and ideal performance levels are specified. Measures are appropriate as evidenced by tools (rubrics, exit surveys, etc.) that clearly align with learning outcomes.	The curriculum map does not contain at least one assessment measure for each outcome. Some measures may not be appropriate measures of the outcomes, or no tools are included.	Curriculum map is absent, or no activities have been added. A discussion of assessment measures is absent or vague.
<b>2.3</b>	The review includes a curriculum efficiency analysis that shows that the curriculum does not have long critical paths. The pre-requisite and co-requisite structure in the curriculum is optimal so that students may graduate on time with a high probability. The review discusses ways in which the curriculum is delivered inside and outside the classroom. Clear connections can be made between the aforementioned pathways and delivery.	The review includes a curriculum efficiency analysis that shows that the curriculum has few bottleneck courses with a few long critical paths, but the student can still graduate on time. The review discusses ways in which the curriculum is delivered. Clear connections can be made between the aforementioned pathways and delivery.	The review shows that there are some changes that should be made to improve the curriculum efficiency of the program or the risk of timely graduation is minimal. The review discusses ways in which the curriculum is delivered. Some consistency exists with the aforementioned pathways and delivery.	The review fails to do a curriculum efficiency analysis or the curriculum efficiency analysis reveals that the programs are very difficult to be navigated by students. There are too many bottleneck courses or it is very challenging to graduate on time. Methods for curricular delivery are inconsistent with the aforementioned pathways.
<b>2.4</b>	Findings from direct and indirect assessment measures are summarized and clearly reported and include data since the last Program Review. Findings are disaggregated by	The program has a substantial history of clearly reported findings from direct and indirect assessment measures.	The program presents findings but not all are linked to learning outcomes; additionally, the program has a limited history of clearly reported findings from direct and indirect assessment measures.	No findings from assessment measures are reported.

	length of term and/or delivery modality.			
<b>2.5</b>	Changes, in the form of action plans, are described and justified based on the findings, or no changes are warranted based on the findings so far. Action plan assessment is included. Action Plans have been reported since the last program review or since the program's inception.	Changes, in the form of action plans, are described and justified based on the findings, or no changes are warranted based on the findings so far. Action plan assessment is included. The program has a limited history of reported Action Plans that are based on Findings from assessment measures.	Program changes are presented but are not linked to learning outcomes OR changes, in the form of action plans, are described but not justified by findings.	No action plans based on findings are reported
<b>2.6</b>	The review articulates relevant General Education/Elective courses and demonstrates how the department contributes to the assessment and robust improvement of General Education. If courses do not contribute to Gen Ed, state so.	The review articulates relevant General Education/Elective courses and demonstrates how the department contributes to the assessment of General Education. If courses do not contribute to Gen Ed, state so.	The review articulates relevant General Education/Elective courses and vaguely demonstrates how the department contributes to the assessment of General Education. If courses do not contribute to Gen Ed, state so.	The review articulates relevant General Education/Elective courses but fails to demonstrate how the department contributes to the assessment or improvement of General Education. If courses do not contribute to Gen Ed, state so.
<b>2.7</b>	The review demonstrates how all faculty contribute to assessment processes and discusses changes and participation expectations. Evidence here can include participation in assessment-related events, number of courses assessed in the program, meeting minutes that include departmental discussion of assessment results.	The review demonstrates how some faculty contribute to assessment processes and discusses changes and participation expectations.	The review demonstrates how a few faculty contribute to assessment processes and discusses changes and participation expectations.	The review fails to address how faculty participate in assessment processes and does not address changes.

**Review Comments:**

2.1: Three program outcomes are not measurable. SLO numbers 1 and 3 are not measurable because you cannot measure the verb "understand". SLO #4 is awkwardly worded and unmeasurable. The recommendation is to choose more measurable verbs



using Bloom's taxonomy. Additionally, the following benchmarks were stated on assessment result documents: "70% of students are rated as proficient on ethics assessments", but it is not clear to this reviewer what that means. For example, how do you rate "meets expectations" or "proficient"? Finally, there is no documentation of any changes made, no description of how the SLOs align with the mission and the improvement plan fails to mention SLOs.

2.2: The curriculum map indicates where the assessment takes place, but there is no indication of assessment measure, benchmark, or rubrics. One document indicated that "signature assignments were required, but did not say what the assignment was so this review was unable to determine if it is relevant. There is no mention of revising data collection or map in the improvement plan and no details about how to measure assessment results.

2.3: It is not clear if there is a course bottleneck that limits curriculum efficiency or if students can graduate on time. Improvement plan does not include points from last revision from 2019-20, no mention of revisiting prerequisites for identifying challenges.

2.4: The program has a limited history of clearly reported findings from direct and indirect assessment measures. And, the findings are not linked to learning objectives.

2.5: No action plans based on findings are reported.

2.6: The review articulates relevant General Education/Elective courses but fails to demonstrate how the department contributes to the assessment or improvement of General Education.

2.7: Faculty participate in annual Assessment Day activities and there is a plan for increasing department meetings where assessment is a topic.

### **Criterion 3: Faculty Qualifications, Effort, & Evaluation**

1. What processes are in place to ensure that faculty have the qualifications to teach in the program? Have these processes changed since the last review or in the past 5-7 years? Complete and upload Table 3.1 as evidence of current faculty qualifications.

2. Summarize the workload and responsibilities of faculty as it pertains to the program. How often do the faculty participate in program/departmental meetings? Include minutes of meetings for the past year as evidence. Utilize a section of the NNMC Program Review Table here.

3. How are faculty being supported to ensure high quality teaching and learning? Describe how students evaluate this program and instructors (positive and negative feedback). Include forms and data collected from the Course Evaluation Forms (CEF) and the Classroom Observation Forms (COF). Describe how this data is used to make improvements to the program. Highlight any trends or insights that came from the aforementioned evaluations.

4. List the professional organizations the program and faculty belong to; and provide an explanation for how the program supports faculty membership. Complete and upload Table 3.4 as evidence.

5. Describe recruitment efforts or goals such as increased enrollment. Be sure to include dates, activities, program representatives, and the number of contacts made for each effort. Have these initiatives been successful and how are you measuring success both qualitatively and quantitatively?

6. Describe the advisement process in the program, including number of contacts with students, and follow up on non-returning students. Describe how the program trains and cross trains advisors, including how often training happens.

Rubric Category	Exemplary (3)	Acceptable (2)	Early Development (1)	Fails to Meet Criteria (0)
3.1	The review provides documented evidence of faculty qualifications and describes processes to determine qualifications are effective and rigorous to comply with accrediting agencies and appropriate regulations.	The review provides evidence of faculty qualifications and describes processes that comply with accrediting agencies and appropriate regulations.	The review provides evidence of faculty qualifications but processes can be improved so that they comply with accrediting agencies. The evidence is weak or partial.	The review fails to provide evidence of faculty qualifications and/or provides weak processes to determine qualifications.
3.2	The review indicates faculty workload is appropriate (faculty to student ratio should be greater than 1 to 17 ratio) yet the department has methods for increasing teaching loads. Substantial evidence of institutional committee and departmental contributions are included.	The review indicates faculty workload is appropriate (faculty to student ratio should be at least 1 to 17). Evidence of institutional committee and departmental contributions are included.	The review indicates faculty workload is appropriate (faculty to student ratio should be at least 1 to 10). Partial evidence of institutional committee and departmental contributions are included.	The review indicates the faculty workload is not appropriate. No evidence of institutional committee and departmental contributions is included.
3.3	The review includes sample evaluations, details the processes for evaluating faculty teaching effectiveness, and how results are used to inform professional development priorities. The review details how the department acquires resources for professional development and provides evidence of how full-time and adjunct faculty are trained and supported. The review includes an analysis of teaching evaluations for	The review details the process for evaluating faculty teaching effectiveness. Because of limited resources, the department provides evidence that faculty participate in institutional professional development or develop in-house training. Evidence includes how full-time and adjunct faculty are trained and supported. The review includes an analysis of teaching evaluations for curricular improvement.	The review vaguely details the process for evaluating faculty teaching effectiveness. Faculty participate in professional development but not in a structured way. Evaluations are collected but not utilized for determining professional development priorities. Evidence includes a plan for how adjunct faculty are trained and supported. The review includes an analysis of teaching evaluations.	The review fails to include processes for evaluating faculty teaching effectiveness. There is no evidence that adjunct faculty are trained and supported. The review fails to include analysis of teaching evaluations.

	curricular improvement along with examples and relevant data related to the discussion. Trends are discussed.	Trends are acknowledged.		
<b>3.4</b>	The review indicates 100% of faculty members participate in a professional organization.	The review indicates over 50% of faculty members participate in a professional organization.	The review indicates under 50% of faculty members participate in a professional organization.	The review indicates no faculty members participate in a professional organization.
<b>3.5</b>	The review indicates the program has developed strategic enrollment goals. It provides a detailed description and data related recruitment efforts as well as measures for success and plan management.	The review indicates the program has developed strategic enrollment goals. It provides data related recruitment efforts with some analysis.	The review indicates the program has developed strategic enrollment goals. It provides data related recruitment efforts.	The review does not indicate the program has strategic enrollment goals. Recruitment efforts are not tracked in a way where trends can be identified.
<b>3.6</b>	The review includes a detailed description of advising within the department including how advisement is distributed, how consistency is maintained, training, and statistics on student contacts, faculty advising load, and retention efforts.	The review includes a description of advising within the department including how advisement is distributed, how consistency is maintained, training, and statistics on student contacts, faculty advising load, and retention efforts.	The review includes a description of advising within the department but lacks some pertinent details from the following list: how advisement is distributed, how consistency is maintained, training, and statistics on student contacts, faculty advising load, and retention efforts.	At least two elements from the list are missing in the review's description of departmental advising.

### Reviewer Comments:

3.1: The report provides helpful information on faculty qualifications. Faculty within the program have a minimum of a Master's Degree. Table 3.1 indicates the credentials of the full-time and adjunct faculty who teach within the program. It would be helpful to include the disciplines of the PhD and M.S. degrees. More information on how faculty outside of environmental science contribute to the program curriculum. The report also indicates that the department maintains a repository of credentials. There is no indication that the processes have changed within the past 5-7 years.

3.2: Prior to Fall 2023, there was a lack of documentation for departmental meetings; however, there is improvement in the documentation and frequency of meetings.

The teaching load and faculty responsibilities are clearly outlined in the narrative. But, it is unclear how many faculty members teach in the Environmental Science program and what the faculty to student ratio is.



The report describes Biology, Environmental Science Chemistry, Agriculture, GIS Wildlife Statistics and related Lab courses in the BCES with 5 full time faculty, an adjunct and a department chair assigned to the Entire Biology, Chemistry and Environmental Sciences department. One full time faculty is assigned to the Environmental Science Pathway with one Vacant Position. With a current total of for the entire BCES department of 176 students with approximately an additional Percentage of 41.09 for 2021, 23.76 for 2122 (assuming 2022 and 35.15 for 2123 (assuming 2023). The Environmental Science pathway is an interdisciplinary program that utilizes courses from the entire BCES department. One must look at the entire department load as well. With data provided it appears the program and department are not appropriately staffed.

3.3: Unfortunately, there is a lack of documentation regarding classroom observations and evaluations. However, the program is showing improvement in supporting teaching and learning. It would be helpful to create an exit survey for graduates as a way to collect data on students' experiences in the program and contribute to continuous improvement. There is mention of faculty participating with institutional professional development.

3.4: The narrative includes information on professional collaborations and membership as supported by the department. It is indicated that the program doesn't belong to any organization but these connections seem helpful to supporting the program.

3.5: There is a lack of documentation of past recruitment efforts and the review describes student enrollment declining since 2020/21 from 47 to 33 2021/22 to 30 in 2022/23. These factors are concerning but the report presents a plan moving forward and a commitment for improvement. The plan is thoughtful and supports continuous growth, but it is unfortunate that a record of past events is not available and that enrollment has declined.

3.6: The report explains how advisors are assigned. Recent efforts show a commitment to support advisement and document progress in helping students. Development of a guide for departmental advisement is particularly helpful.

#### **Criterion 4: Student Success**

1. What are the enrollment trends gauged with Student Credit Hours (SCH) within this program over the course of the review cycle? Write an analysis of what these data indicate about your program. Be sure to include factors that may impact student enrollment. Utilize a section of the NNMC Program Review Table here.

2. Discuss the retention rates from Fall to Spring and Fall to Fall. Has student retention remained in an acceptable range over the course of the review cycle? Does modality factor into retention rates? Utilize a section of the NNMC Program Review Table here.

3. Assess completion/graduation numbers for the program. Are numbers increasing or decreasing? Explain why. What are the median years to graduate? Is the increase or decrease in line with program goals? Utilize a section of the NNMC Program Review Table here.

4. If applicable, discuss pass rate data for any licensure/certification test required of your students for the last 3 years. Utilize a section of the NNMC Program Review Table here.

5. Highlight the accomplishments and external honors (such as special experiences/projects, honors, publications, presentations, internships, etc.) received by students in the program over the course of this cycle.

6. What were some positive and negative feedback received from students as they complete their degrees? Highlight any trends or insights that came from exit surveys over the course of the cycle.

<b>Rubric Category</b>	<b>Exemplary (3)</b>	<b>Acceptable (2)</b>	<b>Early Development (1)</b>	<b>Fails to Meet Criteria (0)</b>
<b>4.1</b>	The review indicates the program tracks its student credit hour trends and highlights excellent enrollment trends (5% growth or an average of over 51 SCH) over a consistent period of time.	The review highlights stable enrollment trends (1-5% growth or an average of 51 SCH at minimum) over the period of time.	The review indicates decreasing enrollment trends (0% growth or below an average 51 SCH).	The review indicates minimal to no enrollment (0% growth and below an average 51 SCH).
<b>4.2</b>	The retention rate Fall to Fall is consistently over 85%. The review indicates the program is tracking learning, retention, and performance in all modalities and is capitalizing on success and responding to any concerning data with action plans and follow up.	The retention rate Fall to Fall is consistently over 60%. The review indicates the program is tracking learning, retention, and performance in all modalities and is capitalizing on success and responding to any concerning data with action plans.	The retention rate Fall to Fall is between 30% and 60%. The review indicates the program is tracking learning, retention, and performance in all modalities.	The retention rate Fall to Fall is less than 30%. The review indicates the program is not able to track learning, retention, and performance in all modalities.
<b>4.3</b>	The review presents data that indicate program graduates are increasing by over 5%.	The review presents data that indicate program graduates are maintaining or increasing up to 5%.	The review presents data that indicate program graduates are decreasing within 5%.	The review presents data that indicate the program graduates are decreasing more than 5%.
<b>4.4 NA</b>	Licensure pass rates fall within board expectations.	Licensure pass rates fall within board expectations.	Licensure pass rates are improving toward board expectations.	Licensure pass rates fail to fall within board expectations.
<b>4.5</b>	The review highlights accomplishments and honors for at least 25% of the program students in the last three years.	The review highlights accomplishments and honors for at least 5% of the program students in the last three years.	Accomplishments and honors are anecdotal.	Accomplishments and honors do not exist or are not documented.

<b>4.6</b>	Feedback is sufficient, periodic, and remarkably positive.	Feedback is periodic and positive.	Feedback is sporadic and a mix of positive and negative.	Feedback has not been collected or the feedback is mostly negative.
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1. Enrollment trends - **(1)** The review indicates decreasing enrollment trends (-36% growth or below an average -63% SCH). Report does show plans for improvement although they are based on flipping to online. Perhaps other strategies should be considered.

2. Retention rates - **(2)** The review indicates increasing enrollment trends (a 43 percent increase). The retention rate Fall to Fall is consistently over 60%. The review could use additional detail as to how the program is using and tracking retention and developing program-specific strategies.

3. Completion/graduation - **(3)** The review presents data that indicate program graduates are increasing by over 5% (33 percent). Although the very small n for all three years is a cause for concerns (3, 2, and 4 respectively).

4. Licensure/certification - **NA**

5. Student Honors - **(0)** - Accomplishments and honors do not exist or are not documented.

6. Student Feedback - **(1)** - Although the feedback reported was positive it does not appear to be collected regularly or systematically. This was recognized as an area of improvement in the program review.

**Criterion 5: Program Analysis**

1. Based on all the data gathered in this review, conduct a SWOT (Strength, Weaknesses, Opportunities, and Threats) Analysis. Be sure to include the last time a SWOT Analysis was conducted.

2. Provide a Strategic Improvement Plan for the Program for the next 5 years. The Plan needs to include goals, SMART objectives, and tasks/actions to address the SWOT elements identified, timeline, and strategies and/or measurements to achieve each Plan item. (You may follow the SMART goal setting guidelines: S – Specific, M – Measurable, A – Attainable, R – Realistic, T – Timely.)

3. Provide an analysis on the adequacy of the spaces on campus most commonly used by the program. Consider the following items for your discussion: current facilities, deficiencies, inventory report of equipment and losses. Additionally, describe your process for updating and keeping an accurate inventory of equipment, materials and supplies. Indicate whose responsibility it is to maintain the inventory process.

<b>Rubric Category</b>	<b>Exemplary (3)</b>	<b>Acceptable (2)</b>	<b>Early Development (1)</b>	<b>Fails to Meet Criteria (0)</b>
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5.1	The review indicates the program uses an evidence-based approach to identify strengths and weaknesses and has collectively developed and implemented ongoing strategies for enhancing areas of strengths and addressing weaknesses.	The review indicates the program uses an evidence-based approach to identify strengths and weaknesses and has developed strategies for enhancing areas of strength and addressing weaknesses.	The review indicates the program identified strengths and weaknesses but supplies little evidence to support its conclusions or has not developed strategies for enhancing areas of strength and addressing weaknesses.	The review indicates the program has not identified strengths and weaknesses or supplies no evidence to support its conclusions or has not developed strategies for enhancing areas of strength and addressing weaknesses.
5.2	The program has a complete strategic plan with at least three specific objectives to enhance quality and efficiency. Evidence is provided to support the viability and implementation of these objectives.	The program has at least three specific objectives to enhance quality and efficiency. Evidence is provided to support the viability and implementation of these objectives.	The program has fewer than three specific objectives to enhance quality and efficiency or does not provide adequate evidence supporting the viability and implementation of its objectives.	The program has no specific objectives to achieve and enhance quality and efficiency or does not provide adequate evidence supporting the viability and implementation of its objectives.
5.3	The review addresses all required elements of the prompt including the process and responsibility for inventory. A detailed analysis is provided.	The review addresses most required elements of the prompt including process and responsibility for inventory. An analysis is provided.	The review generally addressed the required element of the prompt. Either an analysis or responsibility or inventory is lacking.	The review addresses only two or less required elements of the prompt and/or lacks processes and responsibility for inventory.

**Reviewer Comments:**

5.1:

**Strength:** What is the second campus offering ENV5, and how do the programs compare? Please provide evidence and details of the strong collaboration between LANL and N3B. Are there other employers who are seeking our students in the area? Please provide the data that collaborates the strong demand for NNMC students and the growing job market.

**Weaknesses:** What are the strategies for increasing visibility? Please provide evidence that a flexible schedule has been successful in other settings.

**Opportunities:** Has a computation earth science lab at other programs proven beneficial to the student, and is there empirical evidence to support it? Who are the groups beyond LANL who would desire students who have worked in a computation earth science lab?

**Threats:** Please provide a chart or other data with basic infrastructure and update the schedule that needs to be addressed by NNMC.

5.2: Provide a Strategic Improvement Plan for the program for the next five years. There are specific objectives listed but no adequate evidence or measurables. Please provide

the minutes (or location for access) of the meeting already held. What are the enrollment numbers and other data for Fall 23 for the flexible schedules already implemented? Be more specific on the number of courses being developed for quality matters approval. What are the goals for the courses offered online for 2024-2025?

5.3: Need inventory report of equipment and losses as well as any other deficiencies that challenge the facility, staff, and students. Describe the process for updating and keeping an accurate inventory of equipment, use of equipment, materials, and supplies.

**Criterion 6: Program Economics**

1. Describe how the program is being effective with its resources. Provide Program Economics from Gray Associates including the ratio between gross revenue and instructional cost as well as the Program Economics Waterfall as evidence. Provide the 3-year Program Marginal Contribution from Gray Associates software and gross revenue and instructional cost. (You can request this information from IR.)

2. Provide the program's budget for the last three years. Explain how the budget is allocated to the program in question. Based on the data in this section, please write a recommendation for budget changes justifying this recommendation with the data you provided. Write an analysis of what these data indicate about your program.

Rubric Category	Exemplary (3)	Acceptable (2)	Early Development (1)	Fails to Meet Criteria (0)
6.1	The program is a revenue generator that contributes to cover the deficit of other programs. The GA margin is in the black. The gross revenue to instructional cost is larger than 1.0. There are more than 17 FTE per full-time faculty member.	The program finances are healthy and breaks even. There is at least 17 FTE per full-time faculty member. The gross revenue to instructional cost is larger than 0.95.	The program runs with a deficit but the gross revenue to instructional cost is at least 0.8. The FTE is less than 17 per full-time faculty member.	The program runs with a huge deficit. Its instructional cost is way beyond the revenue generated (The gross revenue to instructional cost is less than 0.8). The FTE is less than 10 per full-time faculty member.
6.2	The budget is enough to cover all needs of the program and provides for additional opportunities (services and professional opportunities). If applicable, the budget is sustainable after grant funding expires.	The budget is enough to cover instructional costs for the number of students served. Professional development, supplies, or equipment are not allocated. If applicable, the budget is sustainable after grant funding expires.	The budget is low and relies on a high number of adjunct faculty. If applicable, the budget is not stable after grant funding expires.	The budget is not enough to sustain even the most indispensable instructional costs. If applicable, the budget is not stable after grant funding expires.

**Reviewer Comments:** 6.1, 6.2: The program economics are fairly healthy but the program needs to stabilize enrollment to be sustainable. The department should be



more proactive in retrieving the budget. The budget was sent (on Dr. Lopez's request) by Evette Abeyta on 11/15. Dr. Sushmita Nandy was copied on the email.

**Criterion 7: External Stakeholders**

1. Provide context for the status of the discipline today. What are some emerging trends in this discipline across the country? What is happening in the industries related to this discipline?
2. Describe the selection and work of the local advisory council for the program, including the membership (name, contact information, and societal role). Describe the meetings and present sample agendas as well as minutes of advisory council meetings. Where are the minutes electronically archived (provide specific details where to find them)? In what ways has the local advisory council helped to plan, develop, evaluate, and promote the program?
3. Identify and discuss how similar programs compare to your program in terms of size, curriculum, and any relevant attributes. Include the Gray Associates Score Cards for the CIP codes of the program (or related). Indicate how your program aligns to the factors listed on the Gray Associates Scorecard. Feel free to include up to five relevant CIP codes. (Request a Gray Associates Scorecard from IR.)
4. How do state, national or industry standards relate to the program curriculum and student learning outcomes? (Attach matrix of competencies.) If applicable, describe the process for aligning syllabi and course sequencing to standards listing in above.
5. Describe the process for ensuring that teaching and learning materials are current, unbiased, and are of sufficient quality and quantity to serve the needs of the students and those of the industry.
6. Describe the national, regional, state and local outlook for this occupation or related field. What are the current and projected job openings per year (use Gray Associates Software to develop the narrative)?
7. Does the program participate in job fairs or collaborate with local/state/national organizations to place graduates in jobs or further educational opportunities (include a list of the last three years events)?

<b>Rubric Category</b>	<b>Exemplary (3)</b>	<b>Acceptable (2)</b>	<b>Early Development (1)</b>	<b>Fails to Meet Criteria (0)</b>
<b>7.1</b>	The review discusses program relevance in the world today. The program demonstrates responsiveness to local, regional, and national workforce needs. The review encompasses related industries in this analysis.	The review discusses program relevance in the world today. The program demonstrates responsiveness to workforce needs. The review	The review discusses program relevance in the world today. The program demonstrates responsiveness to workforce needs.	The review discusses program relevance in the world today. The review fails to demonstrate responsiveness

		encompasses related industries in this analysis.		workforce needs or address related industries in this analysis.
<b>7.2</b>	The review provides information on selection processes and outlines expectations of the EAC. The review includes relevant details about how this program impacts the college, community, and service areas. The review includes meeting agendas, minutes, and location of EAC documents. It indicates EAC contributions beyond meetings with tangible outcomes.	The review provides information on selection processes and outlines expectations of the EAC. The review includes relevant details about how this program impacts the college and service areas. The review includes meeting agendas, minutes, and location of EAC documents. It indicates EAC contributions beyond meetings in mandatory fashion but could do so more frequently and with more tangible outcomes.	The review provides information on selection processes and outlines expectations of the EAC. The review includes relevant details about how this program impacts the college or service areas (but not both). The review includes meeting agendas, minutes, and location of EAC documents.	The review fails to acknowledge a selection process and expectations for an EAC. The review fails to include meeting agendas, minutes, and location of EAC documents.
<b>7.3</b>	The review identifies program competitors and is responsive to student needs and demands. The review reflects all GA factors that are in the top 70th percentile.	The review identifies the program competitors but does not discuss student needs or demands. The review reflects 3 of 5 GA factors in the top 70th percentile.	The review indicates vague knowledge of competitors. The review reflects 2 of 5 GA factors in the top 70th percentile.	The review fails to identify competitors in the market/area. All GA factors are in the bottom 50th percentile.
<b>7.4</b>	The review cites applicable workforce trends and/or discipline specific accreditation expectations used to inform curriculum development. The alignment of syllabi and course sequencing is evidence in response to trends and expectations for the program.	The review cites applicable workforce trends and/or discipline specific accreditation expectations used to inform curriculum development. The alignment of syllabi and course sequencing is seemingly relevant in response to trends and expectations for the program.	The review cites some workforce trends and/or discipline specific accreditation expectations used to inform curriculum development.	The review fails to connect workforce trends with curricular development.
<b>7.5</b>	The review discusses how the program matches what is taught in the classroom with work performed in business and industry. The program regularly analyzes the alignment ensuring teaching and learning materials are up-to-date. More than 70% of active courses have been	The review discusses how the program matches what is taught in the classroom with work performed in business and industry. The program indicates an analysis of alignment and currency was	The review loosely aligns what the program taught in the classroom with work performed in business and industry. 10% or fewer of active courses have been reviewed, updated, or	The review fails to align what is taught in the program with work performed in business and industry. Active courses are not reviewed.

	reviewed, updated, or deactivated within the past three years.	performed. 11-70% of active courses have been reviewed, updated, or deactivated within the past three years.	deactivated within the past three years.	
<b>7.6</b>	The review provides GA current and projected job openings per year. Job placement and salary data demonstrates sustained employment and ability to earn the regional living wage for completers.	The review provides GA current and projected job openings per year. Job placement and salary data suggests future, if not immediate, sustained employment for completers.	The review loosely aligns the program with GA current and projected openings per year. Salary for graduates is not markedly higher than those directly beginning employment.	The review fails to align the program with GA current and projected openings per year.
<b>7.7</b>	The review indicates the program participates in job fairs and collaborates with local, state and/or national organizations to place graduates. The program is able to provide qualitative and quantitative data regarding placement/further education. Improvements and follow up based on data and analysis are articulated.	The review indicates the program participates in job fairs and collaborates with local, state and/or national organizations to place graduates. The program is able to provide qualitative and quantitative data regarding placement/further education.	The review indicates the program participates in job fairs and collaborates with local, state and/or national organizations to place graduates.	The review does not provide evidence of participation in job fairs or collaboration with local, state, and/or national organizations to place graduates.