*Office of the Provost*

**NORTHERN New Mexico College**

**Program Review Report**

Program: AAS Nuclear Operations Technology

Department: Biology, Chemistry, & Environmental Science

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

Many recommendations came from peer reviews using a rubric to rate the strengths and weaknesses of the program. The reviews begin on Page 2. The recommended action items are listed below.

1. Upload a curriculum map into Watermark.
2. Maintain assessment efforts and record the results in Watermark.
3. The continuation of the program will be discussed with the new Provost, Dr. Vellanoweth.
4. Increase enrollment if program is continued. Work on increasing graduation and retention rates.
5. Create a table of full-time and adjunct faculty with their credentials who teach in the program.
6. Maintain regular External Advisory Committee meetings.

Your next program report and check-in will be scheduled in December 2025. At that time, the program will need to highlight progress made on the recommended action items. It will also identify any changes in planned actions that may have occurred because of changes to the program or its context. Use the Interim Report Template to report your progress for the upcoming review.

Anthony Sena

David Torres, Director of Assessment

**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?

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| **Rubric Category** | **Exemplary (3)** | **Acceptable (2)** | **Early Development (1)** | **Fails to Meet Criteria (0)** |
| **1.1****3** | 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****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 yearsold 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. |

**Factual Observation:**

The overview of the AAS program in Nuclear Operations Technology is clear and comprehensive. It includes:

* A succinct description of the program's purpose (equipping students with technical expertise and compliance knowledge).
* An explanation of its relevance to workforce needs (alignment with industry stakeholders like LANL).
* The program's integration within the Department of Biology, Chemistry, and Environmental Sciences (BCES), detailing its structure, including faculty, administrative staff, and reporting hierarchies.

The mission of the AAS Nuclear Operations Technology program aligns with NNMC's institutional mission of fostering inclusivity, academic excellence, and workforce readiness. It emphasizes technical training, compliance with industry standards, and preparation for careers in nuclear operations and environmental safety. However:

* The program mission has not undergone significant changes since its inception in 2021.
* No anticipated revisions or specific strategies to address future industry needs or institutional priorities are explicitly discussed.

**Recommendations for Improvement:**

* Address Mission Evolution: Explain why the mission has not changed since its inception and outline potential future revisions based on emerging trends in nuclear technology and environmental safety and evolving industry needs (e.g., clean energy initiatives or advancements in nuclear safety) and integrate this into the mission statement.
* Strategic Alignment: Incorporate elements of NNMC’s strategic plan to demonstrate a proactive approach to aligning with institutional goals.

**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?

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| **Rubric Category** | **Exemplary (3)** | **Acceptable (2)** | **Early Development (1)** | **Fails to Meet Criteria (0)** |
| **2.1****2** | 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 discusseshistorical 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. |
| **2.2****0** | 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. |
| **2.3** **3** | 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. |
| **2.4** **1** | Findings from direct and indirect assessment measures are summarized and clearly reported and include data since the last Program Review. Findings are disaggregated by length of term and/or delivery modality.  | 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.1 | No findings from assessment measures are reported. |
| **2.5****2** | 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 |
| **2.6****NA** | 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. |
| **2.7****3** | 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. |

AAS Nuclear Technology Operations:

It appears that beginning level assessment is taking place.

2.1 SLO # 2. SLO2- Safety: Articulate and interpret radiation safety regulations and guidance. In general, best practice is to use one verb per SLO, as it is hard to measure both.

2.2 No curriculum map with the assessment plan, including assessment measures, benchmarks, or alignment with PSLOs was provided. Evidence A is a curriculum map, but not an assessment plan. Assessment plan doesn’t include any curriculum map, measures for assessment and benchmarks that provide alignment with PSLO.

2.3 Well described

2.4 Preliminary assessment data provided, but no summary of assessment findings included.

**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.

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| **Rubric Category** | **Exemplary (3)** | **Acceptable (2)** | **Early Development (1)** | **Fails to Meet Criteria (0)** |
| **3.1****2** | 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 table lists the qualifications of the full-time faculty, but it is unclear if adjunct faculty are involved in teaching courses and what the credentials are. | 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****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 credit hour load is clear as are the expectations for departmental meetings.  Minutes are included.  It would have been helpful to include the number of advisees and students in the program. | 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****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 curricular improvement along with examples and relevant data related to the discussion. Trends are discussed.The report provides several ways that faculty are supported with documentation.  Classroom observations, anonymous feedback, designated labs, collaboration with other faculty are all helpful tools to support faculty and evaluate their progress. | 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. Trends are acknowledged. | 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. |
| **3.4****2** | 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.There are two professional organizations listed for the one faculty member.  Some indication for how these memberships support this particular program could have added. | The review indicates under 50% of faculty members participate in a professional organization. | The review indicates no faculty members participate in a professional organization. |
| **3.5****2** | 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 departmental recruitment efforts are clear and the shared spreadsheet is an efficient way to organize these efforts, but the “steady” enrollment in the Nuclear Op program could be more specific.  Also, specific goals for the growth of this program could have been outlined. | 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. |
| **3.6****2** | 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 report provides information on the process of tracking students and assigning advisors but the advising load for this program was not clear.  Also, an advisement log where notes about the meetings could be kept (beyond just registration status) would be helpful. | 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. |

Factual Observation: There are many efficient mechanisms in the department to coordinate efforts and support faculty and students.

Recommendations for Improvement: At times more specific information (advisee load, recruitment goals, enrollment numbers) would add helpful information to the report.  A few more opportunities to capture in narrative form the advisement sessions would also add to the report.

**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.

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| **Rubric Category** | **Exemplary (3)** | **Acceptable (2)** | **Early Development (1)** | **Fails to Meet Criteria (0)** |
| **4.1** | 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). |
| **4.2****2** | 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.  |
| **4.3****0** | 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%.  |
| **4.4****N/A** | 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. |
| **4.5****0** | 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.  |
| **4.6****2** | 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. |

Factual Observation:The student enrollment numbers are low and it is hard to interpret the trends. Based on the data provided it seems that each year new students were enrolled to compensate for the students not returning.

Recommendations for Improvement:

Increase enrollment. Work on increasing graduation and retention rates.

**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.

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| **Rubric Category** | **Exemplary (3)** | **Acceptable (2)** | **Early Development (1)** | **Fails to Meet Criteria (0)** |
| **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. |

Recommendations for Improvement:

Find out why there was a decline in the completion numbers.  Are some classes difficult to complete?  If yes, maybe divide the material into two different courses.

Offer 8-week courses instead of 16-week courses to retain students until completion.

Offer online theory courses.

The Chair should evaluate N3B adjunct faculty each semester.  Is it possible to hire NNMC adjunct faculty to teach these courses?

Is it possible to offer this program to other laboratories within New Mexico?  It seems that if N3B is not renewed, the program will end.

To increase enrollment, is it possible for LANL and N3B to make the training mandatory for all their employees in the field?

To increase enrollment, work with other two-year colleges to provide training to their students for better careers.  For example, Mesalands has students that may wish to come and work at Los Alamos National Laboratory.  If the classes were to be taught online, the students from Mesalands could enroll, graduate and get a job at LANL.

**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.

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| **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. |

6.1

Reviewer 1

Early Development (1)

As documented in the “self-study”, the gross revenue to instructional cost is 1.43.  This ratio indicates that for every dollar spent on instruction, the program generates $1.43 in gross revenue. ($9,665 / $6,754)

I could not find the FTE for the program under review in the documents provided.  However, according to one document, there were five students enrolled in the program in 2023 which would put the program well below the 17 FTE which is the required number for an “exemplary” or “acceptable” ranking.

The AAS Nuclear Operations Technology program has a current ratio for gross revenue to instruction cost as 1.43.

Reviewer 2

Exemplary (3)

Recommendations for Improvement: None at this time. A higher ratio indicates that the program generates more revenue relative to what it spends on instruction, suggesting strong financial sustainability.

6.2

Reviewer 1

No score due to insufficient comprehensibility

However, the department’s “self-study” noted.

If the Institutional Agreement with N3B is not renewed,

a) The Department will be responsible for covering the cost of adjunct faculty to teach these courses which may affect their budget.

b) The Dept. of BCES will still be able to sustain the program with the current funding.

Factual Observation: To properly evaluate sections 6.1 and 6.2, I would require direct consultation with the financial analyst who prepared these documents. During this consultation, they would need to explain the program's financial and budgetary figures in detail. Additionally, clarification is needed on how the N3B Institutional Agreements integrate with NNMC's Financial Management system. However, even after such a comprehensive review, I would be unable to verify the accuracy of the financial documents. This consultation would only provide a general overview and understanding of the information presented.

Recommendations for Improvement: Within the department's self-study, the Full-Time Equivalent (FTE) data for Criteria 6.1 should be explicitly stated in the corresponding section. This should be accompanied by supporting documentation that validates and substantiates the reported FTE number.

Reviewer 2

Factual Observation: The program does not have a separate budget and is funded by the BCES I and G budget. It is supported by the N3B grant but if grant funding were to cease, the program could still be funded by the department

Exemplary – (3)

**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)?

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| **Rubric Category** | **Exemplary (3)** | **Acceptable (2)** | **Early Development (1)** | **Fails to Meet Criteria (0)** |
| **7.1****2** | 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 encompasses related industries in this analysis. | 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 workforce needs or address related industries in this analysis. |
| **7.2****1** | 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. |
| **7.3****2** | 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. |
| **7.4****2** | 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. |
| **7.5****2** | 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. More than 70% of active courses have been reviewed, updated, or deactivated within the past three years.  | 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 performed. 11-70% of active courses have been reviewed, updated, or deactivated within the past three years. | 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 deactivated within the past three years. | The review fails to align what is taught in the program with work performed in business and industry. Active courses are not reviewed. |
| **7.6****2** | 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. |
| **7.7****3** | 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.  |

**Factual Observation:**

No past record of existence or any involvement of an advisory council for the program prior to spring 2024 (although there seems to be a solid plan going forward with the newly formed EAC). Even though it is a very specialized program catering the needs of one employer (N3B), having periodic input from an advisory council would strengthen the program.

The review provides a comprehensive overview of emerging trends in the nuclear operations field, aligning the program’s goals with regional workforce needs. The collaboration with N3B is a strong point, as it ensures students are employed upon graduation. However, there are gaps in providing concrete data regarding competitor analysis, course updates, and placement efforts.

**Recommendations for Improvement:**

The EAC is formed only recently. The program personnel should be encouraged to record high-level review of the teaching and learning material for quality and currency in the coming years, as well as formal feedback and input from the employers (although that might be already happening more informally).

The review would benefit more information on how the curriculum aligns with both industry trends and specific accreditation standards, along with a formal process for updating teaching materials. This would improve the overall clarity and strength of the review. Additionally, expanding on job placement, salary data, and the program’s participation in job fairs or further educational collaborations would provide a fuller picture of its impact.