

Program Assessment Form (Academic Program)

A.S. in Natural Resources Management

Table of Contents

General Information	1
Standing Requirements	2
NMC Mission Statement & ESIP	2
Outcomes	2
Curriculum Map	3
2020-2021 Assessment Cycle	4
Means of Assessment & Criteria for Success	4
Summary of Data Collected AND Use of Results	11
Operational Plan	30
Status Report	30
2021-2022 Assessment Cycle	31
Means of Assessment & Criteria for Success	31
Summary of Data Collected AND Use of Results	31
Operational Plan	31
Status Report	31
Pilot Programs/Practice Assessment Cycle (2009, 2016)	32
Means of Assessment & Criteria for Success	32
Assessment Findings	32
Operational Plan	32
Status Report	32
2019-2020 Assessment Cycle	33
Means of Assessment & Criteria for Success	33
Summary of Data Collected AND Use of Results	36
Operational Plan	42
Status Report	46
Appendix	50

General Information (Program Assessment Form (Academic Program))

Standing Requirements

NMC MISSION STATEMENT & ESIP (COLUMN 1 OF THE 5-COLUMN MODEL)

NMC Mission Statement: Northern Marianas College, through its commitment to student learning, provides high quality, affordable and accessible educational programs and services for the individual and people of the Commonwealth. *ESIP for Natural Resources Management (NRM): The NRM program mission (in view of the importance of the NRM as the flagship program of the SMHA Department and the NMC mission statement) is to support local initiatives and priorities developed within the islands toward conserving and protecting its precious natural resources, and to promote the efficient use of human, institutional, and financial resources to meet local and regional goals and objectives. *(This ESIP was formulated by a Committee from Tinian, Rota and Saipan at the time when they change the agriculture program into a broader field of NRM way back in 1998. This has been a historical and substantive work of that Committee which is one of the substantive change in the pursuit of the collaborative, integrative and multidisciplinary-based program).

OUTCOMES (COLUMN 2 OF THE 5-COLUMN MODEL)

A.S. in Natural Resources Management Outcome Set (formulated by a Committee from Tinian, Rota and Saipan in 1998)

NRM PLO 1

Students will be able to demonstrate an understanding of the methodology of system integration and best practices of conservation and sustainable management and development. (NRM-PLO 3/8)

Mapping

General Education Outcomes (GELOs): GEO Citizenship and Society 3.1, GEO Citizenship and Society 3.2, GEO Critical Thinking 1.2, GEO Humanities 2.2, GEO Oral Communication 5.1, GEO Oral Communication 5.2, GEO Quantitative and Scientific Reasoning 6.1, GEO Quantitative and Scientific Reasoning 6.2, GEO Written Communication 7.1

NRM PLO 2

Students will be able to demonstrate an understanding of the roles and politics and economic development on natural resources management and ecosystems management (NRM-PLO 5/8)

Mapping

General Education Outcomes (GELOs): GEO Citizenship and Society 3.1, GEO Citizenship and Society 3.2, GEO Critical Thinking 1.1, GEO Critical Thinking 1.2, GEO Humanities 2.2, GEO Oral Communication 5.1, GEO Oral Communication 5.2, GEO Quantitative and Scientific Reasoning 6.1, GEO Quantitative and Scientific Reasoning 6.2, GEO Written Communication 7.1, GEO Written Communication 7.2

NRM PLO 3

Students will be able to demonstrate an understanding of the CNMI, federal and international environmental laws and regulatory enforcement procedures. They will also be able to demonstrate special topics on their emphasis areas including their on-the-job training (OJT)/internship research experiences and exposure, under the host mentor/supervisor as career professionals in selected environmental institutions (NRM-PLO 8/8)

Mapping

General Education Outcomes (GELOs): GEO Citizenship and Society 3.1, GEO Citizenship and Society 3.2, GEO Critical Thinking 1.1, GEO Critical Thinking 1.2, GEO Humanities 2.2, GEO Oral Communication 5.1, GEO Oral Communication 5.2, GEO Quantitative and Scientific Reasoning 6.1, GEO Quantitative and Scientific Reasoning 6.2, GEO Written Communication 7.1, GEO Written Communication 7.2

CURRICULUM MAP

Active Curriculum Maps

NRM Spring 2020 (Draft) (See appendix)

Alignment Set A.S. in Natural Resources Management Outcome Set (formulated by a Committee from Tinian, Rota and Saipan in 1998)

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2020-2021 Assessment Cycle

MEANS OF ASSESSMENT & CRITERIA FOR SUCCESS (ASSESSMENT PLAN OR COLUMN 3 OF THE 5-COLUMN MODEL)

Mission Statement

NMC Mission Statement: Northern Marianas College, through its commitment to student learning, provides high quality, affordable and accessible educational programs and services for the individual and people of the Commonwealth. *ESIP for Natural Resources Management (NRM): The NRM program mission (in view of the importance of the NRM as the flagship program of the SMHA Department and the NMC mission statement) is to support local initiatives and priorities developed within the islands toward conserving and protecting its precious natural resources, and to promote the efficient use of human, institutional, and financial resources to meet local and regional goals and objectives. A key element within the program is effective capacity building and development at both the institutional and community level, reducing the reliance on external expertise and increasing the ability and capacity of local institutions and individuals to address the ever-increasing environmental challenges faced by the islands. The NRM program curriculum encourages and follows a regional approach to solving problems and developing strategies through working in cooperation with the local agencies, organizations, and individuals toward producing effective management of the region's coral reefs, fisheries, marine biotechnology, and ocean resources. *(This ESIP was formulated by a Committee from Tinian, Rota and Saipan at the time when they change the agriculture program into a broader field of NRM way back in 1998. This has been a historical and substantive work of that Committee which is one of the substantive change in the pursuit of the collaborative, integrative and multidisciplinary-based program).

Measures

A.S. in Natural Resources Management Outcome Set (formulated by a Committee from Tinian, Rota and Saipan in 1998)

Outcome

Outcome: NRM PLO 1

Students will be able to demonstrate an understanding of the methodology of system integration and best practices of conservation and sustainable management and development. (NRM-PLO 3/8)

Measure: Pre- and Post-Test (NR 150)

Course level Direct - Exam

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Measure: Pre- and Post-Test (NR 153)

Course level Direct - Exam

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands, demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Measure: Capstone Course Requirement (NR253)

Course level Direct - Student Artifact

Details/Description:	There are various assessment measures included in the capstone requirements: Pre-and Post- Evaluation, quizzes and exams, research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation).
Success Criteria:	Students will score at least seventy (70) percent on the capstone assignments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Measure: Capstone Course Requirement (NR255)

Course level Direct - Student Artifact

Details/Description:	There are various assessment measures included in the capstone requirements: Pre-and Post- Evaluation, quizzes and exams, research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation).
Success Criteria:	Students will score at least seventy (70) percent on the capstone assignments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator / Dr. Erin Derrington -Adjunct

Personnel: Faculty

Measure: Mid-Term or Final Research Term Paper(s) (NR 150)

Course level Direct - Student Artifact

Details/Description: Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.

Success Criteria: Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.

Implementation Plan (timeline): Throughout the semester (Mid-Term and Final or End of Term)

Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Measure: Mid-Term or Final Research Term Paper(s) (NR 153)

Course level Direct - Student Artifact

Details/Description: Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.

Success Criteria: Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.

Implementation Plan (timeline): Throughout the semester (Mid-Term and Final or End of Term)

Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Measure: Modular Assessments (Exams, Test, Assignments & Quiz) (NR 150)

Course level Direct - Student Artifact

Details/Description: Measures applied during and at the end of each Module will help students demonstrate an understanding of the methodology of system integration and best practices of conservation and sustainable management and development.

Success Criteria: The student should have a score of 70% and above to pass each measure in the module.

Implementation Plan (timeline): Timeline is as indicated in the Course schedule.

Key/Responsible Personnel: Course Instructor/Professor:
Dr. Alfred B. De Torres

Measure: Modular Assessments (Exams, Test, Assignments & Quiz) (NR 153)

Course level Direct - Student Artifact

Details/Description: Measures applied during and at the end of each Module will help students demonstrate an understanding of the methodology of system integration and best practices of conservation and sustainable management and development.

Success Criteria: The student should have a score of 70% and above to pass each measure in the module.

Implementation Plan (timeline): Timeline is as indicated in the Course schedule.

Key/Responsible Personnel: Course Instructor/Professor:
Dr. Alfred B. De Torres

Outcome: NRM PLO 2

Students will be able to demonstrate an understanding of the roles and politics and economic development on natural resources management and ecosystems management (NRM-PLO 5/8)

Measure: Case Assignments and Term research papers (NR 150)

Program level Direct - Student Artifact

Details/Description: Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.

Success Criteria: Student should receive at least seventy (70) percent or better on the assessments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.

Implementation Plan (timeline): During and at the end of the semester

Key/Responsible Personnel: Dr. Alfred B. De Torres
NRM Program Coordinator and Advisor

Measure: Case Assignments and Term research papers (NR 153)

Program level Direct - Student Artifact

Details/Description: Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.

Success Criteria: Student should receive at least seventy (70) percent or better on the assessments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.

Implementation Plan (timeline): During and at the end of the semester

Key/Responsible Personnel: Dr. Alfred B. De Torres
NRM Program Coordinator and Advisor

Measure: Pre- and Post-Test (NR 150)

Course level Direct - Exam

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Measure: Pre- and Post-Test (NR 153)

Course level Direct - Exam

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Measure: Capstone Course Requirement (NR253)

Course level Direct - Student Artifact

Details/Description:	There are various assessment measures included in the capstone requirements: Pre-and Post- Evaluation, quizzes and exams, research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation).
Success Criteria:	Students will score at least seventy (70) percent on the capstone assignments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Measure: Capstone Course Requirement (NR255)

Course level Direct - Student Artifact

Details/Description:	There are various assessment measures included in the capstone requirements: Pre-and Post- Evaluation, quizzes and exams, research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation.
Success Criteria:	Students will score at least seventy (70) percent on the capstone assignments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator / Dr. Erin Derrington-Adjunct Faculty

Outcome: NRM PLO 3

Students will be able to demonstrate an understanding of the CNMI, federal and international environmental laws and regulatory enforcement procedures. They will also be able to demonstrate special topics on their emphasis areas including their on-the-job training (OJT)/internship research experiences and exposure, under the host mentor/supervisor as career professionals in selected environmental institutions (NRM-PLO 8/8)

Measure: Case Assignments and Term research papers-NR 298 (With Both Written and Oral Reporting Rubrics Applied)

Program level Direct - Student Artifact

Details/Description:	This course provides experiences and exposure on specialized directed study, professional and/or public seminar and on-the-job/professional exposure and training in the student's emphasis area or in a topic chosen by the student and the instructor/supervising mentor.
Success Criteria:	Students should receive at least seventy (70) percent on the assessment that measures how effectively students understand, demonstrate and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.
Implementation Plan (timeline):	During and at the end of the semester
Key/Responsible Personnel:	Dr. Alfredo B. De Torres NRM Program Coordinator and Advisor

Measure: Exams/Tests (NR 290)

Program level Direct - Student Artifact

Details/Description:	This course provide experiences and exposure on specialized directed study, professional and/or public seminar and on-the-job/professional exposure and training
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	in the student's emphasis area or in a topic chosen by the student and the instructor/supervising mentor.
Success Criteria:	Students should receive a score of at least seventy (70) percent on the assessments to show they effectively understand, demonstrate, and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.
Implementation Plan (timeline):	During and at the end of the semester
Key/Responsible Personnel:	Dr. Alfredo B. De Torres- NRM Program Coordinator and Advisor

Measure: Exams/Tests (NR 298)

Program level Direct - Student Artifact

Details/Description:	This course provides experiences and exposure on specialized directed study, professional and/or public seminar and on-the-job/professional exposure and training in the student's emphasis area or in a topic chosen by the student and the instructor/supervising mentor.
Success Criteria:	Students should receive a score of at least seventy (70) percent on the assessments to show they effectively understand, demonstrate, and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.
Implementation Plan (timeline):	During and at the end of the semester
Key/Responsible Personnel:	Dr. Alfredo B. De Torres-NRM Program Coordinator and Advisor

Measure: Pre- and Post-Test (NR 150)

Course level Direct - Exam

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Measure: Pre- and Post-Test (NR 153)

Course level Direct - Exam

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Measure: Case Assignments and Term research papers - NR 290 (with Both Written and Oral Reporting Rubrics applied)
Program level Direct - Student Artifact

Details/Description:	This course provides experiences and exposure on specialized directed study, professional and/or public seminar and on-the-job/professional exposure and training in the student's emphasis area or in a topic chosen by the student and the instructor/supervising mentor.
Success Criteria:	Students should receive a score of at least seventy (70) percent on the assessments to show they effectively understand, demonstrate, and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.
Implementation Plan (timeline):	During and at the end of the semester
Key/Responsible Personnel:	Dr. Alfredo B. De Torres NRM Program Coordinator and Advisor

SUMMARY OF DATA COLLECTED AND USE OF RESULTS (ASSESSMENT FINDINGS OR COLUMNS 4 & 5 OF THE 5-COLUMN MODEL)

Finding per Measure

A.S. in Natural Resources Management Outcome Set (formulated by a Committee from Tinian, Rota and Saipan in 1998)

Outcome

Outcome: NRM PLO 1

Students will be able to demonstrate an understanding of the methodology of system integration and best practices of conservation and sustainable management and development. (NRM-PLO 3/8)

Measure: Pre- and Post-Test (NR 150)

Course level Direct - Exam

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Findings for Pre- and Post-Test (NR 150)

Summary of Findings:	Of the 10 students who enrolled, 10 students or 100% earned the completion rate, with an average grade of 89; with 6 students being above average. *These overall grades encompassed the pre and post test for NR 150.
Results :	Success Criteria Achievement: Exceeded
Recommendations:	Overall, the completion rate for NR150 was significantly successful (90%) for the students to continue at the next level of advanced courses, particularly in the capstone courses. Another Intro Course, NR153- Environmental Conservation, have 100% completion rates, compared to the previous years, as indicated earlier with only 50% completion rates. The instructor (no longer with NMC), was advised to modify her pedagogy in teaching, based on the level of understanding of the students, and constant follow through with the required feedback for the students' improvement in their learning. The next PhD adjunct Faculty has a relatively better performance and students became relatively comfortable in the succeeding semesters.
Reflections/Notes:	See recommendations above.

Measure: Pre- and Post-Test (NR 153)

Course level Direct - Exam

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands, demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.

Implementation Plan (timeline): Throughout the semester
Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Findings for Pre- and Post-Test (NR 153)

Summary of Findings: In Spring 2021, only four (4) NRM students enrolled with 100% completion rate reported; and with an average of 90 %; and with 3 students or 75%, being above average.

*The overall grades displayed here take into account the pre and post-test for NR 153.

Results : Success Criteria Achievement: Exceeded

Recommendations: NR153- Environmental Conservation, have 100% completion rates, compared to the previous years, as indicated earlier with only 50% completion rates. The instructor (no longer with NMC), was advised to modify her pedagogy in teaching, based on the level of understanding of the students, and constant follow through with the required feedback for the students' improvement in their learning. The next PhD adjunct Faculty has a relatively better performance and students became relatively comfortable in the succeeding semesters.

Reflections/Notes: See recommendations above.

Measure: Capstone Course Requirement (NR253)

Course level Direct - Student Artifact

Details/Description: There are various assessment measures included in the capstone requirements: Pre-and Post- Evaluation, quizzes and exams, research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation.

Success Criteria: Students will score at least seventy (70) percent on the capstone assignments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.

Implementation Plan (timeline): Throughout the semester
Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Findings for Capstone Course Requirement (NR253)

Summary of Findings:	NR253: Species and Ecosystem Management was offered during Spring 2021, with completion rates of 100 % with all students received 90-96% as their overall grade in the course. *This overall grade takes into account the capstone course requirements.
Results :	Success Criteria Achievement: Exceeded
Recommendations:	Generally, for the capstone courses, the students both orally and in writing have presented their required output in the curricular developments and in effectively conducting research/survey & investigations on their emphasis areas of interest and in their on-the-job training or exposures and experiences with various environmental institutions in the CNMI or in-campus via CREES; and none reported for an off campus/island i.e. outside of the CNMI. It is worthy to note here that the NRM students have had the opportunities to be exposed and thus experienced various project, practicum and/or on the job training in different environmental network institutions not only here inside NMC (like CREES, NRMP) but also in the environmental agencies (BECQ, DLNR and NGOs, including private enterprises) of the CNMI. It is expected that more will avail of the out-of-country internship every or during Summer.
Reflections/Notes:	See recommendations above.

Measure: Capstone Course Requirement (NR255)
Course level Direct - Student Artifact

Details/Description:	There are various assessment measures included in the capstone requirements: Pre-and Post- Evaluation, quizzes and exams, research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation).
Success Criteria:	Students will score at least seventy (70) percent on the capstone assignments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator / Dr. Erin Derrington -Adjunct Faculty

Findings for Capstone Course Requirement (NR255)

Summary of Findings:	NR 255: Conservation Politics and Economics-For the Spring 2021, out of the 7 students enrolled, 71% was recorded to be the completion rate, but with two (2) students as below average or one (1)as Incomplete and another one (1) with a grade of "D"; a minimum of "C" is considered passing in NRM Courses for program major students.
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*The overall grade encompasses the capstone course requirements.

Results :	Success Criteria Achievement: Met
Recommendations:	Thus, by looking forward, the NRM program is hoping to achieve a targeted 10-15 graduating students by Spring 2022 and a cohort of 40-50 NRM students (for the more than 10 years of revival period) These evaluative results and observations were used as part of a comprehensive, integrative, and demonstrative aspects of student proficiency in the NRM sciences and the environmental field of studies.
Reflections/Notes:	It would be noted that enrollment for this Spring term has a downtrend case relative to the previous terms. *See recommendations above.

Measure: Mid-Term or Final Research Term Paper(s) (NR 150)
Course level Direct - Student Artifact

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.
Implementation Plan (timeline):	Throughout the semester (Mid-Term and Final or End of Term)
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Findings for Mid-Term or Final Research Term Paper(s) (NR 150)

Summary of Findings:	Introduction to Natural Resources Management. This course was offered as one of the two beginning program courses for the A. Sc. in NRM degree program in Spring 2021. Of the 10 students who enrolled, 10 students or 100% earned the completion rate, with an average grade of 89; with 6 students being above average. *The overall grade encompasses the grades from the final research paper, which is carries a weight of 20-30% of the overall grade.
Results :	Success Criteria Achievement: Exceeded
Recommendations:	Overall, the completion rate for NR150 was significantly successful (90%) for the students to continue at the next level of advanced courses, particularly in the

capstone courses.

Reflections/Notes: See recommendations above.

Measure: Mid-Term or Final Research Term Paper(s) (NR 153)

Course level Direct - Student Artifact

Details/Description: Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.

Success Criteria: Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.

Implementation Plan (timeline): Throughout the semester (Mid-Term and Final or End of Term)

Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Findings for Mid-Term or Final Research Term Paper(s) (NR 153)

Summary of Findings: Environmental Conservation. This course was also offered as one of the two introductory program courses in Spring 2021, only four (4) NRM students enrolled with 100% completion rate reported; and with an average of 90 %; and with 3 students or 75%, being above average.
*The overall grade encompasses the score for the final research term paper, which accounts for 30% of the overall grade.

Results : Success Criteria Achievement: Exceeded

Recommendations: NR153- Environmental Conservation have 100% completion rates, compared to the previous years, as indicated earlier with only 50% completion rates. The instructor (no longer with NMC), was advised to modify her pedagogy in teaching, based on the level of understanding of the students, and constant follow through with the required feedback for the students' improvement in their learning. The next PhD adjunct Faculty has a relatively better performance and students became relatively comfortable in the succeeding semesters.

Reflections/Notes: See recommendations above.

Measure: Modular Assessments (Exams, Test, Assignments & Quiz) (NR 150)

Course level Direct - Student Artifact

Details/Description:	Measures applied during and at the end of each Module will help students demonstrate an understanding of the methodology of system integration and best practices of conservation and sustainable management and development.
Success Criteria:	The student should have a score of 70% and above to pass each measure in the module.
Implementation Plan (timeline):	Timeline is as indicated in the Course schedule.
Key/Responsible Personnel:	Course Instructor/Professor: Dr. Alfred B. De Torres

Findings for Modular Assessments (Exams, Test, Assignments & Quiz) (NR 150)

Summary of Findings:	Introduction to Natural Resources Management. This course was offered as one of the two beginning program courses for the A. Sc. in NRM degree program in Spring 2021. Of the 10 students who enrolled, 10 students or 100% earned the completion rate, with an average grade of 89; with 6 students being above average. *The overall grade encompasses the exams, tests, assignments and quizzes.
Results :	Success Criteria Achievement: Exceeded
Recommendations:	Overall, the completion rate for NR150 was significantly successful (90%) for the students to continue at the next level of advanced courses, particularly in the capstone courses.
Reflections/Notes:	See recommendations above.

Measure: Modular Assessments (Exams, Test, Assignments & Quiz) (NR 153)

Course level Direct - Student Artifact

Details/Description:	Measures applied during and at the end of each Module will help students demonstrate an understanding of the methodology of system integration and best practices of conservation and sustainable management and development.
Success Criteria:	The student should have a score of 70% and above to pass each measure in the module.
Implementation Plan (timeline):	Timeline is as indicated in the Course schedule.
Key/Responsible Personnel:	Course Instructor/Professor: Dr. Alfred B. De Torres

Findings for Modular Assessments (Exams, Test, Assignments & Quiz) (NR 153)

Summary of Findings:	Environmental Conservation. This course was also offered as one of the two introductory program courses in Spring 2021, only four (4) NRM students enrolled with 100% completion rate reported; and with an average of 90 %; and with 3 students or 75%, being above average. *The overall grade encompasses the grades from the exams, tests, assignments, and quizzes.
Results :	Success Criteria Achievement: Exceeded
Recommendations:	NR153- Environmental Conservation, have 100% completion rates, compared to the previous years, as indicated earlier with only 50% completion rates. The instructor (no longer with NMC), was advised to modify her pedagogy in teaching, based on the level of understanding of the students, and constant follow through with the required feedback for the students' improvement in their learning. The next PhD adjunct Faculty has a relatively better performance and students became relatively comfortable in the succeeding semesters.
Reflections/Notes:	See recommendations above.

Outcome: NRM PLO 2

Students will be able to demonstrate an understanding of the roles and politics and economic development on natural resources management and ecosystems management (NRM-PLO 5/8)

Measure: Case Assignments and Term research papers (NR 150)

Program level Direct - Student Artifact

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Student should receive at least seventy (70) percent or better on the assessments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.
Implementation Plan (timeline):	During and at the end of the semester
Key/Responsible Personnel:	Dr. Alfred B. De Torres NRM Program Coordinator and Advisor

Findings for Case Assignments and Term research papers (NR 150)

Summary of Findings:	Introduction to Natural Resources Management. This course was offered as one of the two beginning program courses for the A. Sc. in NRM degree program in Spring 2021. Of the 10 students who enrolled, 10 students or 100% earned the completion
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rate, with an average grade of 89; with 6 students being above average.
*The overall grade includes the case assignments and term research papers which carry a weight of 20-30% of the overall grade.

- Results :** Success Criteria Achievement: Exceeded
- Recommendations:** Overall, the completion rate for NR150 was significantly successful (90%) for the students to continue at the next level of advanced courses, particularly in the capstone courses.
- Reflections/Notes:** See recommendations above.

Measure: Case Assignments and Term research papers (NR 153)

Program level Direct - Student Artifact

- Details/Description:** Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
- Success Criteria:** Student should receive at least seventy (70) percent or better on the assessments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.
- Implementation Plan (timeline):** During and at the end of the semester
- Key/Responsible Personnel:** Dr. Alfred B. De Torres
NRM Program Coordinator and Advisor

Findings for Case Assignments and Term research papers (NR 153)

- Summary of Findings:** Environmental Conservation. This course was also offered as one of the two introductory program courses in Spring 2021, only four (4) NRM students enrolled with 100% completion rate reported; and with an average of 90 %; and with 3 students or 75%, being above average.
- Results :** Success Criteria Achievement: Exceeded
- Recommendations:** NR153- Environmental Conservation, have 100% completion rates, compared to the previous years, as indicated earlier with only 50% completion rates. The instructor (no longer with NMC), was advised to modify her pedagogy in teaching, based on the level of understanding of the students, and constant follow through with the required feedback for the students' improvement in their learning. The next PhD adjunct Faculty has a relatively better performance and students became relatively comfortable in the succeeding semesters.
- Reflections/Notes:** See recommendations above.

Measure: Pre- and Post-Test (NR 150)

Course level Direct - Exam

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Findings for Pre- and Post-Test (NR 150)

Summary of Findings:	Introduction to Natural Resources Management. This course was offered as one of the two beginning program courses for the A. Sc. in NRM degree program in Spring 2021. Of the 10 students who enrolled, 10 students or 100% earned the completion rate, with an average grade of 89; with 6 students being above average.
Results :	Success Criteria Achievement: Exceeded
Recommendations:	Overall, the completion rate for NR150 was significantly successful (90%) for the students to continue at the next level of advanced courses, particularly in the capstone courses.
Reflections/Notes:	See recommendations above.

Measure: Pre- and Post-Test (NR 153)

Course level Direct - Exam

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Personnel:

Findings for Pre- and Post-Test (NR 153)

Summary of Findings:	NR153: Environmental Conservation. This course was also offered as one of the two introductory program courses in Spring 2021, only four (4) NRM students enrolled with 100% completion rate reported; and with an average of 90 %; and with 3 students or 75%, being above average.
Results :	Success Criteria Achievement: Exceeded
Recommendations:	NR153- Environmental Conservation, have 100% completion rates, compared to the previous years, as indicated earlier with only 50% completion rates. The instructor (no longer with NMC), was advised to modify her pedagogy in teaching, based on the level of understanding of the students, and constant follow through with the required feedback for the students' improvement in their learning. The next PhD adjunct Faculty has a relatively better performance and students became relatively comfortable in the succeeding semesters.
Reflections/Notes:	See recommendations above.

Measure: Capstone Course Requirement (NR253)

Course level Direct - Student Artifact

Details/Description:	There are various assessment measures included in the capstone requirements: Pre-and Post- Evaluation, quizzes and exams, research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation.
Success Criteria:	Students will score at least seventy (70) percent on the capstone assignments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Findings for Capstone Course Requirement (NR253)

Summary of Findings:	NR253: Species and Ecosystem Management was offered during Spring 2021, with completion rates of 100 %.
Results :	Success Criteria Achievement: Exceeded
Recommendations:	Generally, for the capstone courses, the students both orally and in writing have presented their required output in the curricular developments and in effectively conducting research/survey & investigations on their emphasis areas of interest

and in their on-the-job training or exposures and experiences with various environmental institutions in the CNMI or in-campus via CREES; and none reported for an off campus/island i.e. outside of the CNMI. It is worthy to note here that the NRM students have had the opportunities to be exposed and thus experienced various project, practicum and/or on the job training in different environmental network institutions not only here inside NMC (like CREES, NRMP) but also in the environmental agencies (BECQ, DLNR and NGOs, including private enterprises) of the CNMI. It is expected that more will avail of the out-of-country internship every or during Summer.

Reflections/Notes: See recommendations above.

Measure: Capstone Course Requirement (NR255)

Course level Direct - Student Artifact

Details/Description:	There are various assessment measures included in the capstone requirements: Pre-and Post- Evaluation, quizzes and exams, research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation.
Success Criteria:	Students will score at least seventy (70) percent on the capstone assignments which measure whether students effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator / Dr. Erin Derrington-Adjunct Faculty

Findings for Capstone Course Requirement (NR255)

Summary of Findings: Conservation Politics and Economics-For the Spring 2021, out of the 7 students enrolled, 71%was recorded to be the completion rate, but with two (2) students as below average or one (1)as Incomplete and another one (1) with a grade of "D"; a minimum of "C" is considered passing in NRM Courses for program major students.

It would be noted that enrollment for this Spring term has a downtrend case relative to the previous terms.

Results : Success Criteria Achievement: Met

Recommendations: Generally, for the capstone courses, the students both orally and in writing have presented their required output in the curricular developments and in effectively conducting research/survey & investigations on their emphasis areas of interest and in their on-the-job training or exposures and experiences with various

environmental institutions in the CNMI or in-campus via CREES; and none reported for an off campus/island i.e. outside of the CNMI. It is worthy to note here that the NRM students have had the opportunities to be exposed and thus experienced various project, practicum and/or on the job training in different environmental network institutions not only here inside NMC (like CREES, NRMP) but also in the environmental agencies (BECQ, DLNR and NGOs, including private enterprises) of the CNMI. It is expected that more will avail of the out-of-country internship every or during Summer.

Reflections/Notes: See recommendations above.

Outcome: NRM PLO 3

Students will be able to demonstrate an understanding of the CNMI, federal and international environmental laws and regulatory enforcement procedures. They will also be able to demonstrate special topics on their emphasis areas including their on-the-job training (OJT)/internship research experiences and exposure, under the host mentor/supervisor as career professionals in selected environmental institutions (NRM-PLO 8/8)

Measure: Case Assignments and Term research papers-NR 298 (With Both Written and Oral Reporting Rubrics Applied)

Program level Direct - Student Artifact

Details/Description: This course provides experiences and exposure on specialized directed study, professional and/or public seminar and on-the-job/professional exposure and training in the student's emphasis area or in a topic chosen by the student and the instructor/supervising mentor.

Success Criteria: Students should receive at least seventy (70) percent on the assessment that measures how effectively students understand, demonstrate and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.

Implementation Plan (timeline): During and at the end of the semester

Key/Responsible Personnel: Dr. Alfredo B. De Torres
NRM Program Coordinator and Advisor

Findings for Case Assignments and Term research papers-NR 298 (With Both Written and Oral Reporting Rubrics Applied)

Summary of Findings: NRM Internships;
This course is supposed to be offered only during Fall Term or primarily after the summer internship exposures in or out of the country. It is also being offered earlier, on request as an Independent Study (IS) for those students who will be graduating and has only this subject remaining for graduation.

For the year under review, 8 students have attended in Spring term, 2021 (5 enrolled students) and 3 Incomplete students in Spring term, 2021. The recorded completion rate is 88 % but one (1) with Incomplete grade for lacking some requirements, in view of unexpected situations, in particular with the impact of COVID-19 pandemics. However, it is generally noted that students were able to complete these requirements the following semester enabling them to be included in their graduation program.

Results : Success Criteria Achievement: Exceeded

Recommendations: Generally, for the capstone courses, the students both orally and in writing have presented their required output in the curricular developments and in effectively conducting research/survey & investigations on their emphasis areas of interest and in their on-the-job training or exposures and experiences with various environmental institutions in the CNMI or in-campus via CREES; and none reported for an off campus/island i.e. outside of the CNMI. It is worthy to note here that the NRM students have had the opportunities to be exposed and thus experienced various project, practicum and/or on the job training in different environmental network institutions not only here inside NMC (like CREES, NRMP) but also in the environmental agencies (BECQ, DLNR and NGOs, including private enterprises) of the CNMI. It is expected that more will avail of the out-of-country internship every or during Summer.

Reflections/Notes: See recommendations above.

Measure: Exams/Tests (NR 290)

Program level Direct - Student Artifact

Details/Description: This course provide experiences and exposure on specialized directed study, professional and/or public seminar and on-the-job/professional exposure and training in the student's emphasis area or in a topic chosen by the student and the instructor/supervising mentor.

Success Criteria: Students should receive a score of at least seventy (70) percent on the assessments to show they effectively understand, demonstrate, and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.

Implementation Plan (timeline): During and at the end of the semester

Key/Responsible Personnel: Dr. Alfredo B. De Torres- NRM Program Coordinator and Advisor

Findings for Exams/Tests (NR 290)

Summary of Findings: NR 290: Special Research Topics in NRM:
 There are 7 mostly graduating students enrolled for the Spring 2021. Of this

number, a low or about 60 % is the reported completion rate but with three (3) or 40 % as non-passing grades. This is a cause for alarm in view of the fact that some of these students have earned Incomplete grades earlier.

Results : Success Criteria Achievement: Not Met

Recommendations: Generally, for the capstone courses, the students both orally and in writing have presented their required output in the curricular developments and in effectively conducting research/survey & investigations on their emphasis areas of interest and in their on-the-job training or exposures and experiences with various environmental institutions in the CNMI or in-campus via CREES; and none reported for an off campus/island i.e. outside of the CNMI. It is worthy to note here that the NRM students have had the opportunities to be exposed and thus experienced various project, practicum and/or on the job training in different environmental network institutions not only here inside NMC (like CREES, NRMP) but also in the environmental agencies (BECQ, DLNR and NGOs, including private enterprises) of the CNMI. It is expected that more will avail of the out-of-country internship every or during Summer.

Reflections/Notes: See recommendations above.

Measure: Exams/Tests (NR 298)

Program level Direct - Student Artifact

Details/Description: This course provides experiences and exposure on specialized directed study, professional and/or public seminar and on-the-job/professional exposure and training in the student's emphasis area or in a topic chosen by the student and the instructor/supervising mentor.

Success Criteria: Students should receive a score of at least seventy (70) percent on the assessments to show they effectively understand, demonstrate, and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.

Implementation Plan (timeline): During and at the end of the semester

Key/Responsible Personnel: Dr. Alfredo B. De Torres-NRM Program Coordinator and Advisor

Findings for Exams/Tests (NR 298)

Summary of Findings: NR 298: NRM Internships;
This course is supposed to be offered only during Fall Term or primarily after the summer internship exposures in or out of the country. It is also being offered earlier, on request as an Independent Study (IS) for those students who will be graduating and has only this subject remaining for graduation.
For the year under review, 8 students have attended in Spring term, 2021 (5

enrolled students) and 3 Incomplete students in Spring term, 2021. The recorded completion rate is 88 % but one (1) with Incomplete grade for lacking some requirements, in view of unexpected situations, in particular with the impact of COVID-19 pandemics. However, it is generally noted that students were able to complete these requirements the following semester enabling them to be included in their graduation program.

Results : Success Criteria Achievement: Exceeded

Recommendations: Generally, for the capstone courses, the students both orally and in writing have presented their required output in the curricular developments and in effectively conducting research/survey & investigations on their emphasis areas of interest and in their on-the-job training or exposures and experiences with various environmental institutions in the CNMI or in-campus via CREES; and none reported for an off campus/island i.e. outside of the CNMI. It is worthy to note here that the NRM students have had the opportunities to be exposed and thus experienced various project, practicum and/or on the job training in different environmental network institutions not only here inside NMC (like CREES, NRMP) but also in the environmental agencies (BECQ, DLNR and NGOs, including private enterprises) of the CNMI. It is expected that more will avail of the out-of-country internship every or during Summer.

Reflections/Notes: See recommendations above.

Measure: Pre- and Post-Test (NR 150)

Course level Direct - Exam

Details/Description: Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.

Success Criteria: Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.

Implementation Plan (timeline): Throughout the semester

Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Findings for Pre- and Post-Test (NR 150)

Summary of Findings: NR150: Introduction to Natural Resources Management. This course was offered as one of the two beginning program courses for the A. Sc. in NRM degree program in Spring 2021. Of the 10 students who enrolled, 10 students or 100% earned the completion

	rate, with an average grade of 89; with 6 students being above average.
Results :	Success Criteria Achievement: Exceeded
Recommendations:	Overall, the completion rate for NR150 was significantly successful (90%) for the students to continue at the next level of advanced courses, particularly in the capstone courses.
Reflections/Notes:	See recommendations above.

Measure: Pre- and Post-Test (NR 153)

Course level Direct - Exam

Details/Description:	Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	Students will score at least seventy (70) percent on pre and post-tests that evaluate whether the student effectively understands demonstrates, and values the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management.
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Dr. Alfredo De Torres - NRM Program Coordinator

Findings for Pre- and Post-Test (NR 153)

Summary of Findings:	NR153: Environmental Conservation. This course was also offered as one of the two introductory program courses in Spring 2021, only four (4) NRM students enrolled with 100% completion rate reported; and with an average of 90 %; and with 3 students or 75%, being above average.
Results :	Success Criteria Achievement: Exceeded
Recommendations:	NR153- Environmental Conservation have 100% completion rates, compared to the previous years, as indicated earlier with only 50% completion rates. The instructor (no longer with NMC), was advised to modify her pedagogy in teaching, based on the level of understanding of the students, and constant follow through with the required feedback for the students' improvement in their learning. The next PhD adjunct Faculty has a relatively better performance and students became relatively comfortable in the succeeding semesters.
Reflections/Notes:	See recommendations above.

Measure: Case Assignments and Term research papers - NR 290 (with Both Written and Oral Reporting Rubrics applied)

Program level Direct - Student Artifact

Details/Description: This course provides experiences and exposure on specialized directed study, professional and/or public seminar and on-the-job/professional exposure and training in the student's emphasis area or in a topic chosen by the student and the instructor/supervising mentor.

Success Criteria: Students should receive a score of at least seventy (70) percent on the assessments to show they effectively understand, demonstrate, and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.

Implementation Plan (timeline): During and at the end of the semester

Key/Responsible Personnel: Dr. Alfredo B. De Torres
NRM Program Coordinator and Advisor

Findings for Case Assignments and Term research papers - NR 290 (with Both Written and Oral Reporting Rubrics applied)

Summary of Findings: NR 290: Special Research Topics in NRM:
There are 7 mostly graduating students enrolled for the Spring 2021. Of this number, a low or about 60 % is the reported completion rate but with three (3) or 40 % as non-passing grades. This is a cause for alarm in view of the fact that some of these students have earned Incomplete grades earlier.

Results : Success Criteria Achievement: Not Met

Recommendations: Generally, for the capstone courses, the students both orally and in writing have presented their required output in the curricular developments and in effectively conducting research/survey & investigations on their emphasis areas of interest and in their on-the-job training or exposures and experiences with various environmental institutions in the CNMI or in-campus via CREES; and none reported for an off campus/island i.e. outside of the CNMI. It is worthy to note here that the NRM students have had the opportunities to be exposed and thus experienced various project, practicum and/or on the job training in different environmental network institutions not only here inside NMC (like CREES, NRMP) but also in the environmental agencies (BECQ, DLNR and NGOs, including private enterprises) of the CNMI. It is expected that more will avail of the out-of-country internship every or during Summer.

Reflections/Notes: See recommendations above.

Overall Recommendations

These evaluative results and observations were used as part of a comprehensive, integrative, and demonstrative aspects of student proficiency in the NRM sciences and the environmental field of studies.

Recommendations:

On the basis of this Academic Program review of the NRM program courses, the NRMP supports and reiterates the previous cycles recommendations, as well as that of the PAC Meeting and the current Institutional Effectiveness and Assessment Review of StratPlan, 2010-2020 of the NRM program that envisions to transform the ASc in NRM to BSc in NRM and the establishment of the Marine and Environmental Science and Management Center (MESAM); the improved NRM/s ASc in NRM's IDP reduced into 60 credits enabling the NRM students to complete their program within the prescribed two-year period; Improved Educational Programs including the SLOs; the improved education including extension services through the ENRO club and NRMP outreach activities; the Research and Development (R&D) and the Community Public Services within the NRM mission statement, the NRMP as embodied in the StratPlan 2010-2020, reiterates the following five-point agenda for consideration:

Coordinatorship and teaching faculty—recruit qualified personnel (at least one FTE position for NR and/or Environmental Science), who will also serve as understudy to the Program Head of the NRMP; and stabilize the listings of adjunct faculty members given the experienced fast turnover; and further enhance/facilitate the recruitment of at least one adjunct and/or team teaching staff in view of the observed inadequacy, if not lack of NRM or over all course teaching staff; specifically appoint one more core permanent faculty for NRM (needed for a long time/long term basis) under Science/NRM Division. This is to anticipate the transformation of ASc of NRM into BSc in NRM degree requiring four more core teaching-cum-research-faculty to initiate the BSc program, as endorsed by the PAC and the DLNR secretary & BECQ Administrator, including the CNMI community/stakeholders' petition for NMC to offer the long overdue quality, affordable and accessible BSc degree in NRM, amongst other environmental agencies/authorities endorsements.

Coffers and/or Allocated Funding—Allocate substantive permanent budget apart from the uncertain 3-4 network grants/funding for personnel and operational items given the observed inadequacy, if not lack of stable funding for such items. Since the renewal of the NRM program, no operational budget has been allocated for the operations of the NRM Program.

Collaboration & Networking/Partnerships—continuously strengthen and sustain the intra(NMC) and interagency capacity-building in view of the apparently ineffective, if not lack of continuing collaborative and networking efforts both locally and internationally.

Cooperative Participant/Student Recruitment with advertising Campaign—similar to the first two years of the renewal of the NRM program, a more focused and vigorous marketing, recruitment, and admission campaign for both the traditional and non-traditional students especially for the government and non-government employees (GOs & NGOs) including PSS/DOE for both the academic degree and non-degree/certificate programs for NRM, using the students ENRO club(currently having their grants) and other concerned institutions/stakeholders

Curricular and Materials Development – Validating, updating and/or modifying existing NRM curricula and introducing new NRM courses (embedded in the BSC in NRM along with check-listings and procurement/ordering of new edition textbooks/materials that match the NRM course-related offerings (including online programs/course) of other colleges/universities should be explored for our career advancing students both covering the nontraditional and traditional students.

Overall Reflection

Overall, the courses for the year under review have exceeded the desired 70 % passing for the courses offered.

The completion rate recorded for all NRM courses for the year under review ranged from 80% to 100 %.

The overall grade for each student is according to the following categories and percentage or weight system (included in

each syllabus for each course):

10% Participation

40% Exams (including the Final Exam)

30% Final Research Paper (student presents paper to class)

20% Homework, Quiz, Group Work & Cooperative Learning Opportunities, and Class Reporting (oral presentations & discussions, which helps students to be prepared in advance of class)

OPERATIONAL PLAN (THIS IS WHERE YOU CAN LINK AN OUTCOME TO AN ACTION PLAN WITH OR WITHOUT A SPECIAL BUDGET REQUEST.)

STATUS REPORT

2021-2022 Assessment Cycle

MEANS OF ASSESSMENT & CRITERIA FOR SUCCESS (ASSESSMENT PLAN OR COLUMN 3 OF THE 5-COLUMN MODEL)

SUMMARY OF DATA COLLECTED AND USE OF RESULTS (ASSESSMENT FINDINGS OR COLUMNS 4 & 5 OF THE 5-COLUMN MODEL)

OPERATIONAL PLAN (THIS IS WHERE YOU CAN LINK AN OUTCOME TO AN ACTION PLAN WITH OR WITHOUT A SPECIAL BUDGET REQUEST.)

STATUS REPORT

Pilot Programs/Practice Assessment Cycle (2009, 2016)

MEANS OF ASSESSMENT & CRITERIA FOR SUCCESS (ASSESSMENT PLAN)

ASSESSMENT FINDINGS

OPERATIONAL PLAN

STATUS REPORT (THIS SIMPLY STATES THE STATUS OF YOUR OPERATIONAL PLAN.)

2019-2020 Assessment Cycle

MEANS OF ASSESSMENT & CRITERIA FOR SUCCESS (ASSESSMENT PLAN OR COLUMN 3 OF THE 5-COLUMN MODEL)

Mission Statement

NMC Mission Statement: Northern Marianas College, through its commitment to student learning, provides high quality, affordable and accessible educational programs and services for the individual and people of the Commonwealth. *ESIP for Natural Resources Management (NRM): The NRM program mission (in view of the importance of the NRM as the flagship program of the SMHA Department and the NMC mission statement) is to support local initiatives and priorities developed within the islands toward conserving and protecting its precious natural resources, and to promote the efficient use of human, institutional, and financial resources to meet local and regional goals and objectives. A key element within the program is effective capacity building and development at both the institutional and community level, reducing the reliance on external expertise and increasing the ability and capacity of local institutions and individuals to address the ever-increasing environmental challenges faced by the islands. The NRM program curriculum encourages and follows a regional approach to solving problems and developing strategies through working in cooperation with the local agencies, organizations, and individuals toward producing effective management of the region's coral reefs, fisheries, marine biotechnology, and ocean resources. *(This ESIP was formulated by a Committee from Tinian, Rota and Saipan at the time when they change the agriculture program into a broader field of NRM way back in 1998. This has been a historical and substantive work of that Committee which is one of the substantive change in the pursuit of the collaborative, integrative and multidisciplinary-based program).

Measures

A.S. in Natural Resources Management Outcome Set (formulated by a Committee from Tinian, Rota and Saipan in 1998)

Outcome

Outcome: NRM PLO 1

Students will be able to demonstrate an understanding of the methodology of system integration and best practices of conservation and sustainable management and development. (NRM-PLO 3/8)

Measure: Pre- and Post-Test; Modular Evaluation (written test and exams), Research/Case Reports, Focused Group Discussions and Participation, and s

Program level Direct - Student Artifact

Details/Description:

All NRM students are required to take NR150 Intro to Natural Resources Management and NR153 Environmental Conservation, two of the beginning program's course requirements. These courses continue the study of hazardous waste and pollution management; and the human impact on the use, degradation, restoration, and the long-term conservation and sustainable management of resources that include

	land, sea, water, and air. Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.
Success Criteria:	1) Seventy (70) percent of students will effectively understand, demonstrate, and value the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management
Implementation Plan (timeline):	Throughout the semester
Key/Responsible Personnel:	Simon Necesito - Admin Assistant III Dr. Alfredo De Torres - NRM Program Coordinator

Measure: NR253 and NR255 (Capstone Course Requirement)
Program level Direct - Student Artifact

Details/Description:

All NRM students are required to take NR253 Species and Ecosystem Management and NR255 Conservation Politics and Economics, two of the capstone/advanced program's courses requirements.

Assessment measures include the following: Pre-and Post- Evaluation (including quizzes and exams) research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation).

Success Criteria: Seventy (70) percent of students will effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.

Implementation Plan (timeline): Throughout the semester
Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Outcome: NRM PLO 2

Students will be able to demonstrate an understanding of the roles and politics and economic development on natural resources management and ecosystems management (NRM-PLO 5/8)

Measure: Pre-test and Post test, Exams/Tests and Case Assignments and Term research papers
Program level Direct - Student Artifact

Details/Description:

All NRM students are required to take NR150 Intro to Natural Resources Management and NR153 Environmental Conservation, two of the beginning program's course requirements. These courses continue the study of hazardous waste and pollution management; and the human impact on the use, degradation, restoration, and the long-term conservation and sustainable management of resources that include land, sea, water, and air. Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.

The modes of assessments are the Pre- and Post-Test; Modular Evaluation (written test and exams), Research/Case Reports, Focused Group Discussions and Participations, and students' oral presentations of their research projects:

Seventy (70) percent of students will effectively understand, demonstrate, and value the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management of land, water, and air.

All NRM students are required to take NR253 Species and Ecosystem Management and NR255 Conservation Politics and Economics, two of the capstone/advanced program's courses requirements.

Assessment measures include the following: Pre-and Post- Evaluation (including quizzes and exams) research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation.

Success Criteria:

Student should received at least seventy (70) percent or better and will effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.

Implementation Plan (timeline):

During and at the end of the semester

Key/Responsible Personnel:

Dr. Alfred B. De Torres
NRM Program Coordinator and Advisor

Outcome: NRM PLO 3

Students will be able to demonstrate an understanding of the CNMI, federal and international environmental laws and regulatory enforcement procedures. They will also be able to demonstrate special topics on their emphasis areas including their on-the-job training (OJT)/internship research experiences and exposure, under the host mentor/supervisor as career professionals in selected environmental institutions (NRM-PLO 8/8)

Measure: Pre-test and Post test, Exams/Tests and Case Assignments and Term research papers
Program level Direct - Student Artifact

Details/Description:

All NRM students are required to take NR290 Special Topics in NRM, NR295, NRM Seminar, and NR298 NRM Internship capstone courses for the program. These courses provide experiences and exposure on specialized directed study, professional and/or public seminar and on-the-job/professional exposure and training in the student's emphasis area or in a topic chosen by the student and the instructor/supervising mentor.

One of these special topics relate to environmental and natural resources laws and economics (which are not in the course curricula proper of NRM) with reference to the CNMI, federal, and international aspects.

Another related course has reference to a soon-to-be regularized series of the "Island Ecology Course" conducted by two professors from UOG and one professor from NMC.

The seminar is conducted as much as possible as a brown bag seminar or a class scheduled seminar with invited peers apart from instructor and group conducted seminar.

The internship is being held in or off campus as pre-arranged with host supervising institutions.

Assessment measures include Pre- and Post-evaluation of the active engagement of students in coming out with a final written output of the assigned special topics including its public presentation at the UOG and NMC. Seminar topics and special topical emphasis areas selected or agreed upon by the students and host supervisor/coordinator/host mentor. Student stipends have also been provided to students for their research, works, both with scholarly and creative activities.

Seventy (70) percent of the students will effectively understand, demonstrate and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.

Success Criteria:

All students should received at least seventy (70) percent of the students and will effectively understand, demonstrate and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.

Implementation Plan (timeline):

During and at the end of the semester

Key/Responsible Personnel:

Dr. Alfredo B. De Torres
 NRM Program Coordinator and Advisor

SUMMARY OF DATA COLLECTED AND USE OF RESULTS (ASSESSMENT FINDINGS OR COLUMNS 4 & 5 OF THE 5-COLUMN MODEL)

Finding per Measure

A.S. in Natural Resources Management Outcome Set (formulated by a Committee from Tinian, Rota and Saipan in 1998)

Outcome

Outcome: NRM PLO 1

Students will be able to demonstrate an understanding of the methodology of system integration and best practices of conservation and sustainable management and development. (NRM-PLO 3/8)

Measure: Pre- and Post-Test; Modular Evaluation (written test and exams), Research/Case Reports, Focused Group Discussions and Participation, and s

Program level Direct - Student Artifact

Details/Description: All NRM students are required to take NR150 Intro to Natural Resources Management and NR153 Environmental Conservation, two of the beginning program's course requirements. These courses continue the study of hazardous waste and pollution management; and the human impact on the use, degradation, restoration, and the long-term conservation and sustainable management of resources that include land, sea, water, and air. Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.

Success Criteria: 1) Seventy (70) percent of students will effectively understand, demonstrate, and value the human impact on the use, degradation, restoration, and conservation, as well as long-term sustainable management

Implementation Plan (timeline): Throughout the semester

Key/Responsible Personnel: Simon Necesito - Admin Assistant III
Dr. Alfredo De Torres - NRM Program Coordinator

Findings for Pre- and Post-Test; Modular Evaluation (written test and exams), Research/Case Reports, Focused Group Discussions and Participation, and s

Summary of Findings: This PROAC Form 1 reports covered the semesterly period of Fall 2017 and Spring 2018.

NR150: Introduction to Natural Resources Management. This course was

offered as one of the two beginning program courses for the NRM degree program in Fall 2017.

Of the 25 students who enrolled, 21 students or 84% earned the completion rate, with an average grade of 87 or B+, while the other 8 did not pass and the other 8% withdrew from the course.

For the same course in Spring 2018, NR 150 has also, for the first time, been offered in Rota campus, apart from Saipan campus. With the total number of 29 students enrolled, 90 % was recorded as the completion rate, and with an average of 82 or B, and only 10 % as failure

The reported completion rate for this course is slightly lower than the previous semesters.

NR153: Environmental Conservation. This course was also offered as one of the two introductory program courses during the NRM renewal period. In Fall 2017, out of 14 students the completion rate reported was 79 %, with an average of 87 or B+; and 21 % as failure.

In view of low enrollment, NR 153 was cancelled for the Spring 2018.

Overall, for both the previous semesters, the completion rate exceeded the desired 70% success rate for the two (NR 150 & NR 153) beginning program courses.

Results :

Success Criteria Achievement: Exceeded

Recommendations:

Overall, the completion rate for NR150 was significantly successful (100%) for the students to continue at the next level of advanced courses, particularly in the capstone courses. However, under the new instructor teaching NR153, Environmental Conservation, only 50% attained the completion rates. The instructor was advised to modify her pedagogy in teaching, based on the level of understanding of the students, and constant follow through with the required feedback for the students' improvement in their learning. The next PhD adjunct Faculty has a relatively better performance and students became relatively comfortable in the succeeding semesters.

Reflections/Notes:

Please see recommendation above

These Findings are associated with the following Actions:

Recruit qualified personnel (at least 1 FTE for NR and/or Environmental Science))
(Operational Plan; 2019-2020 Assessment Cycle)

Measure: NR253 and NR255 (Capstone Course Requirement)

Program level Direct - Student Artifact

Details/Description:

All NRM students are required to take NR253 Species and Ecosystem Management and NR255 Conservation Politics and Economics, two of the capstone/advanced program's courses requirements.

Assessment measures include the following: Pre-and Post- Evaluation (including quizzes and exams) research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation).

Success Criteria:

Seventy (70) percent of students will effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.

Implementation Plan (timeline):

Throughout the semester

Key/Responsible Personnel:

Dr. Alfredo De Torres - NRM Program Coordinator

Findings for NR253 and NR255 (Capstone Course Requirement)

No Findings Added

Outcome: NRM PLO 2

Students will be able to demonstrate an understanding of the roles and politics and economic development on natural resources management and ecosystems management (NRM-PLO 5/8)

Measure: Pre-test and Post test, Exams/Tests and Case Assignments and Term research papers
Program level Direct - Student Artifact

Details/Description:

All NRM students are required to take NR150 Intro to Natural Resources Management and NR153 Environmental Conservation, two of the beginning program's course requirements. These courses continue the study of hazardous waste and pollution management; and the human impact on the use, degradation, restoration, and the long-term conservation and sustainable management of resources that include land, sea, water, and air.

Students are assessed on their comprehension of the methodology of system integration and best practices of conservation management.

The modes of assessments are the Pre- and Post-Test; Modular Evaluation (written test and exams), Research/Case Reports, Focused Group Discussions and Participations, and students' oral presentations of their research projects:

Seventy (70) percent of students will effectively understand, demonstrate, and value the human impact on the use, degradation, restoration, and conservation, as well as

long-term sustainable management of land, water, and air.

All NRM students are required to take NR253 Species and Ecosystem Management and NR255 Conservation Politics and Economics, two of the capstone/advanced program's courses requirements.

Assessment measures include the following: Pre-and Post- Evaluation (including quizzes and exams) research/case reports and other performance indicators such as project (research/field investigations, presentations, and in-class recitations/participation.

Success Criteria:

Student should received at least seventy (70) percent or better and will effectively understand, demonstrate, and value biodiversity and ecosystem management or care for the role of government interventions, policies, and economics in bio-conservation and biodiversity issues.

Implementation Plan (timeline):

During and at the end of the semester

Key/Responsible Personnel:

Dr. Alfred B. De Torres
NRM Program Coordinator and Advisor

Findings for Pre-test and Post test, Exams/Tests and Case Assignments and Term research papers

No Findings Added

Outcome: NRM PLO 3

Students will be able to demonstrate an understanding of the CNMI, federal and international environmental laws and regulatory enforcement procedures. They will also be able to demonstrate special topics on their emphasis areas including their on-the-job training (OJT)/internship research experiences and exposure, under the host mentor/supervisor as career professionals in selected environmental institutions (NRM-PLO 8/8)

Measure: Pre-test and Post test, Exams/Tests and Case Assignments and Term research papers
Program level Direct - Student Artifact

Details/Description:

All NRM students are required to take NR290 Special Topics in NRM, NR295, NRM Seminar, and NR298 NRM Internship capstone courses for the program. These courses provide experiences and exposure on specialized directed study, professional and/or public seminar and on-the-job/professional exposure and training in the student's emphasis area or in a topic chosen by the student and the instructor/supervising mentor.

One of these special topics relate to environmental and natural resources laws and economics (which are not in the course curricula proper of NRM) with reference to the CNMI, federal, and international aspects.

Another related course has reference to a soon-to-be regularized series of the “Island Ecology Course” conducted by two professors from UOG and one professor from NMC.

The seminar is conducted as much as possible as a brown bag seminar or a class scheduled seminar with invited peers apart from instructor and group conducted seminar.

The internship is being held in or off campus as pre-arranged with host supervising institutions.

Assessment measures include Pre- and Post-evaluation of the active engagement of students in coming out with a final written output of the assigned special topics including its public presentation at the UOG and NMC. Seminar topics and special topical emphasis areas selected or agreed upon by the students and host supervisor/coordinator/host mentor. Student stipends have also been provided to students for their research, works, both with scholarly and creative activities.

Seventy (70) percent of the students will effectively understand, demonstrate and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.

Success Criteria:

All students should received at least seventy (70) percent of the students and will effectively understand, demonstrate and value the environmental and natural resources laws and economics covering the CNMI, federal and international jurisdictions; the scheduled seminar and internship topics/areas of emphasis.

Implementation Plan (timeline):

During and at the end of the semester

Key/Responsible Personnel:

Dr. Alfredo B. De Torres
NRM Program Coordinator and Advisor

Findings for Pre-test and Post test, Exams/Tests and Case Assignments and Term research papers

No Findings Added

Overall Recommendations

Recommendations:

On the basis of this Academic Program review of the NRM program courses, the NRMP supports and reiterates the previous cycles recommendations, as well as that of the PAC Meeting and the current Institutional Effectiveness and Assessment Review of StratPlan, 2010-2020 of the NRM program that envisions to transform the ASc in NRM to BSc in NRM and the establishment of the Marine and Environmental Science and Management Center (MESAM); the improved NRM/s ASc in NRM’s IDP reduced into 60 credits enabling the NRM students to complete their program within the prescribed two-year period; Improved Educational Programs including the SLOs; the improved education including

extension services through the ENRO club and NRMP outreach activities; the Research and Development (R&D) and the Community Public Services within the NRM mission statement, the NRMP as embodied in the StratPlan 2010-2020, reiterates the following five-point agenda for consideration:

Coordinatorship and teaching faculty—recruit qualified personnel (at least one FTE position for NR and/or Environmental Science) and stabilize the listings of adjunct faculty members given the experienced fast turnover; and further enhance/facilitate the recruitment of at least one adjunct and/or team teaching staff in view of the observed inadequacy, if not lack of NRM or over all course teaching staff; specifically appoint one more core faculty for NRM (needed for a long time) under Science/NRM Division. This is to anticipate the transformation of ASc of NRM into BSc in NRM degree requiring four more core teaching-cum-research-faculty to initiate the BSc program, as endorsed by the PAC and the DLNR secretary & BECQ Administrator, amongst other environmental agencies/authorities

Coffers and/or Allocated Funding—Allocate substantive permanent budget apart from the uncertain 3-4 network grants/funding for personnel and operational items given the observed inadequacy, if not lack of stable funding for such items. Since the renewal of the NRM program, no operational budget has been allocated for the operations of the NRM Program.

Collaboration & Networking/Partnerships—continuously strengthen and sustain the intra(NMC) and interagency capacity-building in view of the apparently ineffective, if not lack of continuing collaborative and networking efforts both locally and internationally.

Cooperative Participant/Student Recruitment Campaign—similar to the first two years of the renewal of the NRM program, a more focused and vigorous marketing, recruitment, and admission campaign for both the traditional and non-traditional students especially for the government and non-government employees (GOs & NGOs) including PSS/DOE for both the academic degree and non-degree/certificate programs for NRM, using the students ENRO club and other concerned institutions/stakeholders

Curricular and Materials Development – Validating, updating and/or modifying existing NRM curricula and introducing new NRM courses (embedded in the BSC in NRM along with check-listings and procurement/ordering of new edition textbooks/materials that match the NRM course-related offerings (including online programs/course) of other colleges/universities should be explored for our career advancing students both covering the nontraditional and traditional students.

Overall Reflection

Please see recommendation above

OPERATIONAL PLAN (THIS IS WHERE YOU CAN LINK AN OUTCOME TO AN ACTION PLAN WITH OR WITHOUT A SPECIAL BUDGET REQUEST.)

Mission Statement

NMC Mission Statement: Northern Marianas College, through its commitment to student learning, provides high quality, affordable and accessible educational programs and services for the individual and people of the Commonwealth.*ESIP for Natural Resources Management (NRM): The NRM program mission (in view of the importance of the NRM as the flagship program of the SMHA Department and the NMC mission statement) is to support local initiatives and priorities developed within the islands toward conserving and protecting its precious natural resources, and to promote the efficient use of human, institutional, and financial resources to meet local and regional goals and objectives. A key element within the program is effective capacity building and development at both the institutional and community level, reducing the reliance on external expertise and increasing the ability and capacity of local institutions and individuals to address the ever-increasing environmental challenges faced by the islands. The NRM program curriculum encourages and follows a regional approach to solving problems and developing strategies through working in cooperation with the local agencies, organizations, and individuals toward producing effective management of the region's coral reefs, fisheries, marine biotechnology, and ocean resources.*(This ESIP was formulated by a Committee from Tinian, Rota and Saipan at the time

when they change the agriculture program into a broader field of NRM way back in 1998. This has been a historical and substantive work of that Committee which is one of the substantive change in the pursuit of the collaborative, integrative and multidisciplinary-based program).

Actions

A.S. in Natural Resources Management Outcome Set (formulated by a Committee from Tinian, Rota and Saipan in 1998)

Outcome

Outcome: NRM PLO 1

Students will be able to demonstrate an understanding of the methodology of system integration and best practices of conservation and sustainable management and development. (NRM-PLO 3/8)

Action: Coffers and/or Allocated Funding

This Action is associated with the following Findings

No supporting Findings have been linked to this Action.

Action details:	Allocate substantive permanent budget apart from the uncertain 3-4 network grants/funding for personnel and operational items given the observed inadequacy, if not lack of stable funding for such items. Since the renewal of the NRM program, no operational budget has been allocated for the operations of the NRM Program.
Implementation Plan (timeline):	For approval by Budget and Finance Committee
Key/Responsible Personnel:	Dr. Alfredo De Torres
Measures:	To be determined by the Budget and Finance Committee
Budget approval required? (describe):	Yes
Budget request amount:	\$50,000.00
Priority:	High

Action: Collaboration & Networking/Partnerships

This Action is associated with the following Findings

No supporting Findings have been linked to this Action.

Action details:	To continuously strengthen and sustain the intra(NMC) and interagency capacity-building in view of the apparently ineffective, if not lack of continuing collaborative and networking efforts both locally and internationally.
Implementation Plan (timeline):	Ongoing
Key/Responsible	Dr. Alfredo De Torres - NRM Program Coordinator

Personnel:
Measures: Student internship, seminars, workshops and opportunities from grants.
Budget approval required? (describe): Yes
Budget request amount: \$2,500.00
Priority: Medium

Action: Cooperative Participant/Student Recruitment Campaign

This Action is associated with the following Findings

No supporting Findings have been linked to this Action.

Action details: Similar to the first two years of the renewal of the NRM program, a more focused and vigorous marketing, recruitment, and admission campaign for both the traditional and non-traditional students especially for the government and non-government employees (GOs & NGOs) including PSS/DOE for both the academic degree and non-degree/certificate programs for NRM, using the students ENRO club and other concerned institutions/stakeholders

Implementation Plan (timeline): Ongoing
Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator
Measures: Student recruitment rate, participation in the ENRO club
Budget approval required? (describe): Yes
Budget request amount: \$2,500.00
Priority: High

Action: Curricular and Materials Development

This Action is associated with the following Findings

No supporting Findings have been linked to this Action.

Action details: Validating, updating and/or modifying existing NRM curricula and introducing new NRM courses (embedded in the BSC in NRM along with check-listings and procurement/ordering of new edition textbooks/materials that match the NRM course-related offerings (including online programs/course) of other colleges/universities should be explored for our career advancing students both covering the nontraditional and traditional students.

Implementation Plan (timeline): End of the semester, summer prior to the fall semester
Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator
Measures: Recommendation from course and instructor evaluation, amount of materials in the

NMC Bookstore, instructors' needs

Budget approval required? (describe): Yes

Budget request amount: \$10,000.00

Priority: High

Action: Recruit qualified personnel (at least 1 FTE for NR and/or Environmental Science))

This Action is associated with the following Findings

Findings for Pre- and Post-Test; Modular Evaluation (written test and exams), Research/Case Reports, Focused Group Discussions and Participation, and s (Means of Assessment & Criteria for Success and Summary of Data Collected AND Use of Results; 2019-2020 Assessment Cycle)

Summary of Findings:

This PROAC Form 1 reports covered the semesterly period of Fall 2017 and Spring 2018. NR150: Introduction to Natural Resources Management. This course was offered as one of the two beginning program courses for the NRM degree program in Fall 2017. Of the 25 students who enrolled, 21 students or 84% earned the completion rate, with an average grade of 87 or B+, while the other 8 did not passed and the other 8% withdrew from the course. For the same course in Spring 2018, NR 150 has also, for the first time, been offered in Rota campus, apart from Saipan campus. With the total number of 29 students enrolled, 90 % was recorded as the completion rate, and with an average of 82 or B, and only 10 % as failure The reported completion rate for this course is slightly lower than the previous semesters. NR153: Environmental Conservation. This course was also offered as one of the two introductory program courses during the NRM renewal period. In Fall 2017, out of 14 students the completion rate reported was 79 %, with an average of 87 or B+; and 21 % as failure. In view of low enrollment, NR 153 was cancelled for the Spring 2018. Overall, for both the previous semesters, the completion rate exceeded the desired 70% success rate for the two (NR 150 & NR 153) beginning program courses.

Action details: Coordinatorship and teaching faculty—recruit qualified personnel (at least one FTE position for NR and/or Environmental Science) and stabilize the listings of adjunct faculty members given the experienced fast turnover; and further enhance/facilitate the recruitment of at least one adjunct and/or team teaching staff in view of the observed inadequacy, if not lack of NRM or over all course teaching staff; specifically appoint one more core faculty for NRM (needed for a long time) under Science/NRM Division. This is to anticipate the transformation of ASc of NRM into BSc in NRM degree requiring four more core teaching-cum-research-faculty to initiate the BSc program, as endorsed by the PAC and the DLNR secretary & BECQ Administrator, amongst other environmental agencies/authorities

Implementation Plan (timeline): Timeline per HR

Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Measures: Minimum qualification requirements (MQR)

Budget approval required? (describe): Yes

Budget request amount: \$50,000.00

Priority: High

STATUS REPORT (THIS SIMPLY STATES THE STATUS OF YOUR OPERATIONAL PLAN.)

Action Statuses

A.S. in Natural Resources Management Outcome Set (formulated by a Committee from Tinian, Rota and Saipan in 1998)

Outcome

Outcome: NRM PLO 1

Students will be able to demonstrate an understanding of the methodology of system integration and best practices of conservation and sustainable management and development. (NRM-PLO 3/8)

Action: Coffers and/or Allocated Funding

Action details:	Allocate substantive permanent budget apart from the uncertain 3-4 network grants/funding for personnel and operational items given the observed inadequacy, if not lack of stable funding for such items. Since the renewal of the NRM program, no operational budget has been allocated for the operations of the NRM Program.
Implementation Plan (timeline):	For approval by Budget and Finance Committee
Key/Responsible Personnel:	Dr. Alfredo De Torres
Measures:	To be determined by the Budget and Finance Committee
Budget approval required? (describe):	Yes
Budget request amount:	\$50,000.00
Priority:	High

Status for Coffers and/or Allocated Funding

Current Status:	Not started
Budget Status:	Pending Approval
Additional information:	Operation budget was not approved by BAFC for FY19-20
Next Steps:	To provide evidence for BAFC

Action: Collaboration & Networking/Partnerships

Action details:	To continuously strengthen and sustain the intra(NMC) and interagency capacity-building in view of the apparently ineffective, if not lack of continuing collaborative and networking efforts both locally and internationally.
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Implementation Plan (timeline): Ongoing

Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Measures: Student internship, seminars, workshops and opportunities from grants.

Budget approval required? (describe): Yes

Budget request amount: \$2,500.00

Priority: Medium

Status for Collaboration & Networking/Partnerships

Current Status: In Progress

Budget Status: Approved

Additional information: Students from the NR298 course have worked under several different agencies for the internship program.

Next Steps: To reach out with agencies (BECQ, DLNR, Division of Coastal Resources, Division of Fish and Wildlife, NMC CREES, etc.)

Action: Cooperative Participant/Student Recruitment Campaign

Action details: Similar to the first two years of the renewal of the NRM program, a more focused and vigorous marketing, recruitment, and admission campaign for both the traditional and non-traditional students especially for the government and non-government employees (GOs & NGOs) including PSS/DOE for both the academic degree and non-degree/certificate programs for NRM, using the students ENRO club and other concerned institutions/stakeholders

Implementation Plan (timeline): Ongoing

Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Measures: Student recruitment rate, participation in the ENRO club

Budget approval required? (describe): Yes

Budget request amount: \$2,500.00

Priority: High

Status for Cooperative Participant/Student Recruitment Campaign

Current Status: Not started

Budget Status: Other

Additional information: Recruitment budget was provided during the 2018-2019 fiscal year for

Next Steps: advertisement.
To provide evidence for the Budget and Finance Committee the need for advertisement of the NRM Program

Action: Curricular and Materials Development

Action details: Validating, updating and/or modifying existing NRM curricula and introducing new NRM courses (embedded in the BSC in NRM along with check-listings and procurement/ordering of new edition textbooks/materials that match the NRM course-related offerings (including online programs/course) of other colleges/universities should be explored for our career advancing students both covering the nontraditional and traditional students.

Implementation Plan (timeline): End of the semester, summer prior to the fall semester

Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Measures: Recommendation from course and instructor evaluation, amount of materials in the NMC Bookstore, instructors' needs

Budget approval required? (describe): Yes

Budget request amount: \$10,000.00

Priority: High

Status for Curricular and Materials Development

Current Status: Not started

Budget Status: Other

Additional information: No budget plan was provided for FY19-20

Next Steps: To determine a budget plan for FY20-21

Action: Recruit qualified personnel (at least 1 FTE for NR and/or Environmental Science))

Action details: Coordinatorship and teaching faculty—recruit qualified personnel (at least one FTE position for NR and/or Environmental Science) and stabilize the listings of adjunct faculty members given the experienced fast turnover; and further enhance/facilitate the recruitment of at least one adjunct and/or team teaching staff in view of the observed inadequacy, if not lack of NRM or over all course teaching staff; specifically appoint one more core faculty for NRM (needed for a long time) under Science/NRM Division. This is to anticipate the transformation of ASc of NRM into BSc in NRM degree requiring four more core teaching-cum-research-faculty to initiate the BSc program, as endorsed by the PAC and the DLNR secretary & BECQ Administrator, amongst other environmental agencies/authorities

Implementation Plan (timeline): Timeline per HR

Key/Responsible Personnel: Dr. Alfredo De Torres - NRM Program Coordinator

Measures: Minimum qualification requirements (MQR)

Budget approval required? (describe): Yes

Budget request amount: \$50,000.00

Priority: High

Status for Recruit qualified personnel (at least 1 FTE for NR and/or Environmental Science))

Current Status: Not started

Budget Status: Not approved

Additional information: Was not approved by the Budget Committee in the past

Next Steps: To provide justification as to why a Full Time Faculty is necessary for the NRM Program

Status Summary

See recommendations in Operational Plan

Summary of Next Steps

See recommendations in Operational Plan

Appendix

A. **NRM Spring 2020 (Draft)** (Curriculum Map)
