

Form 1

PROGRAM NAME: Natural Resource Management Program

___(A) **No. 10**

Protocol Route Slip	Name	Title	Initial	Date
Received by PROAC Chair:	Ms. Jacqueline Che	Director of Institutional Effectiveness	jc	23 May 2017
Reviewed by Head of Division (APS)	Ms. Barbara K. Merfalen	Dean, Academic Programs and Services	bkm	23 May 2017
Reviewed by Program Chair or Manager (NRMP):	Prof (Dr.) Alfredo B. De Torres	NRM Program Coordinator	abdet	23 May 2017
Authored by:	Prof (Dr.) Alfredo B. De Torres	Coordinator NRM & Former Chair, SMH&A	abdet	23 May 2017

Reviewed by PROAC Member:	Date reviewed:	

PROAC Form 1

NMC MISSION STATEMENT	CNMI Constitution. Amendment No. 38, Section 2: "The mission of Northern Marianas College shall be to provide the best quality and meaningful postsecondary and adult education opportunities for the purpose of improving the quality of life for the individual and for the Commonwealth as a whole. The College shall be responsible for providing education in the areas of adult and continuing education, postsecondary and adult vocational education and professional development for the people of the Commonwealth."
	NMC's New 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(BOR Approved: 26 September 2013.
PROGRAM MISSION STATEMENT (Column 1)	The NRM program mission (in view of the importance of the NRM as the flagship program of 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.

INTENDED PROGRAM/SERVICE OUTCOMES (Column 2)

1.Students will be able to demonstrate an understanding of the methodology of system integration and best practices of conservation and

{# NRM-PLO-3/8}

sustainable management and development..

MEANS OF ASSESSMENT AND SUCCESS CRITERIA (Column 3)

All NRM students are required to take NR 150 Intro to Natural Resource Management & NR 153 Environmental Conservation, two of the beginning program's courses 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 & 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 & Participations, and students oral presentations of their research projects:

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 of land, water, and air.

SUMMARY OF DATA COLLECTED

(Column 4)

The NR 150 Intro to NRM, NR 153 Environmental Conservation, NR 253 Species and Ecosystem Management, NR 255 Conservation Politics and Economics, and NR 290 Special Topics have been taught for the past two to four semesters inclusive of (Fall 2010 & Spring 2011 & Fall 2011; and Spring 2012; 2014 & 2015-2016; 2016-2017)

NR 150: Introduction to Natural Resources Management. This course was initially offered as one of the two beginning program courses for the NRM degree program in Fall 2010. Of the 15 students who enrolled, 14 students or 92 percent earned the completion rate. In the Fall 2011, 16 students enrolled with 12 students passing or 75 percent completion rates. This course was offered again during the Spring 2012 with 19 students enrolled, and 17 students passing or 89 percent completion rates. The information for the 2013; 2014 have been reported separately in the past Form 1.

For the Fall 2015, Spring 2016, and Spring 2017, the completion rates are 100% with 24 enrolled students; 93% with 17 students enrolled, & 95 % with 20 enrolled students, respectively. The average grade are 83 .86 and 89 % respectively.

NR 153: Environmental Conservation-This course was also initially offered as one of the two introductory program courses during the NRM renewal period in Fall 2010.. Of the ten students who enrolled, 90 percent earned the completion rate.

Of the nine students who attended the Spring 2011 Semester, the average grade for all course requirements is 90 percent. Only three students were below average and one student got incomplete due to some emergency family problems. The student finally completed the course the following term thus the completion rate was 100 percent..

For the term under review, NR 153, for Fall 2015

USE OF RESULTS

Since (Column 5)

The seven courses under review, namely, NR 150, NR 153, and the capstone courses, namely, NR 253, NR 255, NR 290, NR 295 and NR 298 have been successful with respect to their SLOs requirements being met and their relatively higher rate of completion rates with the exception of NR 153 taught by new Instructor in the Spring 2017; compared to the same courses undertaken during the previous years i.e. starting with the renewal of the NRM Program in the year 2010

Overall, the completion rate for NR 150 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 NR 153: 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.

Generally, for the the capstone courses, the students both orally and in writing have presented their required output in 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 CNMI or incampus via CREES; and none reported for the Spring 2017 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 practicum and/or on the job training in different environmental network institutions not only here inside NMC but also in the environmental agencies of the CNMI. It is expected that more will avail of the out-of-country internship every

& Spring 2016 has a completion rate of 100 % with an enrolment of 13 & 12 students respectively. The average grade earned was 86 % for both terms. For Spring 2017, unexpectedly the completion rate declined to 50 % and an average score of 60 %.

Overall, except for the Spring 2017, both the previous terms exceeded the desired 70 % success rate for the two beginning program courses and the rest of the capstone courses under review.

The capstone and/or advanced courses information are as follows:.

NR 253 Species and Ecosystem Management was initially offered twice during Spring and Fall 2011 and the succeeding terms, including this Spring 2017; with five, four; and four (with graduating) students enrolled for each term respectively All the terms have 100 percent completion rates.

For the year under review, Fall 2015, Spring 2016; and Spring 2017; the average grade are 88% with 15 students enrolled, 93% with 12 students enrolled and 91 % with four students enrolled, respectively. The completion rate for all erms is 100 percent.

For the Spring term, 2017; the average grade is 91%, with one above average and 3 below average. The reported completion rate is 100%.

NR 255 Conservation Politics and Economics was also initially offered twice during Spring & Fall, 2011 and Spring 2012, with 13 (thirteen) students for 2011 and ten (with graduating) students for 2012, respectively. All three and succeeding terms have about 100 percent completion rates.. For the Spring term, 2017; the completion rate is 100%, with two students below average of "B" grade..The three students are graduating and the rest will be graduating next Fall Term, 2017.

or during Summer, 2017..

Thus, by looking forward the NRM Proram is hoping to achieve a targeted 15-20 graduate students by Spring 2017 and a cohort of 60-80 NRM students (for the 4-6 year 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.

Recommendations:

On the basis of this 10th cycle 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 of May 2016 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 NREM and the establishment of ' Marine and Environmental Science and Management Center (MESAM) Center; 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 educational, 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 considerations:

1) 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

New Form 1 Template Created: June 1, 2008 Revised: April 28, 2009

recruitment of the 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 (that is long time needed) under Science/NRM Division. This is to anticipate the transformation of ASc of NRM into BSc in NRM degree requiring 4 more core teaching-cumresearch-faculty to initiate the BSc program, as endorsed by the PAC and the DLNR Secretary, 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 NRM Program; Collaboration---Continously strengthen and sustain the intra(NMC) and interagency capacity-building in view of the apparently ineffective, if not lack of continuing collaborative/networking The NR 255 Conservation Politics and Economics. All NRM students are required to take NR 253 efforts both locally and internationally; 2.Students will be able to demonstrate an Species and Ecosystem Management and NR Cooperative Participant/Student understanding of the roles of politics and had been team taught (by faculty from economic development on natural management 255 Conservation Politics and Economics, two of DEQ/BECQ & NMC) initially for the last two **Recruitment Campaign---A more focus** theadvanced program's course requirements semesters (Spring 2011and Fall 2011). It has been and vigorous marketing, recruitment .and ecosystem management. revived with the recruitment of Environmental and admission campaign for both the {# NRM-PLO-3/8} . Assessment measures include the following: the Lawyer, a PhD from Yale University; and co-team traditional and non-traditional students Pre- and Post Evaluation (including guizzes and taught with the NRM Coordinator as Resource especially for the government and nonexams); research/case reports and other Economist, from Michigan State University. government employees (GOs & NGOs) performance indicators such as including PSS/DOE for both the Of the initial four students (one graduating), who project(research/field investigations, academic degree and nonpresentations and recitations/participation. attended during the Spring Semester 2011, the degree/certificate programs for NRM, average grade for the course is 91 percent. And of using the students ENRO Club and the nine students who attended (three graduating) other concerned Seventy (70) percent of students will effectively understand, demonstrate, and value biodiversity during the Fall Semester 2011, the average grade institutions/stakeholders; and ecosystem management or care for the role of for the course is 93 percent. Of the ten students **Curricular and Materials Development** government interventions, policies and economics who attended during the Spring 2012, three were -Validating, Updating and/or Modifying in bioconservation and biodiversity issues. graduating; all passed the course. existing NRM curricula and introducing

New Form 1 Template Created: June 1, 2008 Revised: April 28, 2009

new NRM Courses (embedded in the BSc in For the year under review, in particular Spring NREM, along with checklistings and 2017, the initial terms of, Fall 2015 & Spring 2016, procurement/ordering of new edition the average grade are 89 % with 11 students textbooks/materials that match the NRMenrolled; and 86 % with 9 students enrolled, course related offerings (including On-Line respectively. The completion rate was recorded to program/courses) of other be 91 % and 100 %, respectively. For Spring 2017, Colleges/Universities in the Region and in the completion rate is 100 %. the USA; the production of localized textbooks and related materials/modules for Overall, NR 255 capstone courses exceeded the NRM and related courses should also be desired 70 percent success rate for the two major introduced; and articulation agreements capstone courses. with existing and other Colleges/Universities NR 290 Special Topics had been initially taught 3. Students will be able to demonstrate an All NRM students are required to take NR 290 should be explored for our career for the past two terms: Fall 2010 and Spring 2012 advancing students both covering the non understanding of the CNMI, federal and Special Topics in NRM, NR 295 NRM Seminar, Semesters, with a total of 16 students and with the international environmental laws and regulatory and NR 298 NRM Internships, capstone courses traditional and traditional students. enforcement procedures. They will also be able to for the program. These courses provide average grade for all course requirement of 95 demonstrate special topics on their emphasis experience and exposures on specialized directed percent. areas including their on-the-job (OJT)/internship study, professional and/or public seminar and onresearch experiences and exposures, under the the-job/professional exposures and training in the For the year under review, Spring 2017, including Fall 2015 & Spring 2016, the average grade are 88 student's emphasis area or in a topic chosen by host mentor/superviso,r as career professionals in % with 12 students enrolled, & 90% with 10 selected environmental institutions the student and the instructor/supervising mentor students enrolled. The completion rate recorded are 100 % and 89 %, respectively. . One of these special topics relate to environmental and natural resources laws& For Spring 2017, the average grade is 92% with {# NRM-PLO-8/8} economics (which are not in the course curricula two above average and three below average. The completion rate was 100%. proper of NRM) with reference to CNMI, federal, and international aspects. Another related course has reference to a soon-to-NR 295 NRM Seminar was taught initially starting Fall Term 2010, with eight students and a be-regularized series of the "Island Ecology Course" conducted by two Professors from UOG completion rates of 100 percent..For the Spring and one Professor from NMC. 2017, the reported completion rate was 90%. The Seminar is conducted as much as possible as a brown bag seminar or a class scheduled seminar For the year under review, Spring 2017, with reflection from Fall 2015 & Spring 2016, the with invited speakers apart from instructor and average grade are 84 % with 7 students enrolled, group conducted seminar. and 86 % with another 7 students enrolled, The internship is being held in or off campus as pre- arranged with host supervising institutions. respectively. The completion rate recorded are 86 During Spring 2017, the Department of %, & 100 %, respectively. In contrast the Agriculture and BECQ, conducted the on-the-job completion rate for the Spring 2017 declined to 90%. exposureor internship for the specially arranged 12 students to enable them to graduate in the Spring 2017 and march for the graduation NR 298 NRM internship were initially offered in, Fall 2011 with students and a completion rate of ceremony in May 20, 2017... 100 percent. Assessment measures include Pre- and Post evaluation of the active engagement of students in For the year under review, NR 298 was only

New Form 1 Template Created: June 1, 2008 Revised: April 28, 2009

coming out with a final written output of the assigned special topics including its public presentation at the UOG & 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. The stipend for the Spring 2017 was withheld, in view of the non-implementation yet of the Grants/Programs of NMC, NRM's/BECQ, and of DOA, in particular. 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	percent success rate for the course. The completion rate is 100%.
---	---

Page 6 of 6