PROGRAM REVISION FORM

Program Title: __Native Environmental Science_____

Program Type: _X_BS ___AAS ___AAS-T ___AS ___ATA ___Certificate _Other

Revised Catalog Description (one paragraph): note minor revisions in description, submitted in previous Program Revision Form on 5/20/2011

The Bachelor of Science in Native Environmental Science degree is intended to meet the critical need for effective Native American leaders and environmental scientists who are rooted in their culture. This program will emphasize and explore the interrelatedness of Native ways of knowing, traditional ecological knowledge and Western science. Prominent aspects of the program include hands-on learning and the involvement of students in community service, research and internships. The program will prepare graduates to work within tribal communities in support of environmental stewardship, conservation and revitalization. This program was designed with considerable input from Pacific Northwest tribal elders, leaders, environmental managers, educators and students. Students choose between the Environmental Science Option and the Interdisciplinary Concentration Option. Students must complete at least 60 credits at the 300-499 level.

Requested by: Joel Green **Date:** 10/27/2011

Dean of Academics: _____ **Date:** 11/2/11

**** Attach copy of program description as in current catalog***

**** Attach copy of revised program, marking changes. New courses must be approved prior to approval of revised program.***

FORM MUST BE ACCOMPANIED BY PROGRAM OUTCOMES

Approval Signatures:

_____ _____

Curriculum Committee Chair ***Date***

_____ _____

Vice President for Instruction and Student Services ***Date***

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Proposed changes and rationale:

Overall Change: change requirement of "existing courses" to "elective courses" in the Interdisciplinary Concentration Option. The specific changes in the text of the catalog would be the following:

1. In the description of the Interdisciplinary Concentration, the following sentence would be modified: "The Interdisciplinary Concentration consists of 56 credits, 5 credits of which are required courses, 30 credits of courses that already exist at NWIC or approved upper division courses at Western Washington University or another college or university, plus 21 credits of individualized courses developed within the student's concentration following the Native Environmental Sciences individualized learning course guidelines."

   The new sentence would read:
   "The Interdisciplinary Concentration consists of 56 credits, of which 5 credits are required courses, 30 credits are electives taken at NWIC or another college or university, and 21 credits are individualized courses developed within the student's concentration following the Native Environmental Sciences individualized course guidelines."

2. Within the Interdisciplinary Concentration Requirements, there is currently listed a requirement for 30 credits of "Existing courses taken within concentration." We would like to change this requirement to 30 credits of "Elective courses taken within concentration."
3. A note would be added at the bottom of the page, "Elective courses may include any course numbered 100-499, as approved by the student's concentration committee."

Rationale: The reason for this proposal is to allow students greater flexibility in the choice of courses used to fulfill the 30 credit requirement in the ICO. The change would make it clear that new courses being taught for the first time as 288, 388, or 488 courses may be included in this 30 credit requirement. The text change would also allow for lower division courses from other colleges to be included in the 30 credit requirement (lower division NWIC courses are already allowed as part of the 30 credit requirement). This would allow students greater flexibility in completing degree requirements, but would not change the overall requirement for 26 credits of upper division courses within the concentration, and for 60 credits of upper division courses within the program of study.

Note that additional revisions in the text of the BSNES catalog description have been made to clarify the intent of the program and to correct inaccurate wording in the previous catalog description. All changes are noted in yellow on the revised catalog description.

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BACHELOR OF SCIENCE DEGREE
NATIVE ENVIRONMENTAL SCIENCE
Proposed Revision 10-27-2011

The Bachelor of Science in Native Environmental Science is intended to meet the critical need for effective Native American leaders and environmental scientists who are rooted in their culture. This program will emphasize and explore the interrelatedness of Native ways of knowing, traditional ecological knowledge and Western science. Prominent aspects of the program include hands-on learning and the involvement of students in community service, research and internships. The program will prepare graduates to work within tribal communities in support of environmental stewardship, conservation and revitalization. This program was designed with considerable input from Pacific Northwest Tribal elders, leaders, environmental managers, educators and students. Students may choose between the Environmental Science Option and the Interdisciplinary Concentration. Students must complete at least 60 credits at the 300-499 level.

ENVIRONMENTAL SCIENCE OPTION

The Environmental Science option is intended for students interested in pursuing careers in the fields of biology or environmental science using the tools of western science. Students completing this option may also be interested in pursuing graduate studies in environmental science. The Environmental Science option consists of 56 credits, 35 credits of which are required courses and 21 elective credits.

PREREQUISITE REQUIREMENTS

Students are expected to complete the AAS in Native Environmental Science degree or a program satisfying the Direct Transfer Agreement (DTA) requirements at NWIC or another college or university totaling 90 credits with the following courses or their equivalents as the foundation for junior level standing in Native Environmental Science:

CHEM 111	Inorganic Chemistry, or CHEM 121	5
CHEM 112	Organic Chemistry	5
CHEM 113	Biochemistry	5
GEOL 101	Introduction to Geology, or 111 (101 suggested for environmental science option)	5
MATH 102	College Algebra	5
MATH 107	Elementary Statistics	5
POLS 225	History of Federal Indian Policy	5

TOTAL PREREQUISITE COURSE REQUIREMENTS **35**

TOTAL PREREQUISITE REQUIREMENTS (Including other DTA requirements) **90**

NATIVE ENVIRONMENTAL SCIENCE CORE REQUIREMENTS – Must be taken at NWIC

NESC 301	The Ecology of the First People	3
NESC 310	Native Science	5
NESC 393A-C	Native Environmental Science Seminar III (1 credit per quarter for 3 quarters)	3
NESC 493A-C	Native Environmental Science Seminar IV (1 credit per quarter for 3 quarters)	3
NESC 497	Internship in Native Environmental Science	5
NESC 499A	Native Environmental Science Capstone Project (taken during the junior year)	5
NESC 499B	Native Environmental Science Capstone Project (taken during the senior year)	5
POLS 319	From the Beginning of Time: Native American Fishing Rights	5

TOTAL NATIVE ENVIRONMENTAL SCIENCE CORE REQUIREMENTS **34**

ENVIRONMENTAL SCIENCE OPTION REQUIRED COURSES

BIOL 201	Cell Biology	5
BIOL 202	Plant Biology	5
BIOL 203	Animal Biology	5
BIOL 310	Ecology	5
MATH 210	Biostatistics	5

and

A COMBINATION OF TWO OF THE THREE FOLLOWING COURSES:

ENVS 430	Aquatic Ecology, **OR**	5 each
ENVS 440	Ecology of the Salish Sea, **OR**	
ENVS 481	Ecophysiology	

TOTAL REQUIRED COURSES **35**

ELECTIVES **26**

Choose electives from BIOL, BUAD, CHEM, CMPS, COMH, ECON, ENVS, GEOG, GEOL, MATH, NASD, NESC, PHYS or POLS departments. A minimum of 11 credits must be at the 300-499 level. A maximum of 10 elective credits may be taken through individualized coursework (courses numbered 189, 289, 389, or 489) following the Native Environmental Sciences individualized course guidelines.

TOTAL ENVIRONMENTAL SCIENCE OPTION REQUIREMENTS **56**

TOTAL NATIVE ENVIRONMENTAL SCIENCE CORE REQUIREMENTS **90**

TOTAL DEGREE REQUIREMENTS **180**

INTERDISCIPLINARY CONCENTRATION OPTION

The Interdisciplinary Concentration allows students flexibility in designing a program that meets their own academic, professional and personal goals within the framework of the Native Environmental Science degree. Students design a concentration under the guidance of a concentration committee. The Native Environmental Science Concentration Handbook provides guidelines for constructing a concentration. This option requires students to take significant responsibility for the concentration's design and development. The Interdisciplinary Concentration consists of 56 credits, of which 5 credits are required courses, 30 credits are electives taken at NWIC or at another college or university, and 21 credits are individualized courses developed within the student's concentration following the Native Environmental Sciences individualized course guidelines. At least 26 credits of the concentration courses, which include NESC 305, must be at the 300-499 level.

PREREQUISITE REQUIREMENTS

Students are expected to complete the AAS in Native Environmental Science degree or a program satisfying the Direct Transfer Agreement (DTA) requirements at NWIC or another college or university totaling 90 credits with the following courses or their equivalents as the foundation for junior standing in Native Environmental Science:

BIOL 101	Introduction to Biology, or BIOL 100, 130, or 201	5
CHEM 111	Inorganic Chemistry, or CHEM 121 (NSL)	5
GEOL 101	Introduction to Geology, or 111 (101 suggested for environmental science option) (NSL)	5
MATH 102	College Algebra, or Math 107 (QS)	5
POLS 225	History of Federal Indian Policy (SS, NASD)	5

TOTAL PREREQUISITE COURSE REQUIREMENTS **25**

TOTAL PREREQUISITE REQUIREMENTS (Including other DTA requirements) **90**

NATIVE ENVIRONMENTAL SCIENCE CORE REQUIREMENTS – Must be taken at NWIC

NESC 301	The Ecology of the First People	3
NESC 310	Native Science	5
NESC 393A-C	Native Environmental Science Seminar III (1 credit per quarter for 3 quarters)	3
NESC 493A-C	Native Environmental Science Seminar IV (1 credit per quarter for 3 quarters)	3
NESC 497	Internship in Native Environmental Science	5
NESC 499A	Native Environmental Science Capstone Project (taken during the junior year)	5
NESC 499B	Native Environmental Science Capstone Project (taken during the senior year)	5
POLS 319	From the Beginning of Time: Native American Fishing Rights	5

TOTAL NATIVE ENVIRONMENTAL SCIENCE CORE REQUIREMENTS **34**

INTERDISCIPLINARY CONCENTRATION REQUIREMENTS (Minimum 26 credits must be 300-499)

NESC 305 Native Environmental Science Concentration Seminar (taken the 1st or 2nd quarter in concentration; prerequisite: NESC 303)	5
Elective courses taken within concentration	30
Individualized courses within concentration	21

Elective courses may include any course numbered 100-499, as approved by the student's concentration committee. Individualized courses focus on key areas of inquiry contained in the concentration, such as: relevant work experience, travel study projects, service learning, field school, and volunteer projects. At least 5 credits will be service learning project.

TOTAL INTERDISCIPLINARY CONCENTRATION REQUIREMENTS **56**

TOTAL NATIVE ENVIRONMENTAL SCIENCE CORE REQUIREMENTS **90**

TOTAL DEGREE REQUIREMENTS **180**

Program Outcomes for the B.S. in Native Environmental Science

1. **Communications:** Students will be able to...
   a. Explain the purpose of communication.
   b. Communicate effectively.
   c. Analyze the audience and modify the communication to suit that audience.
   d. Recognize and utilize appropriate information in communication.
   e. Evaluate the effectiveness of the communication and make adjustments if and where necessary.
   f. Use exposition, negotiation, persuasion, and argumentation.

2. **"Ways of Finding Out":** Students will be able to...
   a. Selectively use a broad range of scientific approaches to data collection and analysis tools and methodologies for problem solving.
   b. Use appropriate data collection and analysis tools and methodologies within their limitations.
   c. View the environment from a past, present, and future perspective.

3. **Bodies of Knowledge:** Students will be able to...
   a. Demonstrate competence in bodies of knowledge associated with environmental science (e.g., chemistry, biology, ecology, etc.).

4. **Technology:** Students will be able to...
   a. Use technologies useful in the environmental sciences and be proficient in selected technology use.
   b. Match the intended purpose/intent with the appropriate technology.

5. **Problem Solving:** Students will be able to...
   a. Identify issues, concerns, and/or problems that need corrective and restorative action.
   b. Research and gather appropriate information from appropriate resources to propose possible solutions, taking into account impacts on stakeholders.
   c. Write an action plan that implements the proposed solution taking into consideration the possibility of reassessing the original proposal.
   d. Implement the action plan.

6. **Leadership and Effectiveness:** Students will be able to...
   a. Articulate the diversity in spirituality, culture, and language.
   b. Articulate their own identity in terms of a sense of place and their people.
   c. Demonstrate knowledge of Native American and other models of leadership.
   d. Demonstrate effective leadership skills.