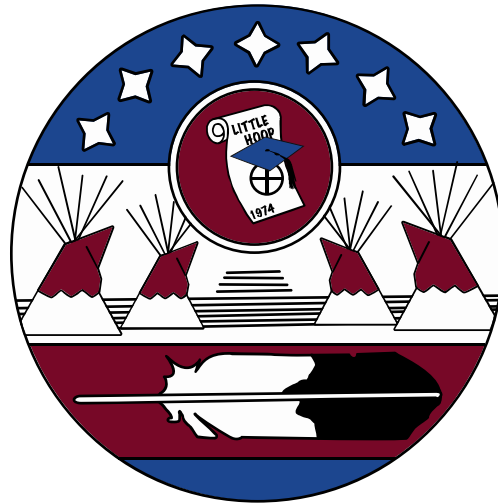

Environmental Science

PROGRAM REVIEW

2017



CANKDESKA CIKANA
COMMUNITY COLLEGE

Spirit Lake Dakota Nation

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EXISTING PROGRAM REVIEW REPORT

The program Review Report includes two components: an executive summary which highlights the major aspects of the program’s review, and a more comprehensive analysis which includes the individual members involved in the completion of the Program Review Report. This program review is for the Environmental Science Program.

ABSTRACT (EXECUTIVE SUMMARY)

Part I: Program Description Summary

The Cankdeska Cikana Community College Natural Resources Program's mission is to provide academic and professional expertise that fosters personal growth, social well-being, and scientifically sound practices and procedures in the study of natural resources. The Environmental Science Program is designed to provide the students with hands on learning experience to manage environmental parameters and graduate with a well-rounded knowledge of how ecosystems function. The primary aim of this program is to prepare the students for technician positions with the completion of the Associates Degree and to be able to further their career choices at a four-year institution. The Environmental Science Program has from 28 to 33 credits of general education classes, including ecological studies, physical geology, meteorology, animal and plant identification, and environmental sampling. The essential study requirements in the Environmental Science Program totals 35 credits. Classes range from geospatial technology to geological sciences to soil science to issues of the environment to ethnobotany. An Associate of Science degree in Environmental Science can be completed in two years with a total of 63 credits. The Environmental Science Program consists of five, permanent, full-time staff.

Contributors:

Douglas Cudworth, Instructor/Assistant Land Grant Program Director

Carrie Ann Duafala, Director of Land Grant Program/Instructor

Part II. Program Summary

The Environmental Science Program faculty posts their schedules by the door of their offices to easily inform the students of their schedules. The appropriate textbooks are generally chosen from the Cengage and Pearson Learning websites with a strong regard to the most current and relevant academic material available to the student. The Dean of Academics, Teresa Harding, evaluates the quality of instruction delivered to the student body on a regular basis. Dean Harding also maintains current updates of the course syllabi. The Cankdeska Cikana Community College Environmental Science Program conforms in content, textbooks, and instructional methods to state of the art disciplinary standards. Currently the community college is utilizing a new learning outcome assessment procedure. The Environmental Science Program has more than adequate technological facilities to maintain the effectiveness of its courses and programs. The Cankdeska Cikana Community College library maintains services to meet the needs of the Environmental Science Program. The community college administration supports professional development for faculty to upgrade their skills and knowledge in their respective fields. Transportation and housing availability remain barriers to student recruiting and increasing enrollment.

Contributors:

Douglas Cudworth, Instructor/Assistant Land Grant Program Director

Carrie Ann Duafala, Director of Land Grant Program/Instructor

Part III. Program Planning Summary

A plan for the Environmental Science Program is to furlough the program. The curriculum is almost identical to a program in Natural Resource Management, with the difference of one class. Resources that are used for Environmental Science are also the same as for the Natural Resource Management Degree. Having two programs that are identical is not benefiting the students.

Contributors:

Douglas Cudworth, Instructor/Assistant Land Grant Program Director

Carrie Ann Duafala, Director of Land Grant Program/Instructor

COMPREHENSIVE ANALYSIS

Part I. Program Self Evaluation

- The Cankdeska Cikana Community College Environmental Science Program facilitates educational experiences that encourage individual, social, and environmental sustainability and growth in the field of natural resources.

The Cankdeska Cikana Community College Environmental Science Program provides an academic program that leads to student scholarly attainment of the required knowledge and abilities to become economically and socially independent citizens while retaining the native culture and language of the Spirit Lake Dakota people.

Degrees and/or Certificates Offered:

- Associate of Science
Environmental Science

The Environmental Science Program Student Learning Outcomes:

1. The student will demonstrate basic resource management principles for natural resource parameters.
2. The student will identify wildlife species, plant species, and weather formations.
3. The student will explain the study of geology.
4. The student will illustrate how altered environments may be re-naturalized.
5. The student will conceptualize current environmental issues.

Curriculum

Essential Study Requirements

Credits

Student Success: New Student Orientation (ENGL 100).....	1
College Composition I (ENGL110).....	3
College Composition II (ENGL120).....	3
Fundamentals of Public Speaking (COMM110).....	3
Dakota Language I (ENGL 161).....	3
Dakota Thought, Philosophy, & Culture (DS110).....	3
Personal and Community Health (HPER217).....	2
Intro to Geospatial Technology (GEOG 115).....	3
Environmental Science (BIOL 124)	4
Introduction to Natural Resource Mgt. (NAT 102).....	3
Introductory Chemistry (CHEM 115)	4
Elementary Statistics (MATH 210)	3

- TOTAL 35

Core Classes

Credits

Ecology (Nature Study) (BIOL230).....	4
---------------------------------------	---

Physical Geology (GEOL105).....	3
Physical Geology Laboratory (GEOL105L).....	1
Weather & Water Resources (GEOG270).....	3
Wildlife Identification (NAT105).....	4
Plant Identification (NAT 215).....	4
Environmental Sampling (ENS 225).....	4
Soil Science (ENS 210)	4
Natural Resources Internship (NAT 297).....	3
*Program Electives.....	2-7
TOTAL 32-37	
TOTAL CURRICULUM CREDITS = 67-72	

*Program Electives (Students should work with their advisors to choose courses that enhance their Natural Resource Management academic or career options).

Intermediate Geospatial Technology (GEOG224).....	3
Environmental Issues (ENS 202)	2
Intermediate Geology (GEOL 219)	4
Ethnobotany (ENS 240)	3
Topics in Agriculture/Natural Resources (ENS 299)....	3

General Education Requirements	CORE PROGRAM REQUIREMENTS	PROGRAM ELECTIVES
ENGL 100 Student Success New Student Orientation	BIOL 230 Ecology (Nature Study)	ENS 202 Environmental Issues
ENGL 110 College Composition I	GEOL 105 Physical Geology GEOL 105L Physical Geology Lab	GEOG 224 Intermediate Geospatial Technology
ENGL 120 College Composition II	NAT 105 Wildlife Identification	GEOL 219 Intermediate Geology
COMM 110 Fundamentals of Public Speaking	GEOG 270 Weather and Water Resources	ENS 240 Ethnobotany
ENGL 161 Dakota Language I	NAT 215 Plant Identification	ENS 299 Topics in Agriculture/Natural Resources
HPER 217 Personal and Community Health	ENS 210 Soil Science	
GEOG 115 Intro to Geospatial Technology		
BIOL 124 Environmental Science		
DS 110 Dakota Thought, Philosophy, and Culture		
NAT 102 Introduction to Natural Resource Mgt.		
CHEM 115 Introductory Chemistry		
MATH 210 Elementary Statistics		

2 -YEAR COMPLETION		
Fall Term 1		
ENGL 100	First Year Learning Experience	3 credit hours
ENG 110	Composition I	3 credit hours
COMM 110	Fundamentals of Public Speaking	3 credit hours
DS 110	Dakota Thought, Philosophy, and Culture	3 credit hours
NAT 102	Introduction to Natural Resources	3 credit hours
		15 credit hours
Spring Term 2		
ENGL120	Composition II	3 credit hours
ENGL 161	Dakota Language I	3 credit hours
CHEM 115	Introductory Chemistry	4 credit hours
GEOL 105	Physical Geology	4 credit hours
NAT 105	Wildlife Identification	3 credit hours
		17 credit hours
Fall Term 3		
BIOL 124	Environmental Science	4 credit hours
MATH 210	Elementary Statistics	3 credits hours
ENS 202	Environmental Issues	2 credit hour
BIOL 230	Ecology (Nature Study)	4 credit hours
NAT 215	Native Plant ID and Uses	3 credit hours
ENS 210	Soil Science	4 credit hours
		20 credit hours
Spring Term 4		
ENS 240	Ethnobotany	3 credit hours
HPER 217	Personal and Community Health	2 credit hours
GEOG 270	Weather and Water Resources	3 credit hours
GEOG 115	Intro to Geospatial Technology	3 credits hours
ENS 299	Topics in Agriculture/Natural Resources	3 credit hours
		14 credit hours
TOTAL DEGREE REQUIREMENTS		63 credits

2. Describe the current Staff of the Program, as follows:

Name: Carrie Ann Duafala

Title/Position: Land Grant Director/Natural Resources Management Instructor

Classification: Full Time

Numbers of Credits Taught Each Semester: 18

Carrie Ann Duafala earned an Associate Wildlife Management degree from Penn State University-DuBois in 2002; A Bachelor of Arts degree in Natural Resources from Edinboro University of Pennsylvania in 2002; A Master of Science degree in Biology, Wildlife Studies, Edinboro University of Pennsylvania in 2012. Carrie Ann Duafala has maintained her position as Land Grant Director/Natural Resources Management Instructor since February 2015.

Name: Douglas Cudworth

Title/Position: Assistant Land Grant Director /Instructor of Natural Resources

Classification: Full Time

Number of Credits Taught Each Semester: 16

Douglas Cudworth has earned a Bachelor of Science and Master of Science degrees in Geology and the Soil Sciences, respectively from North Dakota State University, Fargo, North Dakotan in 1977 and 1988. The previous teaching experience of Douglas Cudworth has included one semester of teaching a sophomore to senior level geology course at Bemidji State University, Bemidji, Minnesota. Douglas Cudworth has been an instructor in the Natural Resources Program at Cankdeska Cikana Community College since July of 2013 to the present time.

- Carrie Ann Duafala was appointed Director of the Natural Resources/Land Grant Program of Cankdeska Cikana Community College in February of 2015 and has held that position continuously to the present time.
- The Director of the Natural Resources Program, Phillip Lewis, was terminated in his position in March of 2014. Dr. James Garrett was past Director in 2009 to 2010. Dr. Garrett was the first Director of the Natural Resources Program and he resigned from the position.
- Rachel Brazil was a past Director from 2010 to 2012 and she resigned.
- The Instructor of Natural Resources position was first held by Carrie Bolstad in 2011. Bolstad held a Bachelor of Science in Natural Resources from Dickinson State University.
- The Instructor of Natural Resources position was then held by Heather Ibsen in 2012.

3. Program Productivity Summary: (Past Five Years) (See Website)

The Environmental Science Program at Cankdeska Cikana Community College was established in 2014. The Environmental Science Program serves to educate and support all students in their social, cultural, and academic development in the fields ranging from agriculture to wildlife management to forestry to nutrition. The geographic scope of the Cankdeska Cikana Community College is generally to serve students within the borders of the Spirit Lake Reservation but has the potential to expand beyond the borders of the reservation. If and when the Cankdeska Cikana Community College administration and associated entities decide to invest in campus housing for the faculty and students, there exists great potential to increase the size and scope of the college's mission.

Environmental Science Program Students				
2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
N/A	N/A	2	1	0
Percent of Environmental Science Program Students to CCCC Student Enrollment				
0	0	0.006	0.003	0

The optimal student enrollment for Cankdeska Cikana Community College would be around 400 students. That level of student enrollment would create classes of about 20 to 25 students per class.

For the last twelve years of data that was taken for the college, from 2005 to 2016, the average persistence rate was 68 %. For the last ten years of data that was recorded for the college, the average retention rate was 42 %. The Cankdeska Cikana Community College has been in existence for over 40 years, therefore many individuals have their four year degrees. Many indigenous Native individuals have established homes and do not want to move out of the region. In addition, if a four-year institution could be developed, a large increase in student enrollment could be realized.

Natural Resources Program Graduates				
2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
0	0	0	1	0
Ratio of Natural Resources Program Graduates to Graduates in other Majors				
0	0	0		0

The data indicate that there does not exist a great deal of interest in the natural resources fields in the community college region. The young people of the community tend to view accounting and business studies their path to economic stability near their neighborhoods where they developed into young adults. The young people of the region have drifted away from the agriculture industry and the natural resources field although opportunities for employment exist on the reservation and in the surrounding area. The annual employment rate for Natural Resources Program graduates is likely to be around 20 %.

One recent graduate of the Natural Resources Program holds the position of Community Land Grant Agricultural Coordinator/Instructor of Native Arts in the Natural Resources Department at the community college. The graduate individual employed in the Natural Resources Program very much applies the knowledge and the training provided in the Natural Resources Program.

National Employment Projections, 2012 – 2022	
Occupational Category	Projected Increase
Natural Resources	3.0 %
Nutrition	10 %
Forestry	7.0 %
Agriculture	5.0 %
Healthcare Industry	22.0 %

4. Program Revenue:

Combined Natural Resources Program/ISC Revenue				
Scholastic Year	Tuition	ISC Revenue	Total	% of CCCC Total
2013-14	\$44,000.00	\$ 170,133.34	\$ 214,133.34	12.5
2014-15	\$28,000.00	\$108,266.66	\$136,266.66	10.2
2015-16	\$10,000.00	\$38,807.11	\$48,807.11	3.3
2016-17	\$16,750.00	\$96,644.59	\$113,394.58	7.4

5. Program Budget:

XX Five Year Budget					
National Institute of Food and Agriculture (NIFA) Grants and other Grants					
	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Salary					\$215,332.00
Fringe Benefits					\$77,206.00
Supplies					\$62,177.00
Internships					\$11448.00
Travel					\$13,751.00
GIS Software	\$2500.00	\$2500.00	\$2500.00	\$2500.00	\$2500.00
Total	\$483,226.00	\$234,400.00	\$336,750.00	\$334,596.00	\$416,127.00
General Fund					
Salary					
Fringe Benefits					
Professional Development					
IDC					
Total					
Grand Total	\$483,226.00	\$234,400.00	\$336,750.00	\$334,596.00	\$416,127.00

The above chart represents the total funds per year for the Land Grant Department, in which the Natural Resource Management program is only a part of. This department is run entirely on grants, therefore, few alternatives exist. Grant funding is not secure, and has to be applied for annually. The presented revenue and program budget indicate that the Natural Resources Program is quite healthy and has a positive general outlook. Justification for additional equipment will easily be demonstrated due to the fact that the program is quite underfunded at the present time. There exist many types of machinery and accessory tools that are lacking in our day to day operations.

6. Does the program have an advisory Team? _____ Yes X No

Part II. Program Self-Evaluation

A. Faculty

The Cankdeska Cikana Community College faculty has collaborated at a high level concerning curriculum design and review, state-of-the-art content, professional development activities, and program delivery. The Curriculum Committee meets with the faculty on a regular basis to discuss course content and curriculum design. This faculty has performed in an exemplary manner in conducting conferences out of state for the collective faculty professional development goals. The Natural Resources faculty has attended two out of the last four FALCON conferences from 2013 to 2016. Cankdeska Cikana Community College is a small college with smaller departments so it is quite easy for the faculty to have daily discussions and make decisions on currently pressing matters. The Natural Program instructors do meet on a regular basis to discuss program content. There are no adjunct professors at Cankdeska Cikana Community College that fit the accepted definition of adjunct professors or instructors, unless the online instructors are considered to be adjunct instructors. The Cankdeska Cikana Community College connections to the Internet in multiple locations throughout the campus make the college a state-of-the-art institution. The many computer clusters located throughout the campus allow the faculty to keep abreast of the most current seminars being conducted in their respective fields in the region.

Faculty Performance Evaluation - The Cankdeska Cikana Community College administration observes and evaluates the faculty in a timely manner several times during the academic year. As a result of the college administration observation efforts concerning the faculty there exists a continual improvement of teaching methods by the faculty at the community college. The Land Grant Director, Carrie Ann Duafala, was last evaluated for performance about six months ago by Douglas Cudworth, her supervisor for CTE certification. Duafala received a satisfactory evaluation and she reported increased effectiveness in her instruction. Douglas Cudworth, Natural Resources Instructor, was evaluated for performance by Academic Dean Teresa Harding in the last week of October, 2016. Douglas Cudworth received a satisfactory evaluation and benefited from suggestions provided by Dean Harding.

B. Student Relations

The Natural Resources Program faculty prominently makes their schedules known to the current students. About 30 % percent of the students visit instructors during the posted office hours. The faculty members or instructors are in possession of all the email addresses of all the students and the students have the email addresses of the entire faculty. I estimate that 100% of the students respond to emails directed to them concerning class scheduling and other pertinent matters. Adequate telephones are installed in the offices of faculty in order to be better accessible to students during business hours. The class schedule offers several evening courses to better meet the work schedules of single parent adults requiring or interested in advanced education. About 75% of the student body at Cankdeska Cikana Community College are single parents. Cankdeska Cikana Community College submits instructor evaluations forms to the students at the end of the semesters to determine student satisfaction with the content and quality of the instruction. The student

satisfaction inventory utilized at Cankdeska Cikana Community College is very likely not the Noel Levitz student satisfaction inventory. The implementation of the student satisfaction inventories has reassured the instructors that they are performing at optimal levels of educational excellence.

Instructional Delivery - The Environmental Program has a textbook selection process that includes a CD with the textbooks that are used for classroom discussion. The appropriate textbooks are generally chosen from the Cengage and Pearson Learning websites with a strong regard to the most current and relevant academic material available to the modern student.

The projection systems used for the classrooms are excellent in the form of smart board projectors. The required core curriculum classes are generally the classes that are taught in evening formats. Laboratory classes are being taught according to when necessary and appropriate. No online classes are being taught at the present time.

Learning and Employment Needs of Students - The single student that has graduated with an Environmental Science degree is attending a 4-year institution to gain further education in the Natural Resource field.

C. Curriculum

The Curriculum Committee reviews, on a timely basis, the Environmental Science Program curriculum. Dean Harding maintains current updates of the course syllabi. Changes in the Environmental Science Program curriculum have been submitted to the Curriculum Committee. The course content, design, and delivery are the responsibility of the instructors. The instructors have not been critically reviewed on these topics.

The Cankdeska Cikana Community College Environmental Science Program conforms in content, textbooks, and instructional methods to state of the art disciplinary standards by each of the selected textbooks containing relevant illustrations to the subject under discussion, a glossary in the last pages of each textbook covering the important terminology of each chapter, and by delivering the educational material by the latest technological mechanisms such as the smart board technology. The Environmental Science Program faculty maintain professional relationships other faculty and professionals in their respective field of study. These types of professional relationships allow the faculty of the Environmental Science Program to maintain currency of their instruction in their respective fields.

Formerly, at the end of every fall and spring semester each instructor would complete a formative and summative evaluation of one of his or her classes. These evaluations would be electronically sent to the Assessment Team by the instructors and the Assessment Team would advise the administration on how to instruct the teachers in improving achievement. This system has been updated and improved and now is currently being implemented. The formative and summative assessment evaluations have been replaced with a more individually reflective free-form evaluation by the instructor on what was effective instruction in the class and what was not effective. This evaluation process has become more of a qualitative method of evaluation than quantitative.

Cultural Aspects - The animal and plant wildlife identification classes in the Natural Resources Program incorporate names, stories, and uses by Native cultures of the traditional foods, materials, and methods to procure, process, and create the food products and crafts necessary for their physical existence. The physical geology class instructs the students concerning what geological materials their ancestors utilized to maintain

their existence. Traditional Ecological Knowledge (TEK) principles are also taught in most classes in the Natural Resource Department.

D. Institutional Support

The Environmental Science Program at Cankdeska Cikana Community College possesses adequate facilities, equipment, and technology to maintain the effectiveness of its courses and programs. At the present time the Natural Resources Department has five computer workstations of which three are enclosed office spaces. Most of the computer workstations have been updated with Windows 10 software. The Natural Resources Department has two spacious classrooms of which one is composed of a computer cluster of nine computers and associated tables and chairs. Additional chairs can be brought into the rooms to accommodate up to about 30 students each. Each classroom has Smart board technology and computer monitor projection capability. The Natural Resources Department has its own library containing pertinent reference books for instructor and student use. This library is essential for an efficient reference source to expediently obtain the information necessary for facilitation of student studies, research, and public inquiry. The Natural Resources Department library contains much more detailed information concerning research fields of interest than can be kept in storage at the community college library.

Cankdeska Cikana Community College certainly maintains adequate library services to students to maintain the effectiveness of the Natural Resources Program courses. The library maintains an extensive inventory of current periodicals to sustain students in completion of natural resources related assignments. The Cankdeska Cikana Community College library carries the National Geographic magazine, Arc User, Web MD, Time magazine, Audubon, and the major North Dakota city newspapers for instructor and student use. A professional tutor is on campus to help students in all disciplines. Writing laboratories and career counseling may be somewhat limited at Cankdeska Cikana Community College. A majority of the students utilize the services of the community college library and find them helpful. Recently about 150 hardcover books were donated to the community college library and placed in the hallway in front of the library for free distribution to the public. During the passage of about two weeks' time the entire collection of books had been distributed to the public.

Cankdeska Cikana Community College supports their faculty to attend national conventions to maintain and upgrade their knowledge and skills in the natural resources discipline. There are not a set number of national conventions a faculty member must or be allowed to attend. Educational classes for continuing education for the faculty and staff conducted during institutional business hours must be approved for by the President of Cankdeska Cikana Community College. Additional academic coursework arranged for on an individual basis out of the business day of the community college is of personal choice. Cankdeska Cikana Community College sent three members of the Natural Resources Program faculty to the FALCON Conference in Washington D.C. in November of 2013 to expand their understanding and versatility in the field of natural resources. Douglas Cudworth recently participated in a week long public seminar in Public Health Geographic Information Systems given by the University Of Nebraska Medical Center College Of Public Health. This seminar took place from October 27-31, 2014. The entire five permanent full time staff of the Natural Resources Department with a student attended the FALCON Conference in Denver, Colorado, in November of 2015 to become familiar with the changing regulations regarding federal grant applications and the new types of research conducted by community college faculty and students.

E. Other

The Cankdeska Cikana Community College Natural Resources Program facilitates the growth of vegetable plants in its greenhouse which it donates to a large degree to the surrounding public. The Cankdeska Cikana Community College Natural Resources Program supports a monthly Nutrition Workshop facilitated through North Dakota State University by providing a classroom for conducting the workshops that are beneficial to the college community. The students stop by when the workshop is going on and participate in the activity. On the average about ten faculty and students participate in the monthly workshops.

Douglas Cudworth, Natural Resources Instructor, received an award in the spring semester of 2014 for Excellent Achievement in the Dakota Studies Program. Carrie Ann Duafala was awarded First Place in contemporary art in 2015.

Transportation availability to the students living in remote sparsely populated regions of a large Native American reservation is a constant barrier to recruiting and maintaining large numbers of students. Housing availability to students and faculty is also a further barrier to recruiting and maintaining large student enrollments.

Part III. Program Planning

The Geographic Information System (GIS) software is constantly being improved and updated and Cankdeska Cikana Community College is aware of these improvements and is compliant with new investments in these programs.

Changes within the student population served by the program - The student population of Cankdeska Cikana Community College has stayed at a fairly steady state in the past five years. Now, the student enrollment is down from what it has been historically over the years. Cankdeska Cikana Community College is now employing an Outreach Coordinator to increase student enrollment.

Changes within the educational, social, or economic sector served by the program - The educational, social, and economic sectors of Cankdeska Cikana Community College have also stayed at a steady state in the past five years. There appear to be no drastic changes approaching the region in terms of the economic, social, or educational sectors.

Changes within the organizational structure and direction of the institution - The organizational structure of the college has changed with Carrie Ann Duafala as the Land Grant Director. The impact of this administrative change has been the continual superlative services to the students of Cankdeska Cikana Community College.

The Cankdeska Cikana Community College students are provided with nutritional information concerning healthy eating, food preparation, and Native cultural practices hosted through the Natural Resources Department. The Natural Resources Department also hosts recreational activities such as the archery program to develop the physical skills of students and increase their sense of team effort to accomplish their goals.

Changes within tribal colleges. - The tribal college organizational structure has maintained a fairly steady state in the recent five years.

Changes in federal or state laws that have an effect on program functions - Federal and state regulations have provided fairly adequate funding for the Cankdeska Cikana Community College Natural Resources Program in the past five years. During the past five years funding for the Cankdeska Cikana Community College Natural Resources Department has been adequate as no employee has received their salary payment late or been denied their salary payment. The funding for supplies for departmental activities could be improved upon due to the fact that individual instructors purchase required materials personally for student instruction.

New and revised goals and objectives for program improvement.

1. Enhance recruitment and retention efforts through collective staff involvement that include student orientation and academic advising. These are both short term and long term goals involving detailed presentations during orientation days and designated faculty members who are experienced and knowledgeable in a range of academic fields that would serve as student advisors to best meet the needs of the developing student.
2. Establish, erect, and maintain student dormitories and housing as a long term goal. The Natural Resources Department will surely assist in this endeavor by securing specialist personnel to locate the most suitable locations for the necessary housing facilities.
3. Identify and develop internal employees with potential to fill key leadership positions in the form of succession planning. It is certain that specific employees will profile themselves with significant accomplishments and leadership qualities in performing their assigned duties. This could be a long term goal by selecting key personnel with significant talents, the Natural Resources Department could take the lead in initiating these methods.
4. Give community a broad base of educational opportunities through “not for” and “for” credit opportunities. Each semester at least two instructors will offer educational opportunities to the public. This could be both a long term and short term goal by the Natural Resources Program holding planning sessions to determine just what classes specifically the community is in need for and what would be popular classes.

Identify additional resources needed to maintain and improve program quality and to reach the goals and objectives

The Environmental Science program is almost identical to the Natural Resource Management Program. This program’s curriculum has only one class difference and utilizes the same resources as the Natural Resource Management Program. It is not beneficial to the students to have two identical programs at the associate level. A recommendation is to furlough the Environmental Science Program.

Required Minimum Data for Instructional Program Review

A. Program Demographics:

1. Program Faculty – Full Time and Part Time

Carrie Ann Duafala, Land Grant Director/Instructor, Full Time

Douglas Cudworth, Assistant Land Grant Director /Instructor, Full Time

2. Program Staff – Full Time and Part Time

Germaine Thompson, Administrative Assistant, Full Time

3. Total Program Student Enrollment per Semester (5 years) (See Website)

Environmental Science Program Students

Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016	Spring 2017
0	0	0	0	2	2	1	1	0	0

4. Ratio of graduates to majors (5 years) (See Website)

Natural Resources Program Graduates				
2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
N/A	N/A	0	1	0
Ratio of Natural Resources Program Graduates to Majors				
0	0	0/2	1/1	0

5. Total Number of Courses and Sections Offered per Semester (data available, up to 5years) *

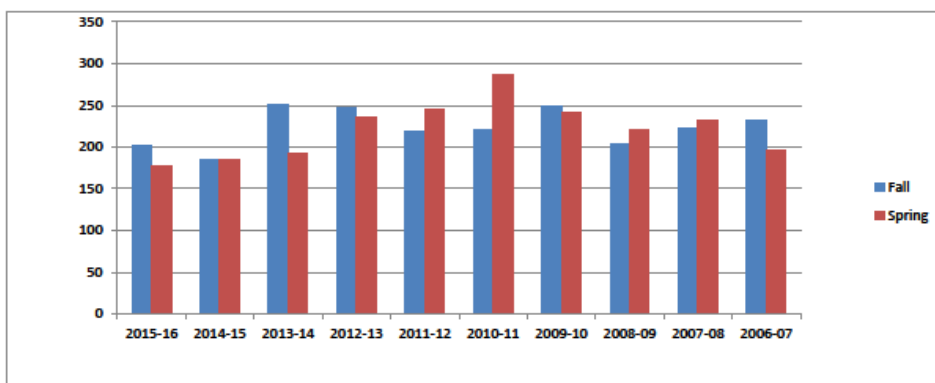
Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016	Spring 2017
5	5	5	7	4	11	8	11	7	8

*Only one section per course is generally taught at Cankdeska Cikana Community College.

6. Comparative Total Enrollment Rate of Growth/Decline: Program vs. Institution (5 years).

**Cankdeska Cikana Community College
Enrollment Data**

Semester	2015-16	2014-15	2013-14	2012-13	2011-12	2010-11	2009-10	2008-09	2007-08	2006-07
Fall	201	185	251	247	219	220	250	203	223	233
Spring	177	184	192	235	246	287	242	220	233	196



Environmental Science Program Students				
2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
N/A	N/A	2	1	0
Percent of Environmental Science Program Students to CCCC Student Enrollment				
0	0	0.006	0.003	0

Cankdeska Cikana Community College Faculty Satisfaction Survey

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Applicable
1. All faculty have the opportunity to participate in curriculum development and revision for this program.	X					
2. All faculty have the opportunity to participate in program planning.	X					
3. Faculty in this program are concerned about student success.	X					
4. The variety of faculty expertise is sufficient to provide effective instruction within this program.	X					
5. Faculty in this program are given the opportunity to participate in the program review process.	X					
6. The program review process is effective in evaluation the strengths and weaknesses of this program.		X				
7. Information gathered during program review is integrated into the program's planning process.		X				
8. Communication among faculty in the program is frequent, interactive, and effective.		X				
9. I am satisfied with the quality of educational planning in this program.		X				
10. The required textbook(s) are selected by all faculty teaching a particular course in this program.	X					
11. The program's courses conform in content, textbooks, and instruction methods to current disciplinary standards.	X					
12. Adjunct faculty communicate with the program full-time faculty regarding grading policies.						X
13. Faculty in this program both assess and base grades and course credit on student achievement of learning outcomes.	X					
14. The faculty in this program are sufficient in number to provide effective instruction within the discipline.	X					
15. Faculty in this program stay current in their area of expertise.	X					
16. The faculty in this program are actively involved in staff development activities.	X					

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Applicable
17. The availability of classroom supplies is sufficient to maintain the effectiveness of this program's courses.	X					
18. Class schedules for this program conform to student's demand and educational needs.		X				
19. Faculty in this program distinguish between personal conviction and professionally accepted views in the discipline.	X					
20. Faculty in this program are committed to high standards of teaching.	X					
21. Adequate facilities and equipment are available to maintain the effectiveness of this program's courses.		X				
22. Library services and collections are adequate to maintain the effectiveness of this program's courses.	X					
23. Tutoring and writing center facilities are adequate to maintain the effectiveness of this program's courses.		X				
24. Clerical support is available and adequate to maintain the effectiveness of this program's courses.		X				
25. I have been provided a copy of the CCCC Policies and Procedures and the CCCC Faculty Handbook.	X					

BACKGROUND

26. At CCCC, are you: full-time faculty part-time faculty adjunct faculty

27. How many years have you taught at least one course in this program?

- Less than 1 4 – 6 years
 1 – 3 years more than 6 years

28. How many different courses per semester are you teaching in this program?

- 2 courses 4 courses
 3 courses I only teach one course per semester

29. How many credits do you teach in this program (per semester)?

- 5 or less 6-12 credits
 12-15 credits 15 or more

Please provide any additional comments (greatly encouraged):

Checklists for Program Reports

Checklist for Existing Program Review Report

Executive Summary

_____ Program Description Summary

_____ Program Self-Evaluation Summary

_____ Program Planning Summary

Comprehensive Analysis

Part I. Program Description

_____ Role of the Program

_____ Staff

_____ Productivity Summary (Appendix A) for past 5 years

_____ Program Revenue (Past 5 years)

_____ Program Budget (Past 5 years)

_____ Advisory Team

Part II. Program Self-Evaluation

_____ Faculty (include results of Appendix B)

_____ Student Relations

_____ Curriculum Content, Design, Delivery

_____ Institutional Support

_____ Other

Part III. Program Planning

_____ Trends affecting program goals

_____ Goals and objectives for program improvement (1 year and 5 year)

_____ Identify additional resources needed

Signature Pages for Completed Program Reviews

Name of Program Reviewed: _____

Director or Faculty of Record

Date of Review

Curriculum Team Chair

Date of Review

Dean of Academics

Date of Review

Curriculum Team Recommendations:

Criteria	Maintain a Program	Enhance a Program	Reconfigure a Program	Reduce or Phase-out a Program
Quality and Strength of the Program as Determined from Assessment Information	The program's quality is substantial and notable.	The program's quality is substantial but could be strengthened through curricular and/or other program enhancements, e.g. providing additional resources, adding or deleting courses.	The program's quality could be strengthened through reconfiguration, e.g. substantial modification of the curriculum and the reorganization of faculty.	The program's quality and/or contribution to the institution is not substantial enough to justify its continuance.
Enrollment	The program's enrollment is strong.	The program's enrollment is adequate but could be strengthened.	The program's enrollment needs to be strengthened.	The program's enrollment does not meet the expectations for continuance.

<p>Ability to Benefit and Positively Impact Cankdeska Cikana Community College</p>	<p>Relationships, partnerships, and/or alliances are strong. This Program benefits the overall mission of the college.</p>	<p>Relationships, partnerships, and/or alliances could be developed to strengthen the program.</p>	<p>Relationships, partnerships, and/or alliances need to be reconfigured in order to positively impact the college.</p>	<p>Relationships, partnerships, and/or alliances are not positively impacting the college. The program's reduction or phase-out would not adversely impact other programs.</p>
<p>Cost Effectiveness</p>	<p>The program sustains itself and is a financial asset to the college.</p>	<p>The program could provide more financial gain with additional efforts.</p>	<p>The program's financial expenditures need to be reconfigured in order to be more cost effective.</p>	<p>The program is not cost-effective.</p>

COMPLETED ELECTRONIC COPY SUBMITTED: _____(Date)

**APPENDIX D
Signature Pages For Completed Program Reviews**

Name of Program Reviewed: A.S. Environmental Science

[Signature]
Director or Faculty of Record

4-12-17
Date of Review

[Signature]
Curriculum Committee Chair

4-6-17
Date of Review

[Signature]
Academic Dean

4-6-17
Date of Review

Curriculum Committee Recommendations:

Criteria	Maintain a Program	Enhance a Program	Reconfigure a Program	Reduce or Phase-out a Program
Quality and Strength of the Program as Determined from Assessment Information	The program's quality is substantial and notable.	The program's quality is substantial but could be strengthened through curricular and/or other program enhancements, e.g. providing additional resources, adding or deleting courses.	The program's quality could be strengthened through reconfiguration, e.g. substantial modification of the curriculum and the reorganization of faculty.	The program's quality and/or contribution to the institution is not substantial enough to justify its continuance.
Enrollment	The program's enrollment is strong.	The program's enrollment is adequate but could be strengthened.	The program's enrollment needs to be strengthened.	The program's enrollment does not meet the expectations for continuance.
Ability to Benefit and Positively Impact Cankdeska Cikana Community College	Relationships, partnerships, and/or alliances are strong. This Program benefits the overall mission of the college.	Relationships, partnerships, and/or alliances could be developed to strengthen the program.	Relationships, partnerships, and/or alliances need to be reconfigured in order to positively impact the college.	Relationships, partnerships, and/or alliances are not positively impacting the college. The program's reduction or phase-out would not adversely impact other programs.
Cost Effectiveness	The program sustains itself and is a financial asset to the college.	The program could provide more financial gain with additional efforts.	The program's financial expenditures need to be reconfigured in order to be more cost effective.	The program is not cost-effective.

COMPLETED ELECTRONIC COPY SUBMITTED: 4-6-17 (Date)