

OGLALA LAKOTA COLLEGE
 MS&T DEPARTMENT STRATEGIC PLAN:
 AY 2015-2016
 (Date Prepared: Friday, August 23, 2013)
 (Date Updated: May 20, 2015)

VISION STATEMENT

To provide constructivist-learning opportunities in Math, Science, and Technology while incorporating traditional Lakota values.

MISSION STATEMENT

The Math, Science, and Technology learning philosophy emphasizes a constructivist framework, a hands-on approach to improve the quality of life on the Reservation through science and technology.

- Tribal: Support and train new and train existing Tribal Agency professionals in environmental, earth and life sciences, engineering and information technology through academics and shared research
- Community: Positively influence the perception of math, science and technology in Tribal communities through formal and informal learning opportunities in cooperation with the K-12 education community
- Cultural: Support, encourage, and respect Lakota values in all aspects of our academic, research, and outreach efforts.
- Academic: Establish a foundation of academic excellence for our stakeholders in Science, Technology, Engineering and Math.

STRATEGIC GOALS

STRATEGIC GOAL 1: Improve STEM education at Oglala Lakota College

Objective 1.1: Improve student success in the math sequence by 2% per year through alignment with Foundational Studies

Objective 1.2: Improve recruiting and retention of first- and second-year STEM students by 5% per year

Objective 1.3: Maintain or increase the number of students pursuing advanced degrees or entering the science and technology workforce.

STRATEGIC GOAL 2: Develop a sustainable departmental funding model

Objective 2.1: Increase the percentage of institutional support for instruction

Strategy 2.1.1 Align STEM strategic plan to OLC strategic plan by developing goals to sustain STEM programs

Objective 2.2: Increase the number of new principal investigators

Objective 2.3: Increase the total number of refereed publications by one per year

STRATEGIC GOAL 3: Revitalize science and technology instruction to fit a constructivist model

Objective 3.1: Improve access to math, science, and technology workspaces and laboratories by one per year

i. Utilize Lab / field assistants

ii. Explore transportation possibilities for interns

Objective 3.2: Increase the number of course using a field or laboratory component by one course per semester

Objective 3.3: Increase student intern dissemination by 20% per year

Objective 3.4: Increase and diversity service learning opportunities by one per semester

STRATEGIC GOAL 4: Provide professional development and informal education opportunities in STEM for faculty, staff, students, and community members

Objective 4.1: Support the pursuit of advanced degrees for faculty, staff, and adjuncts at a rate of two per year

Objective 4.2: Establish a venue for the dissemination of research / training to tribal agencies at a rate of two per year

Objective 4.3: Support extra-curricular outreach activities at the K-12 level at a rate of five activities per year

Objective 4.4: Support co-curricular STEM activities at the K-12 level for 1,200 students per year

STRATEGIC GOAL 5: Grow Math, Science, and Technology research capacity

Objective 5.1: Provide faculty and research staff with opportunities for science and technology research collaboration with Tribal Agencies academic partners through salary support for research, and purchasing / maintaining laboratory equipment, and supplies

Objective 5.2: Provide research internships and dissemination opportunities for 20 students per year

Objective 5.3: Increase collaboration with Tribal agencies and national and international institutions.

Objective 5.4: Collaborate with Graduate Studies to offer a STEM based graduate degree track

OGLALA LAKOTA COLLEGE
 MS&T DEPARTMENT PROGRAM **YEARLY ACTION PLAN:**
 AY 2015-2016

OLC Strategic Goal 1: <i>Oglala Lakota College will produce graduates who demonstrate excellence in their chosen areas of study and fields of endeavor</i>				
Departmental Strategic Goal 1: Improve STEM education at Oglala Lakota College				
Departmental Strategic Objective 1.1: Improve student success in the math sequence by 2% per year through alignment with Foundational Studies				
Strategies	Criteria	Assessment Tools	Results	Use of Results
Strategy 1.1: Align curricula at the 093-103 level with the Foundational Studies department	Meeting minutes and revised syllabi reflect an alignment of curriculum	Meeting minutes Syllabi		

MST Strategic Objective 1.2: Improve recruiting and retention of first- and second-year STEM students by 5% per year				
MST Strategic Objective 1.3: Maintain or increase the number of students pursuing advanced degrees or entering the science and technology workforce				
MST Strategic Objective 1.4: Develop an academic enrichment program for new and non-attaining interns				
Strategies	Criteria	Assessment Tools	Results	Use of Results
Use two Fridays a month to have new and non-pace of progress RAs complete incomplete or failing coursework. Use a shared faculty mentorship approach to ensure students are attaining monthly goals.	60% of new and non-pace of progress students will complete incomplete or failing coursework through enrolling in classes or working with instructors	Changes of grade		
Develop a targeted recruiting system: 1) Work with Retention Director to develop a comprehensive strategy to tutor students below Math 134. 2) Use Math 134 for formal candidacy to program.	Find 5 potential students per semester who might be eligible for Research Assistants (RAs). Criteria – in Math 134 and 2.5 GPA for previous term	Webadvisor OLC Reference		

<p>3) Use Jenzabar data to identify factors for low performing students.</p> <p>4) Science MST majors divided among the faculty and staff for advising.</p>	<p>Contact 60% of majors during the fall and spring semester</p>	<p>Majors have been already divided on a spreadsheet.</p> <p>Advising log sheets will be developed and distributed to faculty and staff</p>		
<p>Maintain high quality research opportunities that lead to workforce or graduate school</p>	<p>Develop Rubric to score student research applicants.</p> <p>Application Process</p> <p>Research Assistant Selection Committee</p> <p>Data review is scheduled for mid-semester</p>	<p>Co-Curricular Reports</p>		

OLC Strategic Goal III: Enhance the academic quality of the college by emphasizing teaching, service learning and applied research.

C. Promote faculty-student service learning and research opportunities engaging and responding to needs of the community.

a. Measurement: The total number of service learning and field based research activities.

OLC Strategic Goal Goal IV: Provide financial resources consistent with the OLC mission.

A. Provide financial resources to the academic and support services efforts of the college.

a. Measurement: grants received and annual operating budget

B. Continue fund raising activities to increase the college endowments for faculty salaries and student scholarships.

a. Measurement: Annual report of funds raised and allocated.

STRATEGIC GOAL 2: Develop a sustainable departmental funding model

Objective 2.1: Increase the percentage of institutional support for instruction

Objective 2.2: Increase the number of new principal investigators

Objective 2.3: Increase the total number of refereed publications by one per year				
Strategies	Criteria	Assessment Tools	Results	Use of Results
Strategy 2.1.1 Align STEM strategic plan to OLC strategic plan by developing goals to sustain STEM programs	Review department strategic plan	Department meeting minutes		
Strategy 2.2 Increase the number of new principal investigators (PIs)	Three faculty or staff submit proposals	Number of proposals submitted		
Strategy 2.3 Increase the total number of refereed publications by one per year	Department research staff will increase by one publication per year	Publication in a peer reviewed journal		

OGLALA LAKOTA COLLEGE
MS&T ANNUAL ACTION PLAN:
AY 2015-2016

OLC Strategic Goal 3: <i>Enhance the academic quality of the College by emphasizing teaching and applied research.</i>				
Departmental Strategic Goal 3: Revitalize science and technology instruction to fit a constructivist model				
Departmental Strategic Objective 3.2: Increase the number of courses using a field or laboratory component by one course per semester				
Strategies	Criteria	Assessment Tools	Results	Use of Results
Investigate outside funding sources for the acquisition of lab or field based components	Identification of two RFPs	Requests for Proposals (RFPs)		
Prioritize existing and future spaces in the STEM, College Centers, and other Administrative Buildings:	Develop a 5-year action plan with targets	Action plan		
Utilize existing funding to expand lab and field experiences in Natural Science TCEP-cover Rang 103	One new course per semester with lab or field component	Syllabi		

Epscor-Geol 143 and 153				
Explore the feasibility of labs for the following Bio 103 Bio 113 Geol 143 Geol 153 Rang 103	Use course faculty feedback forms to see if a lab component would be feasible and transferrable,	Faculty course feedback forms and student survey		
Complete a Lab inventory	Data base will be created	Data base		

MS&T ANNUAL ACTION PLAN:

Enrollment Management

ANNUAL ACTION PLAN

AY 2015-2016

<p>OLC Enrollment Management Policy Oglala Lakota College will develop, implement, monitor and evaluate a comprehensive enrollment management plan that includes student recruitment, retention, persistence, and completion. The Oglala Lakota College implements enrollment management through a holistic approach that fully embraces student recruitment, persistence, retention, and completion.</p>				
<p>Departmental Enrollment Management Outcome 1: MST will increase the number of incoming freshman students enrolling in STEM degree programs by 2% per year Departmental Enrollment Management Outcome 2: MST will increase student retention by 2% per year Departmental Enrollment Management Outcome 3: MST will increase student persistence by 2% per year Departmental Enrollment Management Outcome 4: MST will increase student graduation rate by 2% per year</p>				
<p>Departmental ENROLLMENT MANAGEMENT OBJECTIVES:</p>				
Strategies	Criteria	Assessment Tools	Results	Recommendations for Improvement
<p>General: Evaluate departmental enrollment and persistence data for trends</p>	<p>Completion of a multifactor analysis</p>	<p>R statistical programming language</p>		
<p>EMO-1 Establish a summer bridge program to recruit students with a high probability of success through an integrated K-12 teacher research experience and K-</p>	<p>Recruit six high school seniors and six K-12 teachers 80% of bridge students enroll at OLC. 2% increase in K-12 student participation</p>	<p>Enumeration ISC report</p>		

<p>12 to college bridge program.</p> <p>Continue K-12 Science Fair for strategic recruitment of MST students</p>	<p>above a baseline of 530 participants (Sp 15 target = 541 participants)</p>			
<p>EMO-2 Establish decentralized near-peer learning clusters during the academic year.</p> <p>Recruit two sophomore students in five college centers to act as tutors.</p> <p>Implement a method to link student participation in tutoring with demonstration of learning</p>	<p>Learning clusters established</p> <p>Tutors recruited</p> <p>2% increase in students passing general studies mathematics courses (Math 103 and Math 134)</p>	<p>Enumeration</p> <p>Attendance reports from tutoring, final exam scores</p>		
<p>EMO-3 Increase the diversity student interns by advertising student assistantships, fellowships, and internships</p> <p>MST staff evaluate research assistantships through performance rubrics</p> <p>MST Faculty will actively advise students through individually</p>	<p>5% increase in students applying for departmental and extra departmental cocurricular learning opportunities</p> <p>Rubric implementation / development of an evaluation baseline to evaluate</p> <p>100% of faculty will contact 70% of MST students attending OLC in</p>	<p>Record of extra departmental applications to co-curricular learning opportunities</p> <p>Research assistant applications</p> <p>Student contact list generated from Web assign</p>		

contacting students	the last four semesters			
<p>EMO-4 Faculty supported by TCUP (Higa, LaGarry, Sandoval, Sanovia, Tinant) will conduct decentralized by-monthly writing laboratories</p> <p>MST will longitudinally align writing intensive courses (Sci 273, NSci 393, NSci 493)</p> <p>MST will establish online and paper portfolios to demonstrate student progress through the program.</p>	<p>Writing rubrics implemented</p> <p>Juniors and seniors increase course completion by 2%</p> <p>Course objectives and assignments aligned.</p> <p>Curator of online and paper portfolios selected.</p> <p>Online portfolio implemented.</p>	<p>Assessment plans</p> <p>Jenzebar / WebAdvisor</p> <p>Annual review and assessment of portfolios.</p> <p>Annual review and assessment of PLOs for Sci 273, NSci 393, and NSci 493.</p> <p>OLC website.</p>		

MS&T ANNUAL ACTION PLAN:
CO-CURRICULAR
ANNUAL ACTION PLAN
AY 2015-2016

<p>OLC Strategic Goal 4: <i>Enhance the academic quality of the College by emphasizing teaching and applied research.</i></p>
<p>Departmental CO-CURRICULAR Outcome 1: Students will develop scientific projects for outreach and recruitment in the community and region.</p> <p>Criteria 1: -Students attend two outreach activities and assist the MST Department as well as partner institutions or Tribal entities at least once per year</p> <p>Departmental CO-CURRICULAR Outcome 2: Students synthesize scientific and engineering learning through applied research</p> <p>Criteria 1: -Student is paired with a mentor to design and carry out at least one research project Faculty develop and implement a process to strengthen students' analysis and oral and written presentation of data(this is an assessment tool) PUT IN THE PLAN FOR 2016-2017</p> <p>Criteria 2: -Students assist with OLC Science Fair as judges</p> <p>Departmental CO-CURRICULAR Outcome 3: Students incorporate Lakota cultural and scientific theory</p> <p>Criteria 1: -Students attend one field trips and etc... coordinated by OLC instructional divisions</p>

Criteria 2: Students integrate Lakota language culture in research and presentations
 Departmental CO-CURRICULAR Outcome 4: Student researchers demonstrate effective oral and written communication skills

Criteria 1: -Students prepare an abstract for poster or oral presentation of their research for competitions or display at Tribal, State and National conferences

Criteria 2: -students explain their research and science outreach activities to local community and schools.

Departmental CO-CURRICULAR OBJECTIVES:

Strategies	Criteria	Assessment Tools	Results	Recommendations for improvement for upcoming year include budget amount
<p>CCO-1 MST faculty/ staff will establish collaborations with outreach partners to coordinate outreach activities.</p>	<p>Students attend at least four outreach activities and assist the MST Department as well as partner institutions or Tribal entities per year</p> <p>Students assist with OLC Science Fair as judges</p>	<p>Co-curricular assessment form, students evaluation form and Research Assistant Evaluation Rubric</p>		
<p>CCO2 -Student is paired with a mentor to design and carry out research</p>	<p>Criteria 2 Student participates in one research project</p>	<p>Research Assistant Evaluation Rubric</p>		
<p>CCO4 Students explain their research and science outreach activities to local community and schools.</p>	<p>-Students prepare an abstract for poster or oral presentation of their research for competitions or display at Tribal, State and National conferences</p>	<p>Co-curricular assessment form and students evaluation form</p>		

OGLALA LAKOTA COLLEGE
MS&T ANNUAL ACTION PLAN FOR STUDENT LEARNING OUTCOMES:
AY 2015-2016

Bachelor of Science Natural Science- Conservation Biology

OLC Strategic Goal 1: Graduate students who have the necessary for Indian Country jobs.				
Departmental Strategic Goal 1: Improve STEM education at Oglala Lakota College				
Objective 1.2: Improve recruiting and retention of first- and second-year STEM students by 5% per year				
Program Learning Outcomes 1. Students can express natural phenomena and relationships quantitatively 2. Students can relate the biosphere and ecosphere through the field and laboratory 3. Students can characterize ecosystem health based on physical, chemical, and biological factors. 4. Students can manipulate geospatial and remotely sensed data, manage GIS projects, and independently create projects using an ArcInfo GIS platform 5. Students can describe the flora and fauna of the Black Hills and Badlands in South Dakota 6. Students can conduct an independent research project in conservation biology				
Intended Course/Program Outcome	Criteria	Assessment Method(s)	Results	Use of Results
Program Learning Outcome (PLO) Students can conduct an independent research project in conservation biology (criterion 2&4) Students can conduct an independent research project in conservation biology (criterion 2&4) FA14 – SP15 Student Learning Outcomes (SLO) Nsci 393 1) To carry out peer reviewed literature in the area of the topic in science under study. 2) To summarize literature reviews (introduction, data	Students will achieve 75 or higher on a 100-point rubric 95 Points= Exemplary 85 Points= Competent 75 Points= Satisfactory	FA14 – SP15 Assess semester project in NSci 393 Research Methods 2 Presentation lecture exercises in Bio 463 Conservation Biology		

discussion etc.)
3) Properly use design and write a research proposal.
4) To design a qualitative research. Hypothesis and expected data to be used. Proper scale, space distribution in writing tables and figures for research proposals in a qualitative manner.
5) To design a qualitatively research project. Prepare and deliver conference presentations at professional meetings.

Student Learning Outcomes (SLO)

Bio 463

Discuss conservation and biodiversity

Discuss threats of biodiversity: extinctions and global change, ecosystem degradation, invasive exotics, and over exploitation

Explain how to maintain biodiversity: protecting and managing populations and ecosystems

Discuss social, political, and economic aspects of conservation biology

This is assessment cycle 1 of 3 planned

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<p>for this goal</p> <p>FA15 – SP16 NSci 273 Scientific Literature and Writing</p> <p>Develop the ability to research a topic thoroughly and efficiently (conduct a comprehensive literature review)</p> <ol style="list-style-type: none"> 1. Effectively read, understand, and critically evaluate the scientific literature 2. Learn and apply the IMRAD (Introduction, Methods, Research [and] Discussion) format 3. Understand the ethical and legal issues including plagiarism; 4. Learn and apply appropriate visual aids (<i>e.g.</i> tables, figures, graphs, and other illustrations) to improve the communication 5. Develop the ability to clearly present research results in a written format. 6. Develop skills to speak in public: oral and poster presentations, and to respond thoughtfully to questions 		<p>FA15 – SP16</p> <p>Direct assessment of research proposal</p>		
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<p>This is assessment cycle 1 of a total of 3 planned for this program goal.</p>				
<p>Program Goal 2 Students can relate the biosphere and ecosphere through the field and laboratory.</p> <p>FA14 – SP15 Geol 143</p> <ol style="list-style-type: none"> 1. Explain the scientific method as applied to geological evidence; 2. Describe in general terms the properties of rocks and minerals, and the rock cycle; 3. Describe in general terms plate tectonics and the causes of volcanism and earthquakes; 4. Interpret in general terms Black Hills geology <p>This is assessment cycle 1 of a total of 3 planned for this program goal</p> <p>FA15 – SP16 Bio 151/153</p> <ol style="list-style-type: none"> 1. Develop lab skills that are align with necessary skills needed for scientific research. 2. Learn how to keep accurate data records of laboratory work 	<p>b.1 demonstrate the ability to take and maintain notes describing activities in the field and laboratory, including archival procedures where applicable.</p> <p>b.2 demonstrate the ability to conduct prescribed field and laboratory exercises in a classroom setting.</p>	<p>Direct measure of students' notes</p>		

<p>3. Develop and present, orally and in exhibit format, a biological investigation that uses the scientific method of problem solving.</p> <p>This is assessment cycle 1 of a total of 3 planned for this program goal.</p>				
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OGLALA LAKOTA COLLEGE
(UNIT/DEPARTMENTAL) ANNUAL ACTION PLAN FOR STUDENT LEARNING OUTCOMES:
AY 2015-2016
Bachelor of Science Natural Science- Earth Science

<p><i>OLC Strategic Goal 1: Oglala Lakota College will produce graduates who demonstrate excellence in their chosen areas of study and fields of endeavor</i></p>				
<p>Departmental Strategic Goal 1: Improve STEM education at Oglala Lakota College</p>				
<p>Departmental Objective 1.2: Improve recruiting and retention of first- and second-year STEM students by 5% per year</p>				
<p>Program Outcomes</p> <ol style="list-style-type: none"> 1. Students will understand the scientific method as applied to paleontological evidence. 2. Students will be able to specifically identify and describe the important paleontological research of the northern Great Plains and South Dakota. 3. Students will be able to specifically identify and describe the classification of fossil-bearing rocks as interpreted from lithological evidence, and its role in biostratigraphic research. 4. Students will be able to specifically identify and describe most of the common fossils of the Black Hills, northern Great Plains, and the Pine Ridge Reservation. 				
Outcome	Criteria	Assessment Tools	Results	Use of Results
<p>Spring 2016 Program Learning Outcome (PLO) Describe the geological processes and history of the Black Hills and Badlands of South Dakota</p> <p>Student Learning Outcomes (SLO) NSci433</p>	<p>Paleontology (NSci 443) is a capstone course in Earth Science. The course learning objectives are mapped to the Earth Science learning outcome: describe the geological processes and history of the Black Hills and Badlands of South Dakota. We evaluated the course overall as acceptable. The cognitive level of the course level objectives ranged from L1 to L6 on Bloom's Taxonomy. There was evidence from artifacts that three of four learning objectives were met.</p> <p>75% of the students will achieve 3 or higher on a 5 point rubric.</p> <p>Rubric Rating: 4 = Exemplary 3 = Good</p>	<p>Assess NSci 433 Paleontology Two exams: mid-term and final</p>		

<p>1. Understand scientific method as applied to paleontological evidence</p> <p>2. Students will be able to specifically identify and describe the important paleontological research of the northern Great Plains and South Dakota.</p> <p>3. Students will be able to specifically identify and describe: the classification of fossil-bearing rocks as interpreted from lithological evidence and its (the classification's) role in biostratigraphic research</p> <p>4. Students will be able to specifically identify and describe most of the common fossils of the Black Hills, northern Great Plains, and the Pine Ridge Reservation</p>	<p>2 = Acceptable 1 = Needs Improve 0 = Unacceptable.</p>			
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OGLALA LAKOTA COLLEGE

(UNIT/DEPARTMENTAL) ANNUAL ACTION PLAN FOR STUDENT LEARNING OUTCOMES:

AY 2015-2016

Bachelor of Science Information Technology

OLC Strategic Goal 1: *Oglala Lakota College will produce graduates who demonstrate excellence in their chosen areas of study and fields of endeavor*

Departmental Strategic Goal 1: Improve STEM education at Oglala Lakota College

Objective 1.3: Maintain or increase the number of students pursuing advanced degrees or entering the science and technology workforce.

Program Outcomes

Project Management: Communicate effectively with institutional network stakeholders.

Hardware: Install, maintain and support computer hardware in a networked and stand-alone environment.

Operating Systems: Install, maintain and support network and client operating systems.

Network: Install, maintain and support a network given a hypothetical or real LAN or WAN situation.

Security: Secure devices, networks and data.

National Certifications: Complete selected national certifications in hardware (A+), Network (Network+) and Security Certified Network Professional (SCNP).

Intended Course/Program Outcome	Criteria	Assessment Method(s)	Results	Use of Results
<p>Fall 2015</p> <p>PLO #2</p> <p>National Certifications:</p> <p>Complete selected national certifications in hardware (A+), Network (Network+) and Security Certified Network Professional (SCNP).</p>				
<p>Student Learning Outcomes (SLO)</p> <p>IT-133</p> <p>A+ Certification</p> <p>Complete an A+ Certification exam</p>	<p>Students achieve 3 or higher on a 5 point rubric.</p> <p>Score 4 Mastery</p> <p>Student met Student Learning Outcomes. Program Outcomes</p>	<p>Complete an A+ Certification exam simulation with scores at 70% or higher.</p> <p>Cert Blaster or Total Tester exam formed</p>		

simulation with scores at 70% or higher.	<p>were met.</p> <p>Score 3 Proficient</p> <p>Student generally met Student Learning Outcome but improvement is possible. Program Outcome generally met.</p> <p>Score 2 Developing</p>	the exam simulation.		
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Spring 2016

Assessment of Program Learning Outcome (PLO) #6

National Certifications:

Complete selected national certifications in hardware (A+), Network (Network+) and Security Certified Network Professional (SCNP).

Mastery (Score4) Proficient (Score3) Developing (Score2) Beginning (Score1) Unacceptable (Score0)

Intended Course Outcome	Criteria	Assessment Method(s)		
<p>Student Learning Outcomes (SLO)</p> <p>IT-133</p> <p>A+ Certification</p> <p>Install, maintain and support computer hardware in a networked and stand alone environment.</p> <p>Complete the CertBlaster Test Prep at a 70% or greater.</p>	<p>Complete the A+ CertBlaster Test Prep at a 70% or greater.</p>	<p>Students were provided the CertBlaster Test Prep materials at the beginning of the course.</p> <p>Two formal testing events occurred, a mid term and final assessment at the end of the course.</p>		
<p>Intended Course Outcome</p> <p>Student Learning Outcomes (SLO)</p> <p>IT-243 Introduction to</p>	<p>Complete the Network+ CertBlaster Test Prep at a 80% or greater.</p>	<p>Students were provided the CertBlaster Test Prep materials at the beginning of the</p>		

<p>Networks</p> <p>Design a network based on a network map</p> <p>Assign IP addresses using class-full and classless network diagrams (Rip I and II)</p> <p>Create three subnets with one private subnet hidden from the second and third subnets</p> <p>Configure two printers, one in the private subnet and one in the public subnet</p> <p>Create the network using routers, switches, cables, computers and printers</p> <p>Complete the Total Tester Test Prep at a 70% or greater.</p>		<p>course.</p> <p>Two formal testing events occurred, a mid term and final assessment at the end of the course.</p>		
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Spring 2016

Assessment of Program Learning Outcome (PLO) #3

Operating Systems: Install, maintain and support network and client operating systems.

Mastery (Score4) Proficient (Score3) Developing (Score2) Beginning (Score1) Unacceptable (Score0)

Intended Course Outcome	Criteria	Assessment Method(s)		
<p style="text-align: center;">1.</p> <p>Student Learning Outcomes (SLO)</p> <p>IT-153 Survey of Operating Systems</p> <p>01 Introduction</p> <p>- Definition of Basic</p>	<p>Achieve a score of 2 on a 4 point rubric.</p>	<p>Selected questions from the mid term and final exam.</p> <p>Students were asked two questions from each chapter of the</p>		

<p>Terms and Concepts</p> <ul style="list-style-type: none"> - Structures or How is it Organized <p>02 Processes</p> <ul style="list-style-type: none"> -Managing Programs -Threads -Synchronization -CPU Scheduling <p>03 Memory</p> <ul style="list-style-type: none"> -Main Memory -Virtual Memory <p>04 Storage</p> <ul style="list-style-type: none"> -Mass-Storage -File-Systems and Interface -Systems Implementation -I/O Systems 		<p>textbook.</p> <p>Question 1 in essay form, do not state the obvious! But, be specific and provide some evidence to show that you have an idea of each concept.</p> <p>And question 2 in a Power Point presentation. Two slides for each chapter of the textbook. Describe what you have learned from the chapter.</p>		
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OGLALA LAKOTA COLLEGE

(UNIT/DEPARTMENTAL) ANNUAL ACTION PLAN FOR STUDENT LEARNING OUTCOMES:

AY 2015-2016

Associate of Applied Science Information Technology

<p>OLC Strategic Goal 1: <i>Oglala Lakota College will produce graduates who demonstrate excellence in their chosen areas of study and fields of endeavor</i></p>
<p>Departmental Strategic Goal 1: Improve STEM education at Oglala Lakota College</p>
<p>Departmental Objective 1.2: Improve recruiting and retention of first- and second-year STEM students by 5% per year</p>
<p>Program Outcomes</p> <p>Project Management: Communicate effectively with IT support staff.</p>

Hardware: Assist IT staff to support computer hardware in a networked and stand-alone environment.

Operating Systems: Assist IT staff to support network and client operating systems.

Network: Assist IT staff to support a network.

National Certifications: Demonstrate progress toward completion of selected national certifications in hardware (A+), Network (Network+).

Intended Course/Program Outcome	Criteria	Assessment Method(s)	Results	Use of Results
<p>Fall 2015</p> <p>PLO #1</p> <p>Project Management: Communicate effectively with IT support staff.</p> <p>Student Learning Outcomes (SLO) Sci-113 Technical Writing</p>	<p>Individual project paper</p> <p>Score 4 Mastery</p> <p>Student met Student Learning Outcomes. Program Outcomes were met.</p> <p>Score 3 Proficient</p> <p>Student generally met Student Learning Outcome but improvement is possible. Program Outcome generally met.</p> <p>Score 2 Developing</p>	<p>Achieve a score of 3 on a 4 point rubric.</p>		

Spring 2016

Assessment of Program Learning Outcome (PLO) #6

National Certifications:

Complete selected national certifications in hardware (A+), Network (Network+) and Security Certified Network Professional (SCNP).

Mastery (Score4) Proficient (Score3) Developing (Score2) Beginning (Score1) Unacceptable (Score0)

Intended Course Outcome	Criteria	Assessment Method(s)		
<p>Student Learning Outcomes (SLO)</p>	<p>Complete the A+ CertBlaster Test Prep at a 70% or greater.</p>	<p>Students were provided the CertBlaster Test Prep materials at the beginning of the</p>		

<p>IT-133</p> <p>A+ Certification</p> <p>Install, maintain and support computer hardware in a networked and stand alone environment.</p> <p>Complete the CertBlaster Test Prep at a 70% or greater.</p>		<p>course.</p> <p>Two formal testing events occurred, a mid term and final assessment at the end of the course.</p>		
<p>Intended Course Outcome</p> <p>Student Learning Outcomes (SLO)</p> <p>IT-243 Introduction to Networks</p> <p>Design a network based on a network map</p> <p>Assign IP addresses using class-full and classless network diagrams (Rip I and II)</p> <p>Create three subnets with one private subnet hidden from the second and third subnets</p> <p>Configure two printers, one in the private subnet and one in the public subnet</p> <p>Create the network using routers, switches, cables, computers and</p>	<p>Criteria</p> <p>Complete the Network+ CertBlaster Test Prep at a 80% or greater.</p>	<p>Assessment Method(s)</p> <p>Students were provided the CertBlaster Test Prep materials at the beginning of the course.</p> <p>Two formal testing events occurred, a mid term and final assessment at the end of the course.</p>		

printers				
Complete the Total Tester Test Prep at a 70% or greater.				

Spring 2016

Assessment of Program Learning Outcome (PLO) #3

Operating Systems: Install, maintain and support network and client operating systems.

Mastery (Score4) Proficient (Score3) Developing (Score2) Beginning (Score1) Unacceptable (Score0)

Intended Course Outcome	Criteria	Assessment Method(s)		
<p style="text-align: center;">2. Student Learning Outcomes (SLO)</p> <p>IT-153 Survey of Operating Systems</p> <p>01 Introduction</p> <ul style="list-style-type: none"> - Definition of Basic Terms and Concepts - Structures or How is it Organized <p>02 Processes</p> <ul style="list-style-type: none"> -Managing Programs -Threads -Synchronization -CPU Scheduling <p>03 Memory</p> <ul style="list-style-type: none"> -Main Memory -Virtual Memory <p>04 Storage</p> <ul style="list-style-type: none"> -Mass-Storage -File-Systems and Interface -Systems 	<p>Achieve a score of 2 on a 4 point rubric.</p>	<p>Selected questions from the mid term and final exam.</p> <p>Students were asked two questions from each chapter of the textbook.</p> <p>Question 1 in essay form, do not state the obvious! But, be specific and provide some evidence to show that you have an idea of each concept.</p> <p>And question 2 in a Power Point presentation. Two slides for each chapter of the textbook. Describe what you have learned from the chapter.</p>		

Implementation -I/O Systems				
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OGLALA LAKOTA COLLEGE

(UNIT/DEPARTMENTAL) ANNUAL ACTION PLAN FOR STUDENT LEARNING OUTCOMES:

AY 2015-2016

Associate of Arts- Life Science

OLC Strategic Goal 1: *Oglala Lakota College will produce graduates who demonstrate excellence in their chosen areas of study and fields of endeavor*

Departmental Strategic Goal 1: Improve STEM education at Oglala Lakota College

Departmental Objective 1.2: Improve recruiting and retention of first- and second-year STEM students by 5% per year

Program Learning Outcomes

1. The ability to demonstrate basic knowledge of mathematics, biology and chemistry in situations encountered by a Life Science Major.
2. Demonstrate good laboratory skills
3. Critically review and communicate scientific data in a qualitative and quantitative manner through oral and written formats
4. Distinguish how alterations to the human body systems can contribute to disease.
5. Identify and relate research methods and protocols

Intended Course/Program Outcome	Criteria	Assessment Method(s)	Results	Use of Results
Spring 2016 <i>The ability to demonstrate basic knowledge of mathematics, biology and chemistry in situations encountered by a Life Science Major.</i>	<i>75% of the students will achieve 3 or higher on a 5 point rubric.</i> 5=Exemplary 4= Good 3=Acceptable 2=Needs Improvement 1=Unacceptable	<i>Students comprehend course material by completing questions 23, 43, 45 and 47 correct on final comprehensive exam</i>		

OGLALA LAKOTA COLLEGE

(UNIT/DEPARTMENTAL) ANNUAL ACTION PLAN FOR STUDENT LEARNING OUTCOMES:

AY 2015-2016

Associate of Arts- **Pre-Engineering-Civil Engineering / Geological Engineering / SEM**

OLC Strategic Goal 1: *Oglala Lakota College will produce graduates who demonstrate excellence in their chosen areas of study and fields of endeavor*

Departmental Strategic Goal 1: Improve STEM education at Oglala Lakota College

Departmental Objective 1.2: Improve recruiting and retention of first- and second-year STEM students by 5% per year

Program Outcomes- Science, Engineering and Math (SEM)

1. Apply laws of Chemistry and stoichiometric rules to predict changes in temperature, volume and ionic compositional behavior.
2. Demonstrate an understanding of Newtonian principals.
3. Apply the rules of differentiation and integration to quantify processes occurring in the natural world.
4. Demonstrate an understanding of the relationships between forces, energy, work, and power

Program Outcomes- Pre-Engineering-Civil Engineering

1. Demonstrate an understanding of Newtonian principals and relationships between forces, energy, work and power
2. Apply the rules of differentiation and integration to quantify processes occurring in the natural world.
3. Evaluate how materials act under conditions of equilibrium
4. Apply laws of Chemistry and stoichiometric rules to predict changes in temperature, volume and ionic compositional behavior.
5. Perform engineering design and analysis

Program Outcomes- Pre-Engineering- Geological Engineering

1. Demonstrate an understanding of Newtonian principals and relationships between forces, energy, work and power
2. Apply laws of Chemistry and stoichiometric rules to predict changes in temperature, volume and ionic compositional behavior.
3. Apply the rules of differentiation and integration to quantify processes occurring in the natural world.
4. Evaluate how materials act under conditions of equilibrium
5. Perform engineering design and analysis
6. Manipulate geospatial and remotely sensed data, manage GIS projects, and independently create projects utilizing a GIS
7. Describe the rock cycle, properties of rocks and minerals, and plate tectonics

Measured Program Outcome: Apply the rules of differentiation and integration to quantify processes occurring in the natural world.

Intended Course/Program Outcome	Criteria	Assessment Method(s)	Results	Use of Results
<p>CALC 1 SLOs</p> <p>1) Evaluate limits and determine the continuity of a function;</p> <p>2) Find the derivative of a function using differentiation rules;</p> <p>3) Find the slope and the equation of a tangent line for a point on the graph of a function;</p> <p>4) Find the derivative of a function using implicit differentiation;</p>	<p>Score an overall score of acceptable (3 of 5) on the seven student learning outcomes.</p> <p>5 = Exemplary 4 = Good 3 = Acceptable 2 = Needs improvement 1 = Unacceptable</p>	<p>Assess Math 194 Calculus artifacts: two exams a mid-term and a final exam</p>		

<p>5) Use derivatives, function extrema, limit evaluations, and continuity tests to sketch the graph of a function;</p> <p>6) Solve variable optimization problems;</p> <p>7) Evaluate indefinite integrals using basic integration techniques.</p>				
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