Sinte Gleska University

Arts & Sciences

Program Review

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Section 1. Introduction

Begin with a program description and include edits to update for the next catalog. Include a degree program plan (status sheets), narrative that includes program history, mission, and other general information. Include application processes and criteria for admittance if your program requires additional process for acceptance into your program. Note any significant curriculum changes that have been made to the program during the past four years and explain the rationale for such changes, which may include labor market changes, accreditation needs and student feedback based on surveys and Student Course Evaluations. If external reviews of your program are conducted, include references to those reviews and copies of the most recent review reports.

Program Description

The Arts & Sciences Wounspe Wankatuya will provide fundamental coursework leading to degrees offered at the University. This program will foster the value of flexibility in a multicultural and interdisciplinary world. It will help students succeed academically, socially, and personally both locally and globally; and provide nurturing, tolerant, stimulating learning environments to expand the skills, talents, ideas, awareness and capacities of its students. The department will maintain a commitment to the specific needs and desires of the reservation community in order to strengthen the sovereignty of the Sicangu Oyate.

The Arts & Sciences Wounspe Wankatuya exists for two purposes, both of which are basic to the institution. The first is to provide culturally relevant four year and two year degrees (summarized below). The second purpose of the Arts & Science Wounspe Wankatuya is to serve other departments by offering courses required by those departments and the core curriculum. To this end, Arts & Sciences instructors teach composition, speech, literature, history, art, government, science, math and other humanities courses to all students.

The Arts & Science Wounspe Wankatuya offers three 4 year degrees:

- **Bachelor of Arts in Liberal Arts**
- **Bachelor of Science in Computer Science**
- **Bachelor of Science in Environmental Science**

The Bachelor of Liberal Arts degree exists to provide a solid background in the humanities to assist students who wish to possess a traditional college education with concentration areas in English/literature, Natural Science, Social Science, and History, and minors in Art, History, Math, Human Services, Natural Sciences, Social Science, English/Literature/Creative Writing, and Lakota Studies. One of the benefits of a liberal arts education is the chance to explore multiple areas of interest. Students also acquire the practical skills they need for lifelong learning and achievement—like research writing, communication, critical thinking, and analytical reasoning skills. As liberal arts majors, students get an overview of the arts, humanities (the study of the human condition), social sciences, mathematics and natural sciences, as well as a variety of skills that will help them excel in the workforce. It's an educational style that can trace its roots back hundreds of years—and it has only gotten better with age.

The Bachelor of Science in Computer Sciences provides a high level of expertise in modern technologies to provide students necessary skills to work within technology based fields. This program prepares students for careers as Systems Programmers, Computer System Analysts, Network and Computer Systems Administrators, or Software Developers in an application-based environment, and for further graduate work in computer science. Additional Computer Science electives and special topics, mathematics and science courses supplement a strong core of computer science courses, enabling students to design and implement software that requires complicated computations, data structures and interfaces.

The Bachelor of Science in Environmental Science is very much a generalist degree within the natural sciences. Focusing primarily on both the understanding of our natural and man-made environments, environmental science

degrees draw from diverse fields of studies and require a strong background in the more traditional sciences: biology, physics, chemistry, geography, and ecology. In addition, environmental science degrees also draw heavily from the social sciences, such as economics, business, or sociology. The degree to which any of these fields of study becomes prevalent within an environmental science education largely depends on the chosen specialization the student. Due to the fact that environmental science is a generalist degree, students' often complete specializations within a more select area, i.e. biology, Lakota land studies, range studies, etc. True to most science degrees, environmental science programs often require significant field work, lab work, or other data-oriented work.

The Arts & Sciences Wounspe Wankatuya offers four 2 year degrees:

- **Associate of Arts Arts & Sciences**
- **Associate of Science Environmental Science**
- **Associate of Science Biological Science**
- **Associate of Science Physical Science**

The Associate of Arts and Associate of Science degrees are the primary tools needed to fulfill the bridge function of Sinte Gleska University, which enables students to transfer to four year programs with confidence that they have a sound educational background and also familiarity with the academic experience that leads to self-assurance and academic success.

The Associate of Arts in Arts & Sciences lays the foundation for students to enter a baccalaureate program. Because of the expansive subjects studied, students are typically prepared to enter into any field they wish. Those who chose a concentration while earning their associate's degree can continue their undergraduate studies by majoring in that same concentration. Graduates of Arts & Science associate's degree may qualify to enter into various career fields that require a generalized college education. Employers seeking candidates with a broad knowledge, strong communication capabilities and critical-thinking skills may find the right employee in one with an associate's degree in Arts and Sciences.

The Associate of Science in Environmental Science teaches students about environmental protection regulations, environmental issues and the protection of natural elements such as water and air, which are essential for life. The associate's degree program in environmental science is designed to prepare students for entry-level positions or as a foundation for further study. Students look at ways to prevent, correct or reduce damage to the environment and study scientific methods and principles related to environmental science. They might be required to conduct laboratory experiments and present results properly formatted. Graduates may continue their educational path in environmental policy - or environmental science - focused programs. The AS environmental sciences program prepares graduates to transfer their credits directly into the bachelors program.

The Associate of Science in Biological Science prepares students for transfer to upper-division colleges and universities to pursue a bachelor's degree. People with an AS in biology can look forward to technician careers, all of which work close with scientists and biologists in many different industries. Some people obtain their degree as a stepping stone to a four-year degree; others turn their interest into a career. Biology is the primary life science from which students can enter specific fields of study as diverse as molecular biology, forestry, pathophysiology, neuroanatomy, and parasitology. Biology also provides the foundation for students who wish to become physicians, dentists, veterinarians, or other medical professionals. The curriculum is equivalent to the first two years of a baccalaureate program in Biology. Emphasis is placed on scientific method and critical analysis that will enable students to be contributors to any scientific or medical team.

The Associate of Science in Physical Science program focuses on understanding nature and the different technologies that impact society today. The physical sciences focus on non-living systems such as astronomy, geology, chemistry and physics. The program is designed to prepare students for transfer to baccalaureate institutions as majors

in Physical Science or related science disciplines. Associate's degree programs in the physical sciences cover a range of fields, including chemistry, geography, geology, hydrology and physics. In addition to the physical sciences, an associate's degree program in this area provides a foundation in mathematics and life sciences. Students gain theoretical knowledge and laboratory skills beneficial for an entry-level career in the physical sciences and for continued study. Topics of study include: General chemistry, Physical geography, Geology, Earth Science, and Physics.

Arts & Science Degree Programs and Rational for Curriculum Changes

- Bachelor of Arts Liberal Arts

HS 103	Personal Health & Wellness	3 credits
LL 101	Lakota Language I	4 credits
LS 253	Lakota History & Culture	3 credits
EN 101	Freshman English I	3 credits
EN 102	Freshman English II	3 credits
SP 100	Speech Communications	3 credits
	Computer Course	3/4 credits
MA 150	College Algebra	4 credits
MA 370	Statistics	3 credits
	Science Course	6/8credits
GE 100	Physical Geography Fundamentals	3 credits
PS 100	American Government	3 credits
	Social Science Course	3 credits
EN 201	Intro to Literature	3 credits
EN 301	Research Writing	3 credits
EN 360	Professional Writing	3 credits
	History Elective	6 credits
	Humanities Elective	6 credits
	Lakota Language Elective	3 credits
	Lakota Studies Elective	3 credits
	Literature Elective	3 credits
	Math Elective/SS100	3/4 credits
	Philosophy Elective	3 credits
Choose ONE Concentration area:		
A) English/Literature		(24 elective credits)
B) History		(18 restricted credits & 6 elective credits)
C) Natural Science		(30-34 elective credits)
D) Social Science		(24 elective credits)
Choose TWO Minor areas:		
A) Art		(15 restricted credits & 3 elective credits)
B) Creative Writing		(12 elective credits)
C) English/Literature		(12 elective credits)
D) History		(12 elective credits)
E) Human Services		(12-18 restricted credits)
F) Lakota Studies		(12 elective credits)
G) Mathematics		(13-15 elective credits)
H) Natural Science		(15-18 elective credits)
I) Social Science		(12 elective credits)

There were no program changes to the BA Liberal Arts degree in the past 4 years. With the changing financial aid regulations, there is a need to reduce credit hours from 123/149 that the current BALA degree requires to 120.

- Associate of Arts Arts and Science

HS 103	Personal Health & Wellness	3 credits
LL 101	Lakota Language I	4 credits
LS 253	Lakota History & Culture	3 credits
EN 101	Freshman English I	3 credits
EN 102	Freshman English II	3 credits
SP 100	Speech Communications	3 credits
	Computer Course	3/4 credits
MA 150	College Algebra	4 credits
	Science Course	3/4 credits
GE 100	Physical Geography Fundamentals	3 credits
PS 100	American Government	3 credits
EN 201	Intro to Literature	3 credits
	History Elective	6 credits
	Humanities Elective	3 credits
	Lakota Language Elective	3 credits
	Lakota Studies Elective	3 credits
	Literature Elective	3 credits
	Math Elective/SS100	3/4 credits
	Philosophy Elective	3 credits
	Science Elective	3/4 credits
	Social Science Elective	3 credits

There were no program changes to the AA Arts & Sciences degree in the past 4 years. With the changing financial aid regulations, there is a need to reduce credit hours from 66/70 that the current AA Arts & Sciences degree requires to 60.

- Bachelor of Science Computer Science

HS 103	Survey of Alcohol and Drugs	3 credits
LL 101	Lakota Language I	4 credits
LS 253	Lakota History & Culture	3 credits
EN 101	Freshman English I	3 credits
EN 102	Freshman English II	3 credits
SP 100	Speech Communications	3 credits
CS 101	Intro to Computer Science	3 credits
MA 150	College Algebra	4 credits
MA 216	Discreet Mathematics	3 credits
	Science Course	6/8 credits
	Social Science Course	3 credits
	Humanities Course	3 credits
CS 111	Principles of Software Engineering	4 credits
CS 201	Programming Concepts I	4 credits
CS 202	Programming Concepts II	4 credits
CS 203	Data Structures	4 credits
CS 301	Internet Technologies	4 credits
CS 302	Internet Technologies II	4 credits
CS 311	Computer Architecture	4 credits
CS 312	Assembly Language	4 credits
CS 380	Internship	6/8 credits
CS 401	Computer Networking I	4 credits
CS 402	Computer Networking II	4 credits
CS 411	Software Development I	4 credits
CS 412	Software Development II	4 credits
EL 211	Electronics I	4 credits
EL 212	Electronics II	4 credits

	Math/Statistics Elective	3 credits
	Science Elective	4 credits
	Computer Science Electives	16 credits

There were no program changes to the computer science degree in the past 4 years. Due to financial aid restraints, there is a need to reduce the credit hours of this program from 129 to 120.

- Bachelor of Science Environmental Science

HS 103	Personal Health & Wellness	3 credits
LL 101	Lakota Language I	4 credits
LS 253	Lakota History & Culture	3 credits
EN 101	Freshman English I	3 credits
EN 102	Freshman English II	3 credits
SP 100	Speech Communications	3 credits
	Computer Course	3/4 credits
	Math Course (MA 150 or higher)	4 credits
MA 201	Calculus & Analytic Geometry I	4 credits
ESC 101	Environmental Monitoring	3 credits
ESC 209	Environmental Science	4 credits
GE 100	Physical Geography Fundamentals	3 credits
LS 118	Lakota Land Plant and Animal Concepts	3 credits
BA 380	Ethics	3 credits
BI 151	Biology I	4 credits
BI 152	Biology II	4 credits
BI 235	Microbiology	4 credits
BI 310	Ecology	4 credits
CH 151	Chemistry I	4 credits
CH 152	Chemistry II	4 credits
EN 301	Research Writing	3 credits
ESC 121	Earth Science	4 credits
ESC 241	GIS and Remote Sensing	3 credits
ESC 297	Contemporary Issues in ESC	2 credits
ESC 380	Climate & Weather	3 credits
ESC 415	Environmental Law	3 credits
ESC 440	Field Study I	4 credits
ESC 441	Field Study II	4 credits
ESC 495	Senior Seminar I	1 credit
ESC 496	Senior Seminar II	2 credits
MA 370	Statistics	3 credits
PH 202	Physics I	4 credits
Choose ONE Emphasis Area:		
A) General Track		
	Biology Elective (152+)	3/4 credits
	Chemistry Elective (152+)	3/4 credits
	Environmental Science Electives	9/10 credits
	Science Electives	9/11 credits
B) Biology		
BI 429	Cell Biology	3 credits
BI 430	Genetics	3 credits
CH 351	Organic Chemistry I	4 credits
CH 352	Organic Chemistry II	4 credits
	Biology Electives	11/15 credits
C) Lakota Land Studies		
ESC 299	Land Tenure Issues	3 credits

IS 230	Tribal Law, Treaties, & Governments	3 credits
LS 300	Lakota Ethno-Geography	3 credits
LS 350	Lakota Ethno-Astronomy	3 credits
LS 360	History of BIA, Land, & the Lakota	3 credits
	Environmental Science Electives	9/10 credits
D) Range Studies		
ESC 205	Range Management	3 credits
ESC 331	Environmental & Range Economics	3 credits
ESC 384	Watershed Management	3 credits
ESC 385	Soils	4 credits
ESC 410	Range Improvements & Grazing Management	3 credits
	Environmental Science Electives	9/11 credits

Prior to 2013, due to a status sheet that was very non-directional, many students were falling behind in their degree. In 2013, a new status sheet was proposed considering other universities ESC programs and cultural significance of the current program through this, significant change was made to the status sheet which was adopted starting fall of 2013. The last students who graduated with that status sheet finished summer of 2014. The purpose of the new status sheet and revamping of the program was to make it more credible among other universities. Adding a senior capstone course was very important in this for the master/assessment component of the degree.

Due to financial aid restraints, there is a need to reduce the credit hours of this program from 126/136 to 120.

- Associate of Science Environmental Science

HS 103	Personal Health & Wellness	3 credits
LL 101	Lakota Language I	4 credits
LS 253	Lakota History & Culture	3 credits
EN 101	Freshman English I	3 credits
EN 102	Freshman English II	3 credits
SP 100	Speech Communications	3 credits
	Computer Course	3/4 credits
	Math Course (MA 150 or higher)	4 credits
ESC 101	Environmental Monitoring	3 credits
GE 100	Physical Geography Fundamentals	3 credits
BA 380	Ethics	3 credits
BI 151	Biology I	4 credits
BI 152	Biology II	4 credits
CH 151	Chemistry I	4 credits
ESC 209	Environmental Sciences	4 credits
ESC 241	GIS and Remote Sensing	3 credits
ESC 297	Contemporary Issues in ESC	2 credits
LS 118	Lakota Land Plant and Animal Concepts	3 credits
PH 202	Physics I	4 credits
	Environmental Science Electives	7/8 credits

Prior to 2013, students were graduating with courses that were not specific to science. Considering this, a new status sheet was proposed, that would prepare students to continue on in the ESC degree or another degree elsewhere. The program needed a major overhaul and I believe we accomplished that. Previously there was no mastery/assessment component to the degree, by adding ESC 297, this was accomplished.

Due to financial aid restraints, there is a need to reduce the credit hours from 70/71 to 60.

- Associate of Science Biological Science

HS 103	Personal Health & Wellness	3 credits
LL 101	Lakota Language I	4 credits
LS 253	Lakota History & Culture	3 credits

EN 101	Freshman English I	3 credits
EN 102	Freshman English II	3 credits
SP 100	Speech Communications	3 credits
	Computer Course	3/4 credits
	Math Course (MA 150 or higher)	4 credits
BI 151	Biology I	4 credits
BA 380	Ethics	3 credits
	Social Science Elective	3 credits
BI 152	Biology II	4 credits
BI 223	Anatomy & Physiology I	4 credits
BI 224	Anatomy & Physiology II	4 credits
BI 235	Microbiology	4 credits
BI 245	Botany	4 credits
BI 299	Contemporary Issues in Biology	2 credits
CH 151	Chemistry I	4 credits
CH 152	Chemistry II	4 credits
ESC 101	Environmental Monitoring	3 credits
MA 201	Calculus & Analytical Geometry I	4 credits
PH 202	Physics I	4 credits
PH 203	Physics II	4 credits

Prior to 2013, this program did not have a clear direction and was not biological science based, even though it was AS biological science, it was random as far as the course requirements (ie, earth science was a requirement). Great strides were made to focus this program on biology to prepare students for a BS program. A sophomore research capstone was added for the mastery/assessment value.

There is a need to reduce credit hours from 69/70 to 60 because of new financial aid policies.

- Associate of Science Physical Science

HS 103	Personal Health & Wellness	3 credits
LL 101	Lakota Language I	4 credits
LS 253	Lakota History & Culture	3 credits
EN 101	Freshman English I	3 credits
EN 102	Freshman English II	3 credits
SP 100	Speech Communications	3 credits
CS 101	Intro to Computer Science	3 credits
MA 150	College Algebra	4 credits
PH 202	Physics I	4 credits
	Social Science Elective	3 credits
	Humanities Elective	3 credits
CH 151	Chemistry I	4 credits
CH 152	Chemistry II	4 credits
ESC 121	Earth Science	4 credits
MA 201	Calculus & Analytical Geometry I	4 credits
	Math Elective (150+)	3/4 credits
PH 203	Physics II	4 credits
	Physical Science Electives	9/12 credits

Prior to 2013, this program was not physical science focused. Actually it was very similar to the biology degree. Through this, the program was completely revamped to focus on the physical science aspect.

It was found in 2015, through curriculum mapping that this course does not have a mastery component to it. This is a major issue that needs to be addressed.

Currently there are no students enrolled in this program. We have had very few, if any graduates in this program over the last 10 years. I am proposing to archive/retire this program.

History

1972: Associate degrees were developed and approved by the State of South Dakota Board of Regents in 1972.

*1973: **Associate of Arts in Arts & Sciences** was the first degree offered at Sinte Gleska University.*

*1993: **Associate of Science in Biological Science**, **Associate of Science in Physical Science**, and **Associate of Science in Environmental Science** degrees were designed and offered to students at Sinte Gleska University.*

*1996: **Bachelor of Arts in Liberal Arts** was approved by the Sinte Gleska University Board of Regents.*

*1996: **Bachelor of Science in Computer Science** degree was offered to Sinte Gleska University students as a result of the Data Processing Certificate offered by the Institute of Technologies.*

*2001: **Bachelor of Science in Environmental Science** was approved by the Board of Regents.*

Mission Statement

The Arts & Science Wounspe Wankatuya will provide fundamental coursework leading to degrees offered at the University. This program will foster the value of flexibility in a multicultural and interdisciplinary world. It will help students succeed academically, socially, and personally both locally and globally; and provide nurturing, tolerant, stimulating learning environments to expand the skills, talents, ideas, awareness and capacities of its students. The department will maintain a commitment to the specific needs and desires of the reservation community in order to strengthen the sovereignty of the Sicangu Oyate.

Other General Information

Arts and Sciences instructors collaborate with Lakota Studies instructors in order to insure that accurate information regarding culture is included in as many courses as possible. This collaboration is especially evident in AIHEC Knowledge and Science Bowls where Science, History, Literature, Speech and the Arts combine to assist students in demonstrating all-around understanding of the many indigenous and immigrant cultures of the world. Poetry Slams, Movie Nights, Open Mikes, and other Performing Arts interests supported by faculty benefit students as well as the general community.

Section 2: Program alignment with college mission and purposes

This can include evidence of departmental caucuses reflecting assessment of these criteria. Provide a description of how the program's mission, design, and program learning outcomes align with SGU's mission, values, and purpose statement, including Wolakota.

SGU Mission Statement	Arts & Sciences Mission Statement
Sinte Gleska University provides a model for Indian-controlled education. It is an institution governed by people rooted to the ***reservation and culture****, concerned about the future, and willing to work to see the institution grow. It provides each Lakota person the opportunity to pursue an education and does so in a way that is relevant to* ***career and personal needs****. Sinte Gleska University graduates will help determine the* ***future development and direction of the Tribe and its institutions****. The mission of Sinte Gleska University is to plan, design, implement and assess post-secondary programs and other* ***educational resources uniquely appropriate to the Lakota people*** *in order to facilitate* ***individual development and tribal autonomy****.*	*The Arts & Science's Wounspe Wankatuya will provide* ***fundamental coursework*** *leading to degrees offered at the University. This program will foster the value of* ***flexibility in a multicultural and interdisciplinary world.*** *It will help students succeed* ***academically, socially, and personally both locally and globally****; and* ***provide nurturing, tolerant, stimulating learning environments to expand the skills, talents, ideas, awareness and capacities of its students****. The department will* ***maintain a commitment to the specific needs and desires of the reservation community in order to strengthen the sovereignty of the Sicangu Oyate****.*

The mission of the Arts and Sciences department supports SGU's mission in that we offer fundamental course work leading to degree programs that are relevant to careers and personal needs on and off the reservation. General education requirements that are taught by instructors in the Arts & Science department are the fundamental courses for all education at Sinte Gleska University.

The Arts and Sciences maintain a commitment to the specific needs and desires of the Sicangu Oyate by educating and nurturing students that will be the future leaders of the RST.

The Arts and Sciences supports SGU's mission in that we provides a multicultural and interdisciplinary education that is a unique resource to the Lakota People. Protection of the land (water, soil, air) and culture is very important and is emphasized in the science and humanities courses.

The Arts and Sciences facilitates individual development by helping students succeed academically, socially, and personally; and providing nurturing, tolerant, and stimulating learning environments to expand the skills, talents, ideas, awareness, and capacities of its students.

Wolakota Statement

Wolakota is promoted in our programs by first including the Wolakota Statement in our syllabi by some of our instructors. It can then be related to coursework requirements of treating other students with respect and doing one's own work. We try to demonstrate these principals in our daily dealings with students by being honest, respectful, sharing our time, and showing how we take time to keep clean, protect or prevent damage to property. Teaching each day in the face of every challenge we encounter. We encourage our students to do their best in their own circumstances and reach out so that they may benefit from every opportunity possible. We are honest and respectful and appreciate our students. We strive to share our knowledge any way that we can to benefit each student and enrich their lives. We don't speak ill of other instructors, students, administrators or institutions. We try not to place blame when facing a challenge, and we try to look at things in a positive way. If there is a ceremony, we not only encourage our students to attend, we attend as well. We don't ignore their personal trials and tribulations; we listen, show concern, and try to help find a solution. Finally we let them help each other.

Examples

Giving time:

- Working with Knowledge Bowl students and Science bowl students.
- Serving as advisor for groups such as AISES
- Giving students/staff/faculty rides.
- Promoting and attending performing arts activities – poetry slams, open mikes, art shows.
- Attending Writing festivals, promoting Native Arts on Facebook.
- Reading the papers of fellow instructors who are furthering their educations
- Supervising workstudy students

Giving talent:

- Sharing our experiences, papers, art work, food.
- Writing reference letters.
- Critiquing resumes, applications.

Giving treasure:

- Buying raffle tickets,
- Sharing books, magazines and movies,
- Jeopardy prizes, food,
- Giving books, crayons and toys to children,
- Bringing used clothing, etc. to Tree of Life.
- Networking.
- Sharing contacts.
- Harvesting Sage and Chokecherries.
- Taking students to local historical sites, conferences, festivals.
- Sharing what we learn when we cannot take them with.

Section 3: Alignment with Community Needs

Provide information about graduates from the program during the past 4 years, to include higher education they may be pursuing, or did pursue, employment they have, and locale of residence.

Graduate Success:

Over the past 20 years,

BALA Graduates:

- 3 went on to graduate school (law, physical therapy, creative writing)
- 6 work in various SGU departments (admin assistant, managers, director positions, or teaching)
- 1 works for the Tribal VP's office
- 1 works for the RST Adult Correctional Facility
- 1 works as an Independent Publisher
- 2 work in the Ranching Business
- 1 works for SD Parent Connection
- 1 works for Tribal Land Enterprise
- 1 works as a Blue Water Activist
- 1 works as a physical therapist

BS Computer Science Graduates:

- 3 work in various SGU departments (MIS, Media, Foundational Studies)
- 1 works as Park Ranger for Wind Cave National Park
- 1 writes the codes for the driver programs for video cards and several software projects
- 2 work in Information Management (one being a health care facility)
- 1 works for IHS in Aberdeen (Information Management Officer)
- 1 works in Networking at the Rosebud Casino

BS Environmental Science Graduates:

- 1 went onto Graduate School
- 2 work for the IHS Office of Environmental Health
- 1 works as the Greenhouse Manager and has taught various adjunct courses

AS Biological Science Graduates:

- 1 finished BS Animal Science and MS Biological Science, is working on PhD
- 1 graduating with BS in Environmental Science: Biology; enrolled in INMED program to prepare for Medical School.
- 1 finished BS and Physical Therapy degree, is currently working as a physical therapist.

AS Environmental Science Graduates:

- Over the years several graduates have gone on to finish their BS Environmental Science degree at SGU (including 3 from summer 2015)

Provide labor market information related to the program and provide information about starting wages identified for such programs per the Department of Labor statistics.

Liberal Arts/Arts & Sciences

The AA in Arts & Sciences and the BA Liberal Arts are important programs at SGU in that they allow students to explore different areas of study before committing to a specific area.

According to the Association of American Colleges and Universities, employers seek out potential employees with a Liberal Arts Degree, in that 4 out of 5 employers want employees to have a well-rounded degree (Association of American Colleges & Universities, 2014). Employers understand that training in specific areas is required, but the problem solving and critical-thinking capacity of liberal arts majors is preferential (Hill, 2016).

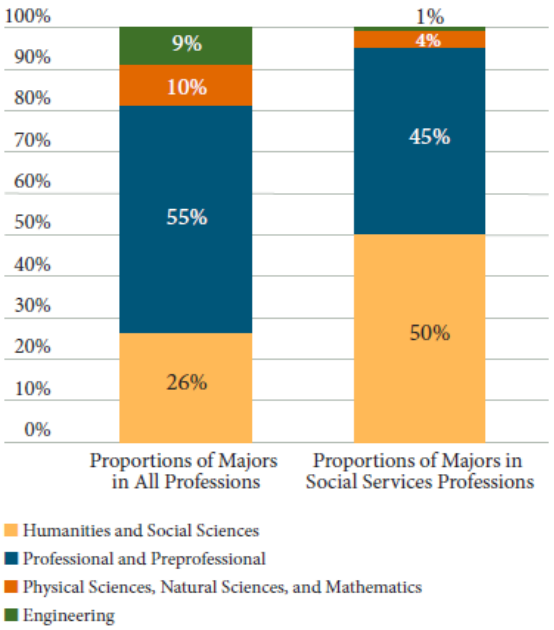


Figure 1 Liberal Arts majors supply the workforce need in the social services professions.

Liberal Arts covers a broad spectrum of subjects so there is no one set career path as seen in most other degrees. Liberal arts programs can prepare graduates for entry-level positions. Liberal arts graduates have multiple career opportunities depending on the direction of their liberal arts education. Students may find themselves working in a number of organizations or businesses, including: Nonprofit organizations, Public relations companies, Communications, Community organizations, Social service agencies, Marketing, Medicine, Law, Management, and Publishing companies.

The top 15 careers of liberal arts degrees include: Elementary and Middle School Teachers, Lawyers, Judges, Magistrates, Managers, Postsecondary Teachers, Chief Executives, Legislators, Education Administrators, Social Workers, Secondary School Teachers, Counselors, Sales Representatives, Clergy, Retail Sales Supervisors, Secretaries and Administrative Assistants, Accountants and Auditors, and Marketing and Sales Managers (Association of American Colleges & Universities, 2014).

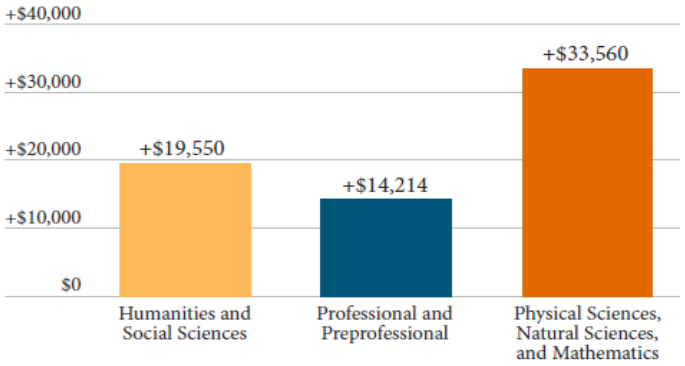


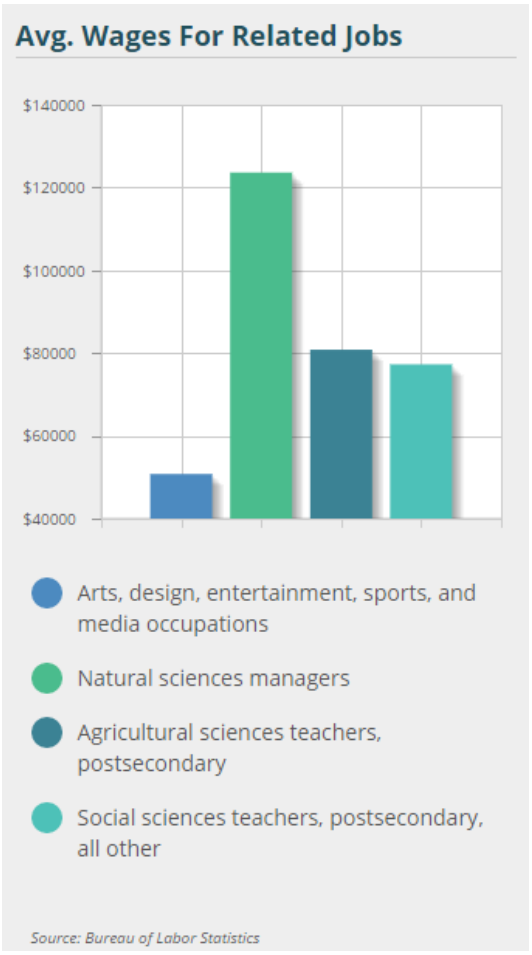
Figure 2 Graduate school significantly increases earnings of Liberal Arts majors.

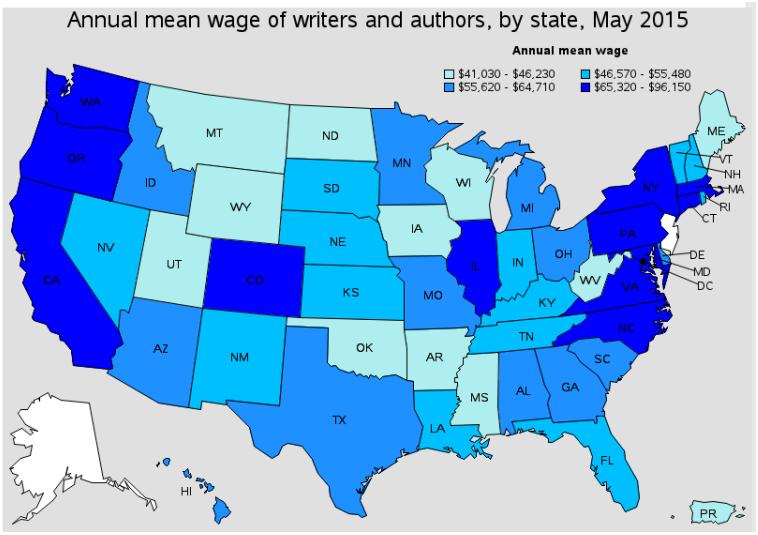
There is a big difference in future plans of liberal arts graduates verses other degree graduates in that many more students in the academically oriented liberal arts do not see their bachelor's degree as terminal. Nearly 40% of liberal arts graduates expect to continue on to another degree level before they begin looking for a job (Koch, 2010). Additionally, twice the proportion of liberal arts graduates plan on taking the year after graduation off to travel or on entering the military (Koch, 2010).

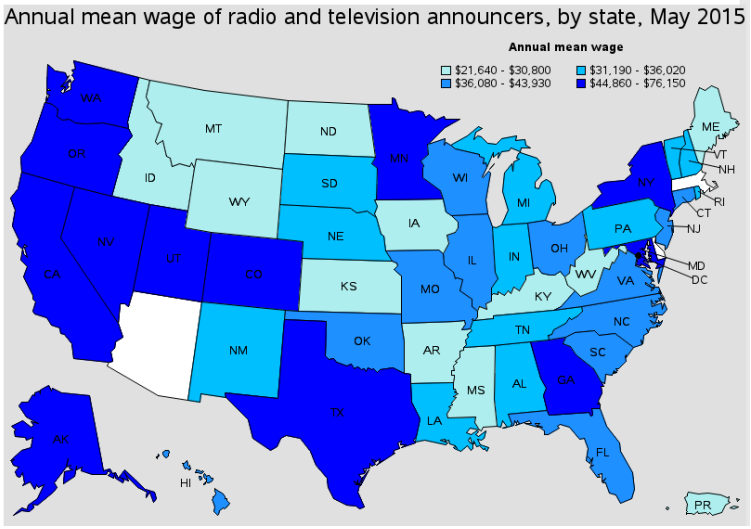
The Liberal Arts degree is a major stepping stone to professional degrees, in particular medical school. According to a report on USNews.com, students who can't handle the "hard sciences" as an undergraduate are still applying and being accepted into medical school because it is actually MCAT scores that matter more than one's major (Chang, 2013). Granted it is the science courses that prepare students for these standardized tests like the MCAT but regardless, as long as the student has a good GPA, good MCAT scores, and meets the minimum prerequisites, they are typically admitted into Medical school.

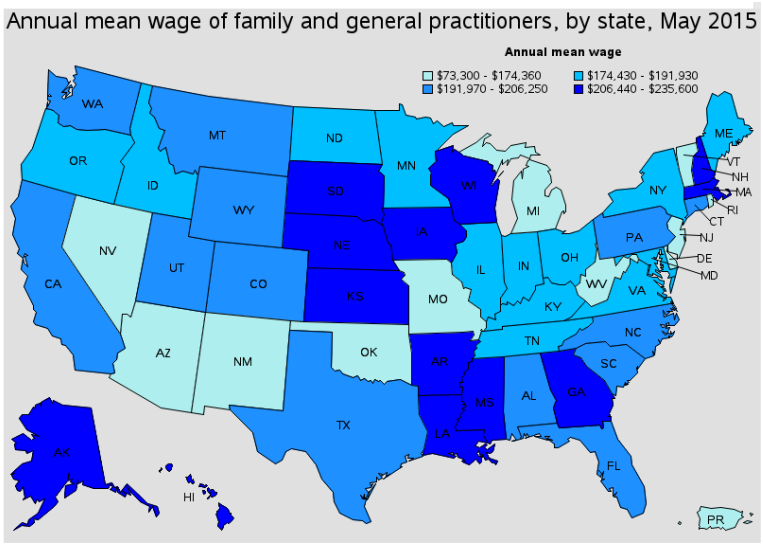
The U.S. Bureau of Labor Statistics (BLS) suggests that liberal arts students prepare for their careers by taking courses in job-specific subjects (www.bls.gov). Possible career options include sales associate and writer. In May 2014, the BLS reported that retail sales associates earned a median annual salary of $21,390, and writers and authors earned a median annual salary of $58,850. While jobs for retail salespersons are projected to increase at an about-average rate from 2012 to 2022, jobs for writers are projected to increase at a slower-than-average pace during the same period, according to the BLS.

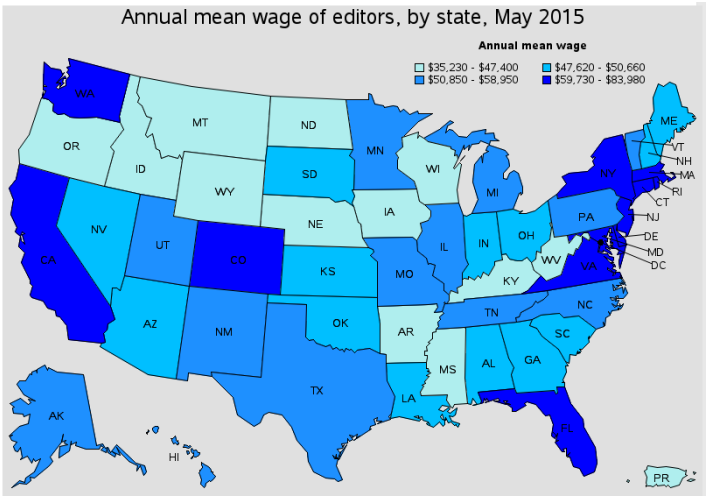
The following are annual mean wage earnings of different careers that students with Liberal Arts majors can pursue.

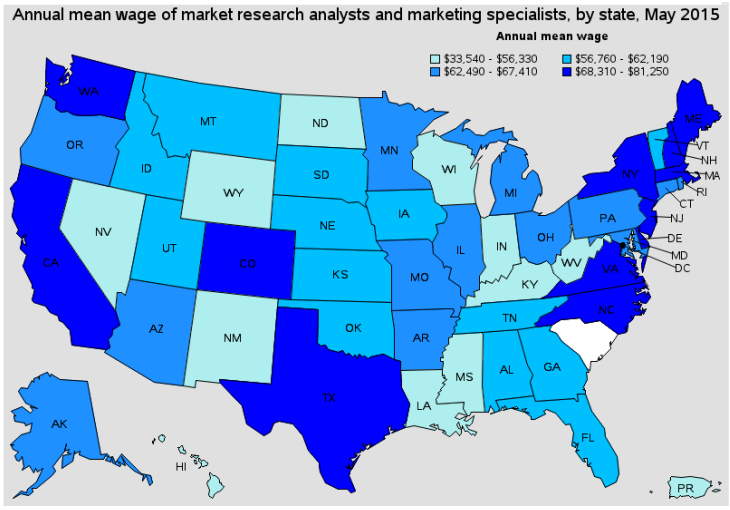


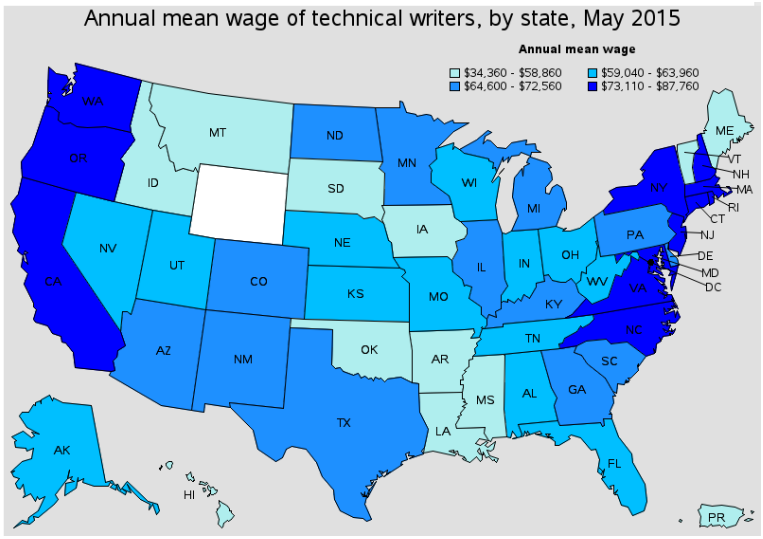








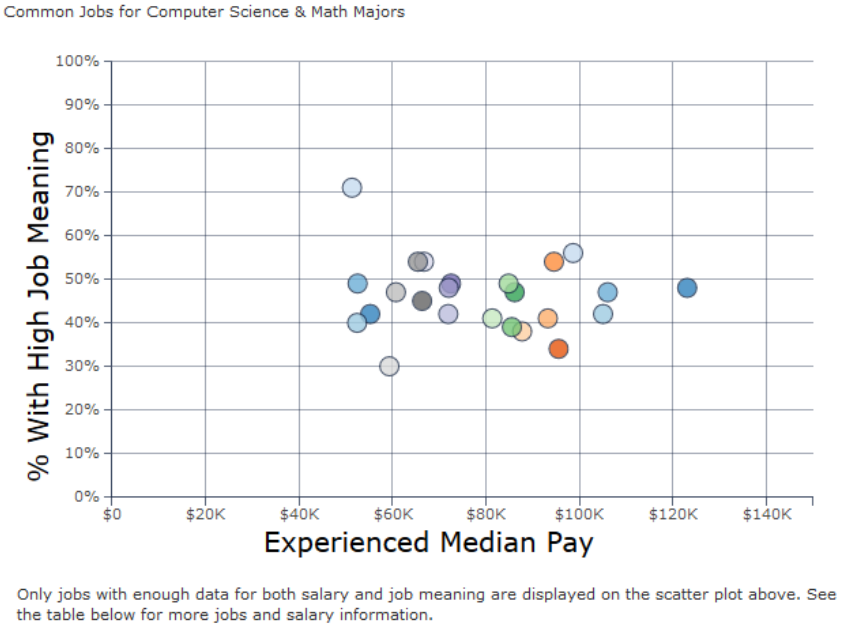




Computer Science

Those who are analytical, good at problem solving and have the ability to pay attention to detail might enjoy a computer science career. This is a promising field with employment outlook ranging from average to much faster than average over the next several years.

As computers continue to evolve, computer professionals with experience in the latest technology will be in high demand, particularly graduates with additional business or industry expertise. The outlook for computer jobs in general is very good. The U.S. Bureau of Labor Statistics (www.bls.gov) projected that jobs for computer network and systems administrators, database administrators and software developers will grow much faster than the national average,



increasing by 12%, 15% and 22%, respectively, from 2012 to 2022. Jobs for computer programmers, Web designers and system software engineers should also experience significant growth.

Median annual salaries in 2014 were $80,280 for database administrators, $75,790 for computer network and systems administrators, $95,510 for computer application software developers, $102,880 for systems software developers and $77,550 for wage-and-salary computer programmers.

Jobs for Computer Science & Math Majors by Salary Potential – Full List*

Rank	Job Title	Experienced Median Pay	Common Major	% With High Job Meaning
1	Information Technology (IT) Architect	$123,000	Computer Science (CS)	48%
2	Network Architect	$119,000	Computer Science (CS)	Not enough data
3	Data Scientist, IT	$114,000	Computer Science (CS)	Not enough data
4	Senior Database Administrator (DBA)	$106,000	Computer Science (CS)	47%
5	Management Consultant	$105,000	Computer Science (CS)	42%
6	Security Engineer, Information Systems	$98,600	Computer Science (CS)	56%
7	Storage Engineer	$95,800	Computer Science (CS)	Not enough data
8	Client Services Director	$95,500	Computer Science (CS)	34%
9	Configuration Manager, IT	$94,500	Computer Science (CS)	54%
10	Senior Application Developer	$94,300	Computer Science (CS)	Not enough data
11	Sr. Business Analyst (Computer Software/Hardware/Systems)	$93,200	Computer Science (CS)	41%
12	Senior .NET Developer / Programmer	$92,400	Computer Science (CS)	Not enough data
13	Software Quality Engineer	$90,600	Computer Science (CS)	Not enough data
14	Senior Applications Engineer	$88,500	Computer Science (CS)	Not enough data
15	Database Developer	$87,700	Computer Science (CS)	38%
16	Project Engineer, IT	$86,100	Computer Science (CS)	47%
17	User Experience Designer	$85,500	Computer Science (CS)	39%
18	Software Development Engineer, Test (SDET)	$84,800	Computer Science (CS)	49%
19	Product Engineer	$81,300	Computer Science (CS)	41%
20	Mobile Applications Developer	$78,700	Computer Science (CS)	Not enough data
21	Senior Technical Analyst	$76,600	Computer Science (CS)	Not enough data
22	Senior Network Administrator, IT	$72,500	Computer Science (CS)	49%
23	Computer Systems Analyst	$72,000	Computer Science (CS)	48%

Rank	Job Title	Experienced Median Pay	Common Major	% With High Job Meaning
24	Software Quality Assurance (SQA) Analyst	$71,900	Computer Science (CS)	42%
25	Quality Assurance Analyst	$66,700	Computer Science (CS)	54%
26	Systems Administrator	$66,300	Computer Science (CS)	45%
27	Support Engineer, Information Technology (IT)	$65,400	Computer Science (CS)	54%
28	Support Analyst, Information Technology (IT)	$60,700	Computer Science (CS)	47%
29	Desktop Support Engineer	$59,300	Information Technology (IT)	30%
30	Network Operations Center (NOC) Technician	$55,200	Computer Information Systems (CIS)	42%
31	Information Technology (IT) Support Specialist	$52,500	Computer Science (CS)	49%
32	Credit Analyst	$52,400	Mathematics	40%
33	Information Technology (IT) Coordinator	$51,300	Computer Science (CS)	71%

Methodology

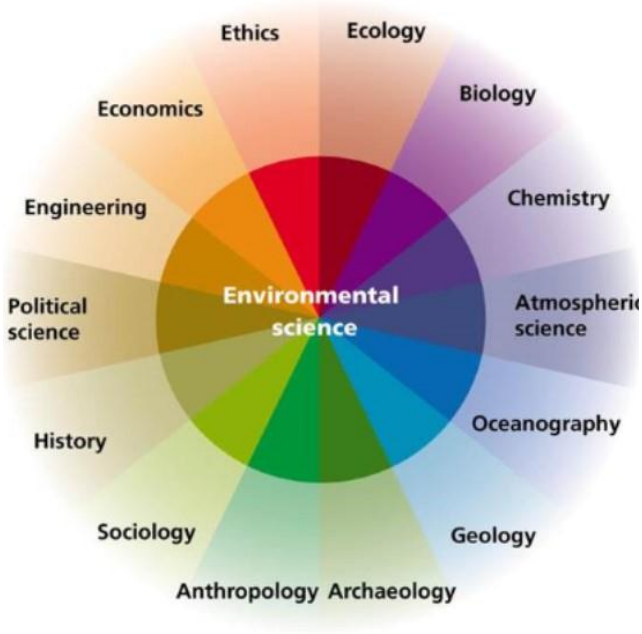
All data is limited to those with a Bachelor's degree and no higher degrees who work full-time in the United States. Jobs are listed in order of relative popularity amongst graduates with a Bachelor's degree in the given major from any college. Experienced Median Pay for each job title is for individuals with any major who have a typical amount of experience at that job. Salary is the sum of compensation from base salary, bonuses, profit sharing, commissions, and overtime, if applicable. Salary does not include equity (stock) compensation. This chart is based upon PayScale Salary Survey data, and may not represent all individuals in these categories.

*Data from: http://www.payscale.com/college-salary-report-2014/choosing-a-major/popular-jobs-by-major/computer-science-and-math

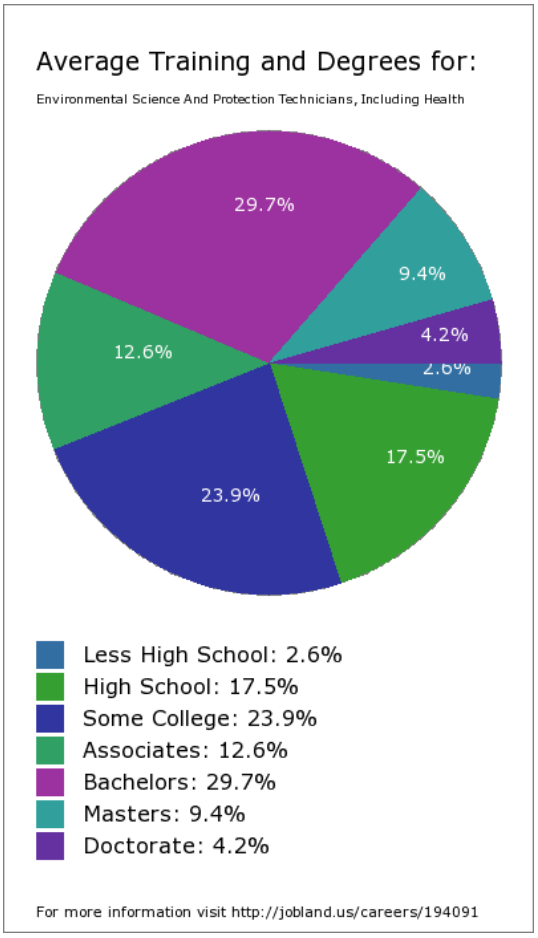
Comparing Computer Science Careers

	Education	License	Median Salary
Computer and Information Systems Manager	Minimum: Bachelor's Preferred: Master's	none	$123,950
Computer Systems Analyst	Bachelor's	none	$81,190
Computer Hardware Engineer	Bachelor's	needed if working directly with the public	$104,250
Computer Programmer	Bachelor's	none	$76,140
Computer Support Specialist	varies	none	$46,620
Software Developer	Minimum: Experience Preferred: Bachelor's	none	$101,410 (systems) $92,660 (applications)
Web Developer	Minimum: Experience and certification Preferred: Bachelor's	none	$63,160
Web Master	Associate or certificate	none	$82,340

Environmental Science



Environmental science is a hot field right now, with more and more companies going green and attempting to develop more eco-friendly products. Environmental sciences are a cornerstone at SGU in that they meet the need in preparing students for careers that are important in preserving our earth (water, land, and air).



With an education in environmental science, you can take a number of different career paths. Some environmental scientists focus on environmental regulations that are designed to protect people's health, while others focus on regulations designed to minimize society's impact on the ecosystem (U.S. Department of Labor, 2015). The following are examples of types of specialists: Environmental Protection Worker, Environmental Engineer, Field Research, Marine Biologist, Sustainable Farmer, Renewable Power Researcher, Forest Ranger, Natural Resource Scientist, Restoration Ecologist, Climate change analysts, Environmental health specialists, Environmental restoration planner, Industrial ecologists, Environmental Lawyer, Environmental Geologist, Environmental Biologist, Oceanographer, and Environmental chemists.

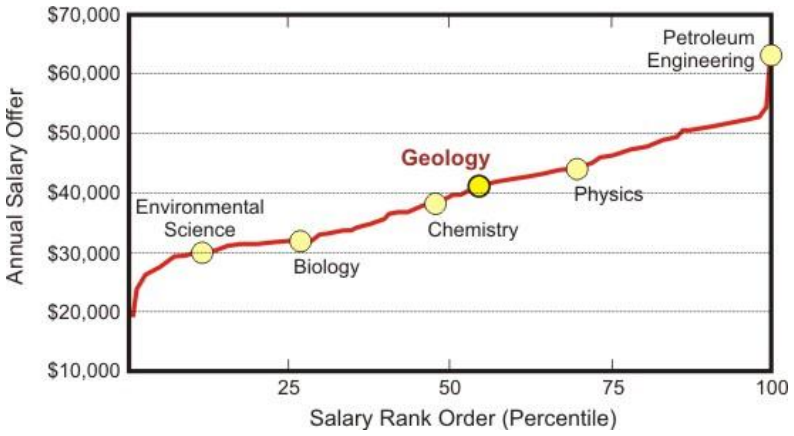
Careers in environmental science are projected to grow 11% from 2014-2024 compared to other careers at only 7% this is due to increase interest in the hazards facing the environment and increasing demand by population growth placed on the environment. Median pay in 2015 for environmental scientists is $67,460, although those working for the federal government can make over $100,000 per year.

Environmental science majors can also have careers as:

- Geoscientists - $89,700/yr,
- Atmospheric Scientists - $89,820/yr,
- Biochemists - $82,150/yr,
- Hydrologists - $79,550/yr,
- Conservation Scientists and Foresters - $60,220/yr,
- Soil & Plant Scientist - $62,470/yr,
- Occupational Health and Safety Specialists -$70,210/yr,
- Agricultural and Food Scientists - $62,470/yr

Quick Facts: Environmental Scientists and Specialists	
2015 Median Pay	$67,460 per year $32.43 per hour
Typical Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2014	94,600
Job Outlook, 2014-24	11% (Faster than average)
Employment Change, 2014-24	10,200

- Zoologists and Wildlife Biologists - $59,680/yr
- Biological Technicians - $41,650/yr
- Natural Sciences Managers - $120,160/yr
- Chemists and Materials Scientists - $72,610/yr
- Forensic Science Technicians - $56,320/yr



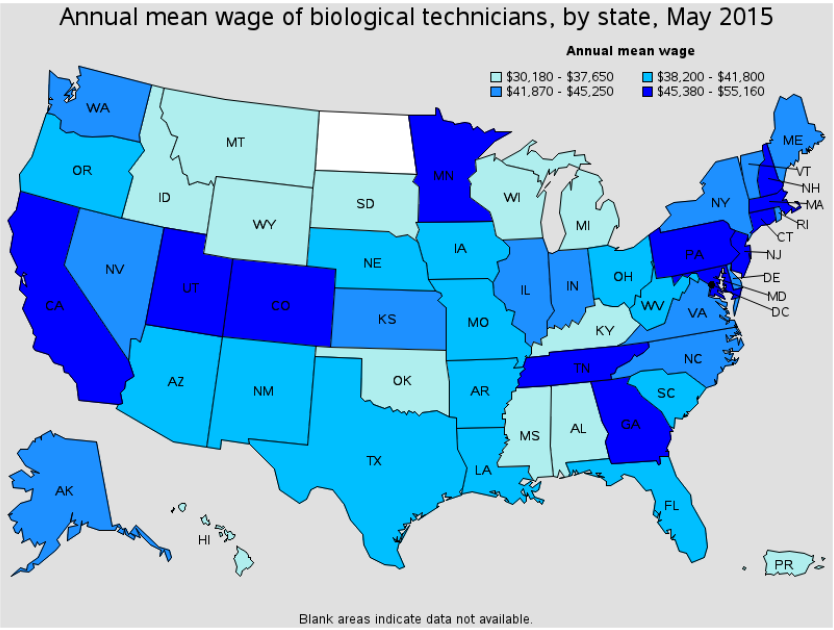
There a several job opportunities with only an associate's degree in Environmental science. Although a bachelor's degree, and further more a master's degree continue to open doors for higher salaries and more opportunities. Many students who earn a bachelor's degree in environmental science later go on to pursue a master's degree in order to specialize and gain more knowledge of the specific career they hope to pursue. Many government programs and employers are willing to help financially in order to have employees with a higher skill level.

Quick Facts: Environmental Science and Protection Technicians	
2015 Median Pay	$43,030 per year $20.69 per hour
Typical Entry-Level Education	Associate's degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2014	36,200
Job Outlook, 2014-24	9% (Faster than average)
Employment Change, 2014-24	3,400

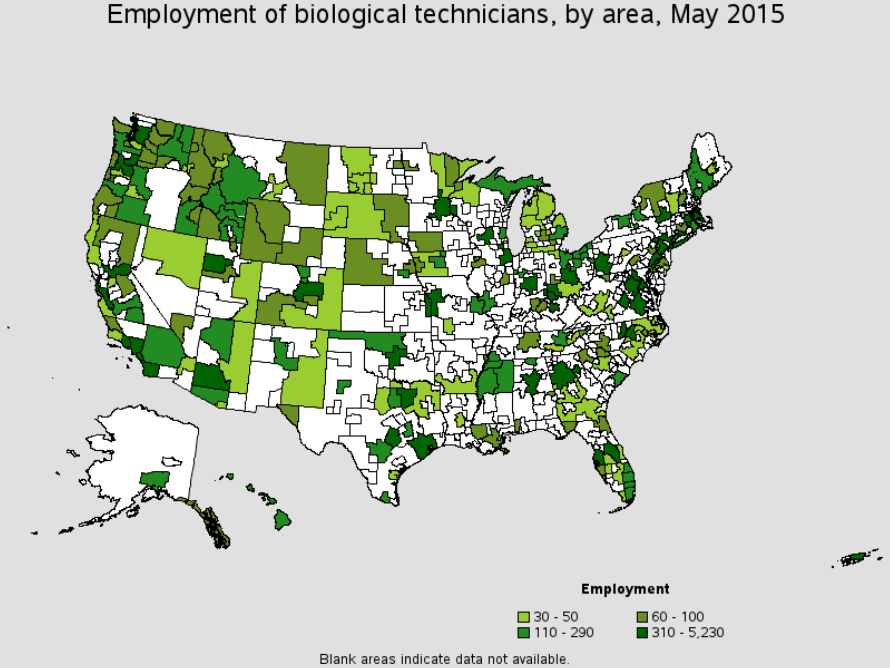
Other careers that only require an AS degree include environmental engineering technician, chemical technician, and agriculture and food science technician.

Biology

People with an associate degree in biology can look forward to technician careers, all of which work close with scientists and biologists in many different industries. Some people obtain their degree as a stepping stone to a four-year degree; others turn their interest into a paying job. An associate's degree in biology degree isn't associated with a specific career, but can lead to many different careers. The degree level will likely limit job seekers to lower-level positions. Absent further education, it may also limit prospects for advancement. Job possibilities include medical office assistant, lab technician and research associate.



Biological technicians prepare samples, conduct tests and maintain laboratory equipment. They analyze biological data from the tests they perform and summarize their findings in reports. These technicians can specialize in a variety of disciplines and industries. Some work outdoors in different environments to collect samples and specimens for testing. Biological technicians generally work under the supervision of biologists and other scientists. The employment outlook for biological technicians is expected to be favorable between 2008 and 2018, with a job rate increase of 18 percent, according to the Bureau of Labor Statistics. Thanks to the growing number of agricultural and medical products from biotechnology research, technicians should see a higher demand for their services in the biotechnology field. In addition, population and life-expectancy rates have caused a greater need for advanced and improved drugs, therefore requiring more biological technicians. The largest growth in employment of technicians will take place in professional, scientific and educational settings. The salary outlook for biological technicians depends on many factors, such as employer, industry and science field. Depending on the service or employer, biological technicians' salaries may be determined by funding or grants for experiments. According to the Bureau, biological technicians made an average salary of $45,230 in 2015. The highest levels of employment were in scientific research and development services, as well as in colleges, universities and professional schools.



National estimates for this occupation: Top

Employment estimate and mean wage estimates for this occupation:

Employment (1)	Employment RSE (3)	Mean hourly wage	Mean annual wage (2)	Wage RSE (3)
29,810	0.7 %	$18.40	$38,260	0.2 %

Percentile wage estimates for this occupation:

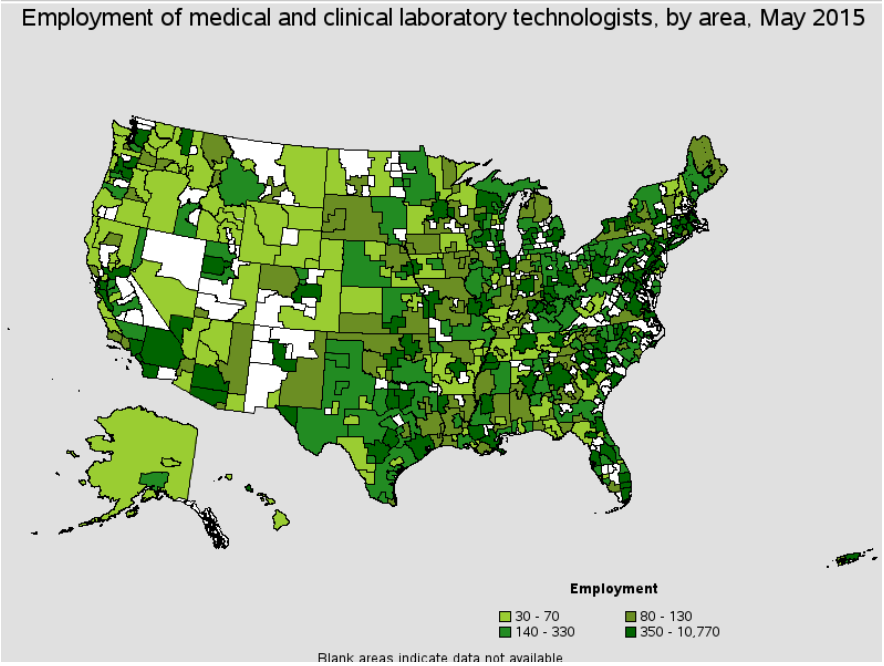
Percentile	10%	25%	50% (Median)	75%	90%
Hourly Wage	$12.23	$13.73	$17.04	$22.20	$26.38
Annual Wage (2)	$25,430	$28,550	$35,430	$46,170	$54,860

Forestry and Conservation Technician

Forest and conservation technicians collect samples and perform laboratory tests in an attempt to maintain or improve natural environments such as forests, lakes, rivers and farming areas. They test these environments to ensure soil, water, and air is safe to help the environments thrive. Many of these technicians work for federal, state and local government agencies that oversee the conservation of parks and reservations. The Bureau of Labor Statistics estimated average salaries in 2015, Forest and conservation technicians earned an average salary of $38,260 per year.

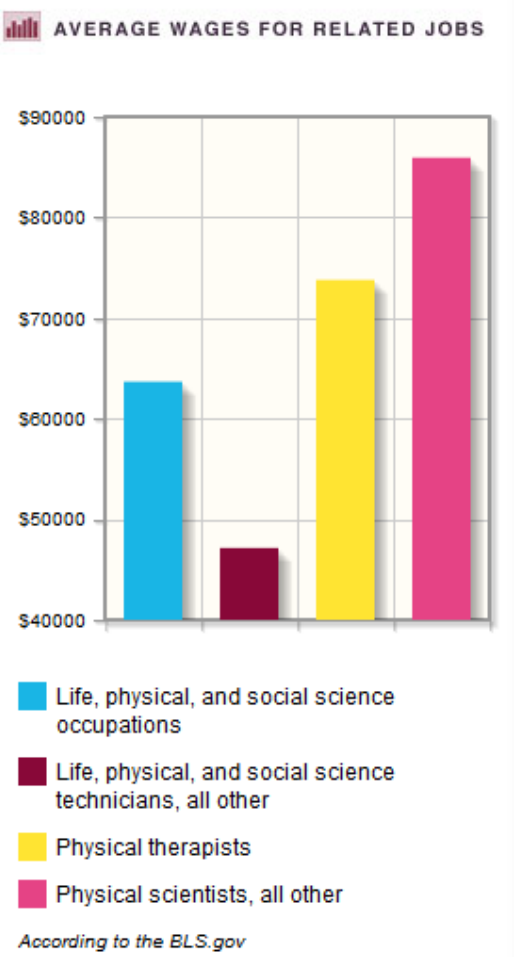
Quick Facts: Medical and Clinical Laboratory Technologists and Technicians	
2015 Median Pay	$50,550 per year $24.30 per hour
Typical Entry-Level Education	See How to Become One
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2014	328,200
Job Outlook, 2014-24	16% (Much faster than average)
Employment Change, 2014-24	52,100

Medical and clinical laboratory technicians work in a health care setting, such as a hospital, and perform tests to help analyze and diagnose diseases and illnesses. They collect and analyze human samples such as blood, tissues and urine. They use specialized equipment to determine test results and create detailed reports for patients' medical records. They often consult with other health care professionals such as registered nurses, doctors and scientists. According to careerinfonet.org, Medical and clinical laboratory technicians earned an average salary of $50,550 per year in 2015. Employment of medical laboratory technologists and technicians is projected to grow 16 percent from 2014 to 2024, much faster than the average for all occupations. An increase in the aging population is expected to lead to a greater need to diagnose medical conditions, such as cancer or type 2 diabetes, through laboratory procedures.



Physical Science

At the associate's degree level, students can pursue a general physical science degree preparing them for transfer to a 4-year bachelor's degree program. Jobs for those with a degree in physical science vary from teacher and technician to engineer, scientist, or technical writer. Physical scientists who work in research spend much of their time collecting and analyzing data, running tests and creating visual and written materials to communicate their findings. Many of these skills are acquired through hands-on laboratory and fieldwork that are part of most physical science degree programs. In general, the minimum suggested education for work in the physical science field is a bachelor's degree. Career opportunities include paleontologist, astronomer, chemist, geographer, geologist, geophysicist, meteorologist, oceanographer, and physicist. Physical scientists are employed by government agencies, and the chemical, computer, construction, drug, food, industrial electronics, manufacturing and petroleum industries. Additional career opportunities exist in energy management, mineral exploration and land use planning.



The U.S. Bureau of Labor Statistics (BLS) has projected an average growth in employment nationwide for astronomers, hydrologists, meteorologists and physicists from 2012-2022. A slower-than average growth in jobs was expected for chemists (6%) during the same period. Prospects may be best in small, specialized research and development firms because chemical companies are increasingly outsourcing research and development to these firms. Geoscientists can look forward to a faster-than-average increase in opportunities through

2022 (16%). Most of this growth is due to the need for better environmental and resource management. Those with a master's degree should see an increasing number of opportunities, especially in areas of applied research and development and product design.

As of May 2013, astronomer and physicists earned median annual salaries of $110,450 and $110,110, respectively. At that same time, the median annual salary for atmospheric and space scientists was $87,030, while hydrologists and chemists had corresponding incomes of $75,710 and $72,350. In May 2013, all other physical scientists not classified separately earned median annual salaries $93,230, as reported the BLS (www.bls.gov).

Describe any partnerships and relationships with outside entities that provide internship or practicums for students in the program.

The arts & sciences program has no established partnerships with outside entities. Through various faculty we have formed informal relationships with Haskell Indian Nations University and Kiksapa Consulting via the NASA Haskell REU programs. For the past 4 summers, we have sent one student and one faculty to this REU program, prior to that we sent at least one student every year since 2009. Faculty and students also participate in and have served on the Indigenous Peoples Climate Change Working Group. We also have informal relationships with the NCAR, USGS, IHS Environmental Health, TLE, Tribal Game Fish and Parks, Tribal Forestry, and the Niobrara Wildlife Refuge.

Kiksapa consulting taught our ESC 241 GIS and Remote Sensing and ESC 380 Climate and Weather during summer and fall of 2015. At this time we had no qualified faculty to teach these courses so Kiksapa's GIS person taught these courses as adjunct for us.

SD EPSCOR provides grant funding for students to do independent research. AICF and SD Space Grant provides fellowship opportunities for student to go to school and do research.

Include information from employer surveys.

No employer surveys are required for the Arts & Sciences degree.

Section 4: Student Participation and Success

Complete a table for each degree plan within your program to include figures for the past 4 years for annual enrollment to include the number of new students to the program; continuing students; completers; drop/stop out; and still enrolled at the end of the academic year.

Enrollment in Programs and Courses:

Program:	Arts & Sciences Course Enrollment			
Academic Year	**Enrolled in Courses**	**Completed**	**Retained (Still Enrolled)**	**Withdrew (Drop or Stop Out)**
2015-2016*	544*	343*	343*	145*
2014-2015	1059	748	748	222
2013-2014	1279	873	873	280
2012-2013	1260	797	797	239

**Data only for Fall semester available*

This table is the number of students enrolled in all A&S courses at SGU. This is duplicated data, so students could be listed multiple times if they are enrolled in more than one course. Also this table includes all students of all majors that are taking A&S classes during the years given.

Program:	AA Arts & Sciences				
Academic Year	**New Students**	**Continuing Students**	**Completed**	**Retained (Still Enrolled)**	**Withdrew (Drop or Stop Out)**
2015-2016*	29	112	4^	137	No data
2014-2015	60	131	1	190	49
2013-2014	72	113	7	178	0
2012-2013	69	130	5	194	9
2011-2012~	28	No data	8	No data	No data

**Data only for Fall/Spring semesters available ^prepared grad apps ~data only for spring/summer 2012*

Program:	BA Liberal Arts				
Academic Year	**New Students**	**Continuing Students**	**Completed**	**Retained (Still Enrolled)**	**Withdrew (Drop or Stop Out)**
2015-2016*	0	12	1^	11	No data
2014-2015	1	11	2	10	0
2013-2014	1	15	0	16	4
2012-2013	1	16	2	15	0
2011-2012~	1	No data	1	No data	No data

**Data only for Fall/Spring semesters available ^prepared grad apps ~data only for spring/summer 2012*

Program:	BS Computer Science				
Academic Year	**New Students**	**Continuing Students**	**Completed**	**Retained (Still Enrolled)**	**Withdrew (Drop or Stop Out)**
2015-2016*	2	15	0	17	No data
2014-2015	2	20	1	21	4
2013-2014	1	14	0	15	0
2012-2013	3	21	2	22	7
2011-2012~	3	No data	1	No data	No data

**Data only for Fall/Spring semesters available ^prepared grad apps ~data only for spring/summer 2012*

Program:	AS Biological Science				
Academic Year	**New Students**	**Continuing Students**	**Completed**	**Retained (Still Enrolled)**	**Withdrew (Drop or Stop Out)**
2015-2016*	0	5	2^	3	No data
2014-2015	1	6	1	6	1
2013-2014	4	2	0	6	0
2012-2013	1	2	0	3	0
2011-2012~	1	No data	0	No data	No data

**Data only for Fall/Spring semesters available ^prepared grad apps ~data only for spring/summer 2012*

Program:	AS Environmental Science *(**excludes data for previous AAS degree)*				
Academic Year	**New Students****	**Continuing Students****	**Completed**	**Retained (Still Enrolled)****	**Withdrew (Drop or Stop Out)**
2015-2016*	1	2	0^	3	No data
2014-2015	0	7	3	4	1
2013-2014	3	5	0	8	1
2012-2013	0	7	0	7	0
2011-2012~	1	No data	0	No data	No data

**Data only for Fall/Spring semesters available ^prepared grad apps ~data only for spring/summer 2012*

Program:	AS Physical Science				
Academic Year	**New Students**	**Continuing Students**	**Completed**	**Retained (Still Enrolled)**	**Withdrew (Drop or Stop Out)**
2015-2016*	0	0	0^	0	No data
2014-2015	0	0	0	0	0
2013-2014	0	0	0	0	0
2012-2013	0	0	0	0	0
2011-2012~	0	No data	0	No data	No data

**Data only for Fall/Spring semesters available ^prepared grad apps ~data only for spring/summer 2012*

Program:	BS Environmental Science *(**excludes the data for BS ESC Tribal Lands/Ecology)*				
Academic Year	**New Students****	**Continuing Students****	**Completed**	**Retained (Still Enrolled)****	**Withdrew (Drop or Stop Out)**
2015-2016*	0	6	4^	2	No data
2014-2015	0	5	0	5	0
2013-2014	0	4	2	2	0
2012-2013	1	2	0	3	0
2011-2012~	2	No data	1	No data	No data

**Data only for Fall/Spring semesters available ^prepared grad apps ~data only for spring/summer 2012*

The BS Environmental Science Data is underrepresented due to the fact that it excludes student enrollment numbers from the BS ESC Tribal Lands/Ecology degree during the years of 2011-2014.

From the list of hundreds of students (unduplicated) provided to me, I sorted in excel by major, year, and term. Then I went through and counted the students who were new enrollees during the fall of 2014 (for example) and spring/summer 2015 to get the number of new students for 2014-2015 school years. I counted the continuing students then that should add up to the total number of students (not listed). I subtracted the completed (graduates) off of the total number of students to get the total number of students retained in the program. To calculate the number of dropouts, I subtracted 2012-13 from 2013-14. There was minimal 2011 data available to me, therefore the no data in the columns; also, since we don't know 2016-2017 total numbers of students, we can't yet calculate the number that dropped out for 2015-2016.

Some programs provide required courses for other degree programs (e.i. Lakota Studies or Art History). List any of those courses that are provided by your program and provide an average number of students non-program students who attend those courses. Also list any courses that you offer for non-degree seeking students.

Courses Required by other Departments:

General Education Requirements: *		
9hrs Communications:	EN 101 Freshman English I 3cr	20% non-majors~
	EN 102 Freshman English II 3cr	20% non-majors~
	SP 100 Speech Communications 3cr	20% non-majors~
3hrs Computer Technology Literacy:	CS 101 Introduction to Computer Science 3cr	5% non-majors
6-8hrs Mathematics:	MA 100 Mathematics for General Education 3cr	100% non-majors
	MA 120 Introductory College Algebra 3cr	95% non-majors
	MA 150 College Algebra 4cr	95% non-majors
	MA 370 Statistics 3cr	95% non-majors
6-8hrs Science:	BI 101 Survey of Biology I 4cr	100% non-majors
	BI 102 Survey of Biology II 3cr	100% non-majors
	BI 151 Biology I 4cr	50% non-majors
	BI 152 Biology II 4cr	5% non-majors
	BI 245 Botany 4cr	50% non-majors
	BI 285 Selected Topics in Biology 1-4cr	50% non-majors
	CH 100 Survey of Chemistry 4cr	100% non-majors
	CH 151 Chemistry I 3cr	25% non-majors
	ESC 101 Environmental Monitoring 3cr	50% non-majors
	ESC 121 Earth Science 4cr	80% non-majors
	PH 100 Physics-How Things Work 3cr	100% non-majors
	PH 101 Survey of Physics: Motion & Matter 4cr	100% non-majors
	PH 102 Survey of Physics: Energy & Its Transformation 4cr	100% non-majors
	PH 202 Physics I 4cr	5% non-majors
6hrs Social Science:	GE 100 Physical Geography Fundamentals 3cr	75% non-majors
	GE 200 World Regional Geography 3cr	75% non-majors
	HI 151 World Civilization I 3cr	50% non-majors
	HI 152 World Civilization II 3cr	50% non-majors
	HI 251 American History I 3cr	50% non-majors
	HI 252 American History II 3cr	50% non-majors
	PS 100 American Government 3cr	75% non-majors
	PS 200 World Politics 3cr	75% non-majors
3hrs Humanities:	CW 241 Literary Production I (Wanbli Ho Journal) 4cr	20% non-majors
	CW 261 Creative Writing I (Poetry) 3cr	20% non-majors
	CW 271 Creative Writing I (Fiction) 3cr	20% non-majors
	EN 201 Introduction to Literature 3cr	60% non-majors
	EN 210 Children's and Adolescent's Literature 3cr	99% non-majors
	EN 250 Creative Writing (GENERAL INTEREST) 3cr	20% non-majors
	EN 251 Contemporary Native American Literature 3cr	20% non-majors
	EN 260 Great Plains Literature 3cr	20% non-majors
	EN 301 Research Writing 3cr	50% non-majors
	EN 310 Native American Children's Literature 3cr	20% non-majors
	EN 320 Survey of Western Literature 3cr	20% non-majors
	EN 321 Literature of the Americas I 3cr	20% non-majors
	EN 350 Poetry by Native American Authors 3cr	20% non-majors
	EN 351 Fiction by Native American Authors 3cr	20% non-majors
	EN 352 Non-Fiction by Native American Authors 3cr	20% non-majors
	EN 360 Professional Writing 3cr	80% non-majors
	EN 361 Survey of World Literature 3cr	20% non-majors

	EN 421 Survey of English Literature 3cr	20% non-majors
	EN 450 Literature by and about Native Americans Throughout History 3cr	20% non-majors
	GN 289 Special Topics Variable Credit Hours	Depends on the special topics course.
	PHIL 200 American Indian in Western Thought 3cr	40% non-majors
	PHIL 300 The World of Human Ideas: An Introduction to Philosophy 3cr	10% non-majors
	PL 100 Critical & Creative Thinking 3cr	5% non-majors
	SP 300 Oratory by Native Americans 3cr	20% non-majors
	SP 400 Advanced Public Speaking 3cr	20% non-majors
	TA 101 Theatre Orientation 3cr	20% non-majors

~ Although most of the "A&S majors" are defaulted into A&S as they are undecided.

Education:	EN 210 Children's and Adolescent's Literature 3cr	99% education majors
	EN 320 Survey of Western Literature 3cr	20% education majors
	HI 251 American History I 3cr	50% education majors
	MA 310 Mathematics for Teachers I 3cr	100% education majors
	MA 311 Mathematics for Teachers II 3cr	100% education majors
	MA 380 Geometry for Teachers 2cr	100% education majors
	MA 410 Math Strategies for Teachers-Tools and Activities 2cr	100% education majors
	MA 415 Algebraic Reasoning for Teachers 3cr	100% education majors
	PS 100 American Government 3cr	75% education majors
	SC 201 Integrated Science I 4cr	90% education majors
	SC 202 Integrated Science II 4cr	90% education majors
	SC 301 Selected Topics in Science 1-3cr	90% education majors
	TA 365 Creative Drama for the Classroom 3cr	100% education majors
Human Services:	EN 301 Research Writing 3cr	40% Human Services majors
	EN 360 Professional Writing 3cr	45% Human Services majors
Business Management:	EN 360 Professional Writing 3cr	40% Business majors
Lakota Studies:	HI 151 World Civilization I 3cr	10% Lakota Studies majors
	HI 251 American History I 3cr	10% Lakota Studies majors
	HI 252 American History II 3cr	10% Lakota Studies majors
	TA 155 American Indian Theatre Literature 3cr	10% Lakota Studies majors

**All the data in the "courses required by other departments" table is nonscientific/unofficial percentages.*

Section 5. Program Learning Outcomes and Curriculum and Instruction

a) *Describe the process used to evaluate student progress toward program learning outcomes.*

We are currently working on PLO assessment of the Arts & Sciences degrees. Student progress is assessed by rubrics that evaluate student artifacts.

b) *Include the curriculum map for the program. Provide a summary of outcome data, if available, and describe any adjustments to the program that have been made or considered as a result of learning outcome data.*

BA Liberal Arts

Program Learning Outcomes

Students who graduate with a BS in Liberal Arts will be able to:

1) Demonstrate a broad understanding of the liberal arts.
2) Effectively use the tools of oral and written communication to express ideas, solve problems, and contribute/participate appropriately within a community of learners.
3) Apply knowledge from a variety of disciplines within the liberal arts to develop an appreciation for diverse cultures and global interconnectivity.
4) Use critical thinking skills to analyze, synthesize, evaluate, and describe diverse issues.
5) Analyze and evaluate data to draw informed conclusions.
6) Demonstrate cultural expression, values ethics and social responsibility.

Curriculum Map

Curriculum Map – BA Liberal Arts

Courses	Demonstrate a broad understanding of the liberal arts.	Effectively use the tools of oral and written communication to express ideas, solve problems, and contribute/participate appropriately within a community of learners.	Apply knowledge from a variety of disciplines within the liberal arts to develop an appreciation for diverse cultures and global interconnectivity.	Use critical thinking skills to analyze, synthesize, evaluate, and describe diverse issues.	Analyze and evaluate data to draw informed conclusions.	Demonstrate cultural expression, values ethics and social responsibility.
MA 370		R		R	R	
GE 100	I	I	I	I	I	I
PS 100	I	I	I	I	I	I
EN 201	R	R	R	R	R	R
EN 301	R	M	R	R	R	R
EN 360	I	M	I	I	R	R

Summary of Outcome Data/Adjustments made or considered

No outcome data at this time as we are currently working on PLO assessment of the BA Liberal Arts degree. Updates need to be made to the BALA degree to reflect changes in Liberal Arts degrees across the US. A Senior Research Capstone course, Ethics course, and an Internship need to be considered to bring the current liberal arts degrees and also to bring them further in line with the program learning outcomes.

AA Arts & Sciences

Program Learning Outcomes

Students who graduate with an AA in Arts & Sciences will be able to:

1) Develop skills necessary for academic success in college.
2) Demonstrate a broad understanding of the liberal arts.
3) Effectively use the tools of oral and written communication to express ideas, solve problems, and contribute/participate appropriately within a community of learners.
4) Apply knowledge from a variety of disciplines within the liberal arts to develop an appreciation for diverse cultures and global interconnectivity.
5) Demonstrate cultural expression, values ethics and social responsibility.

Curriculum Map

Curriculum Map – AA Arts and Sciences

Courses	Develop skills necessary for academic success in college.	Develop and express ideas effectively in writing and communication.	Demonstrate analytical reasoning and problem solving.	Develop global citizenship and multicultural understanding.	Demonstrate cultural expression, values ethics and social responsibility.
GE 100	I	I	I	I	I
PS 100	I	I	I	R	I
EN 201	R	R	R	R	R

Summary of Outcome Data/Adjustments made or considered

No outcome data at this time as we are currently working on PLO assessment of the AA Arts & Sciences degree. As with the BALA degree this degree is in very much need of updating. Two new courses need to be considered to more efficiently meet the learning outcomes for the degree including an ethics course and a capstone course.

BS Computer Science

Program Learning Outcomes

1) Students think critically and creatively at formulating, analyzing, decomposing, and solving problems computationally.
2) Articulate and apply the theories of the discipline of computer science as specified by professional organizations such as the Association for Computing Machinery (ACM.org).
3) Demonstrate effective communication and collaboration with both technical and non-technical constituents.
4) Express potential for lifelong learning and good citizenry, considering the ethical and social impacts of technology in a rapidly changing discipline.

Curriculum Map

Courses	Students think critically and creatively at formulating, analyzing, decomposing, and solving problems computationally.	Articulate and apply the theories of the discipline of computer science as specified by professional organizations such as the Association for Computing Machinery (ACM.org).	Demonstrate effective communication and collaboration with both technical and non-technical constituents.	Express potential for lifelong learning and good citizenry, considering the ethical and social impacts of technology in a rapidly changing discipline.
CS 101	I	I	I	I
CS 111	I	I	I	I
CS 201	I, R	R	R	R, M
MA 216	I, R	I	I	I, R
CS 202	R, M	R	R	R, M
EL 211	I	I	I	R
CS 203	R, M, A	R	R	M
EL 212	I	I	I	R, M
CS 301	R, M	R	R	M
CS 311	I, R	R	R	M
CS 302	R, M	R	R	M
CS 312	I, R	R	R	M
CS 401	I, R	I, R	I, R	M
CS 411	M	I, R	I, R	M
CS 380	R, M, A	M, A	M, A	M, A
CS 402	R, M	I, R	I, R	M
CS 412	M	I, R	I, R	M

Summary of Outcome Data/Adjustments made or considered

No outcome data at this time as we are currently working on PLO assessment of the BS Computer Science degree. Currently, the program does not require an ethics course in the required curriculum. It is recommended with because ethics in securing information, intellectual property of hardware/software design (piracy), data acquisition security, access to data (specifically not divulging information), hacking, unauthorized access, buying/selling information, policies and procedures, etc. With a greater number of faculty, more options could be available for students, including computer graphics (animation, video editing, etc), information management (databases in all job areas in the area), and programming for writing gaming. Capstone courses are the software development courses (CS 411 & 412) where the students take everything they have learned in the previous course and apply it.

The strengths of the computer science program include: 1) Graduates in this program will apply their technical knowledge and skills to develop and implement computer solutions that accomplish goals important to the industry, government (federal or tribal) or research area. 2) Graduates will communicate with both technical (including supervisors, subordinates and coworkers) and non-technical people from multiple domains and work as part of teams. 3) And graduates will continue to grow intellectually and professionally in their chosen field. 4) Furthermore, other strengths of the program include mathematics, theory and concepts, problem specification and analysis, program design, solution implementation, system evaluation, technical skills, teamwork and project management, ethical issues, oral communications, written communications, and social impact.

BS Environmental Science

Program Learning Outcomes

Students who graduate with a BS in Environmental Science will be able to:

1. Identify key concepts in the life and physical sciences, and apply them to environmental issues keeping Lakota culture and ethical concepts in mind.
2. Apply knowledge of the sciences within an interdisciplinary context in solving environmental issues such as environmental health, food and agriculture, energy, waste and pollution, climate change, population, resource management, and loss of biodiversity.
3. Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.
4. Locate, evaluate and synthesize information from the scientific literature.
5. Carry out an applied research project and communicate science effectively through written work and oral presentations to a variety of audiences.
6. Apply practical skills for scientific problem-solving, including familiarity with laboratory and field instrumentation, computer applications, statistical and modeling techniques.

Curriculum Map

Courses	Identify key concepts in the life and physical sciences, and apply them to environmental issues keeping Lakota culture and ethical concepts in mind.	Apply knowledge of the sciences within an interdisciplinary context in solving environmental issues such as environmental health, food and agriculture, energy, waste and pollution, climate change, population, resource management, loss of biodiversity.	Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.	Locate, evaluate and synthesize information from the scientific literature.	Carry out an applied research project and communicate science effectively through written work and oral presentations to a variety of audiences.	Apply practical skills for scientific problem-solving, including familiarity with laboratory and field instrumentation, computer applications, statistical and modeling techniques.
BA 380	I					
BI 151	I	I	I	I	I	I
BI 152	R	R	R	R	R	R
BI 235	R	R	R	R	I	R
BI 310	R	R	R	R	R	R
CH 151	I	I	I	I	I	I
CH 152	R	R	R	R	R	R
EN 301			I	I	I	
ESC 101	I	I	I	I	I	I
ESC 121	I	I	I	I	I	I
ESC 209	R	R	R	R	I	R
ESC 241	R	R	R	I	R	R
ESC 297	M	M	M	R	R	R
ESC 380	R	R	R	R	R	R
ESC 415	R	R	R	R	R	R
ESC 440	M, A	M, A	M, A	M, A	M, A	M, A
ESC 441	M, A	M, A	M, A	M, A	M, A	M, A
ESC 495	M, A	M, A	M, A	M, A	M, A	M, A
ESC 496	M, A	M, A	M, A	M, A	M, A	M, A
GE 100	I	I	I			
LS 118	I	I	I			
MA 201						R
MA 370						R
PH 202	R	R	R	I	I	R

Key: "I"=Introduced; "R"=reinforced and opportunity to practice; "M"=mastery at the senior or exit level; "A"=assessment evidence collected

Summary of Outcome Data/Adjustments made or considered

No outcome data at this time as we are currently working on PLO assessment of the BS Environmental Science degree. I am recommending a new ethics (PHIL 301) course be added that will more significantly meet the needs of the students rather than the current business ethics course. I have also recommended that EN 301 Research Writing be a required course for the degree as the significant writing component in ESC 297/440/441/495/496. I am also updating course names more closely reflect what the course actually is. ESC 297 will be ESC 299 Sophomore Research Seminar, ESC 440 will now be ESC 498 Undergraduate Research Experience I, and ESC 441 will be ESC 499 Undergraduate Research Experience II. Course descriptions and credit hours will not change. I have also removed LS 118 from the degree required courses as it hasn't been offered in several years.

AS Environmental Science

Program Learning Outcomes

Students who graduate with an AS in Environmental Science will be able to:

1. Identify key concepts in the life and physical sciences, and apply them to environmental issues keeping Lakota culture and ethical concepts in mind.
2. Apply knowledge of the sciences within an interdisciplinary context in solving environmental issues such as environmental health, food and agriculture, energy, waste and pollution, climate change, population, resource management, and loss of biodiversity.
3. Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.
4. Locate, evaluate and synthesize information from the scientific literature.
5. Communicate science effectively through written work and oral presentations to a variety of audiences.
6. Apply practical skills for scientific problem-solving, including familiarity with laboratory and field instrumentation, computer applications, statistical and modeling techniques.

Curriculum Map

Courses	Identify key concepts in the life and physical sciences, and apply them to environmental issues keeping Lakota culture and ethical concepts in mind.	Apply knowledge of the sciences within an interdisciplinary context in solving environmental issues such as environmental health, food and agriculture, energy, waste and pollution, climate change, population, resource management, loss of biodiversity.	Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.	Locate, evaluate and synthesize information from the scientific literature.	Communicate science effectively through written work and oral presentations to a variety of audiences.	Apply practical skills for scientific problem-solving, including familiarity with laboratory and field instrumentation, computer applications, statistical and modeling techniques.
BA 380	I					
BI 151	I	I	I	I	I	I
BI 152	R	R	R	R	R	R
CH 151	I	I	I	I	I	I
ESC 101	I	I	I	I	I	I
ESC 209	R	R	R	R	R	M, A
ESC 241	R	R	R	R	R	R
ESC 297	M, A	M, A	M, A	M, A	M, A	R
GE 100	I	I	I			
LS 118	I	I	I			
PH 202	R	R	R	I	R	R

Key: "I"=Introduced; "R"=reinforced and opportunity to practice; "M"=mastery at the senior or exit level; "A"=assessment evidence collected

Summary of Outcome Data/Adjustments made or considered

No outcome data at this time as we are currently working on PLO assessment of the AS Environmental Science degree. I am recommending a new ethics (PHIL 301) course be added that will more significantly meet the needs of the students rather than the current business ethics course. I have also recommended that EN 301 Research Writing be a required course for the degree as the significant writing component in ESC 297. I am updating ESC 297 to ESC 299 Sophomore Research Seminar to more specifically describe the course. I have also removed LS 118 from the degree required courses as it hasn't been offered in several years.

AS Biological Science

Program Learning Outcomes

Students who graduate with an AS in Biological Science will be able to:

1. Demonstrate comprehension of biological systems at all levels of biological organization.
2. Apply the scientific method within course investigations.
3. Communicate biological data, analyses, and interpretations orally and/or in writing.
4. Demonstrate application of critical thinking in classroom, field, and laboratory studies.
5. Apply ethical conduct in scientific activities.

Curriculum Map

Courses	Demonstrate comprehension of biological systems at all levels of biological organization.	Apply the scientific method within course investigations.	Communicate biological data, analyses, and interpretations orally and/or in writing.	Demonstrate application of critical thinking in classroom, field, and laboratory studies.	Apply ethical conduct in scientific activities.
BA 380					R
BI 151	I	I	I	I	I
BI 152	R	R	R	R	R
BI 223	R	R	R	R	R
BI 224	R	R	R	R	R
BI 235	R	R	R	R	R
BI 245	R	R	R	R	R
BI 299	M, A	M, A	M, A	M, A	M, A
CH 151	I	I	I	I	I
CH 152	R	R	R	R	R
ESC 101	I	I	I	I	I
MA 201		I		I	
PH 202	R	I	R	I	R
PH 203	R	R	R	R	R

Key: "I"=Introduced; "R"=reinforced and opportunity to practice; "M"=mastery at the senior or exit level; "A"=assessment evidence collected

Summary of Outcome Data/Adjustments made or considered

No outcome data at this time as we are currently working on PLO assessment of the AS Biological Science degree. I am recommending a new ethics (PHIL 301) course be added that will more significantly meet the needs of the students rather than the current business ethics course. I have also recommended that EN 301 Research Writing be a required course for the degree as the significant writing component in BI 299. I am updating the name of BI 299 to Sophomore Research Seminar to more specifically describe the course.

AS Physical Science

Program Learning Outcomes

Students who graduate with an AS in Physical Science will be able to:

1. Organize, analyze and interpret information and use the scientific method to make inferences.
2. Exhibit knowledge of scientific concepts through written and oral communication.
3. Demonstrate excellent laboratory skills and techniques including the proper use of relevant instruments and related technologies.
4. Apply concepts learned to real world situations.

Curriculum Map

Courses	Organize, analyze and interpret information and use the scientific method to make inferences.	Exhibit knowledge of scientific concepts through written and oral communication.	Demonstrate excellent laboratory skills and techniques including the proper use of relevant instruments and related technologies.	Apply concepts learned to real world situations.
CH 151	I	I	I	I
CH 152	R	R	R	R
CS 101	I	R	R	R
ESC 121	I	I	I	I
MA 201			R	R
PH 202	R	R	R	R
PH 203	M*	M*	M*	M*

Key: "I"=Introduced; "R"=reinforced and opportunity to practice; "M"=mastery at the senior or exit level; "A"=assessment evidence collected

Summary of Outcome Data/Adjustments made or considered

No outcome data at this time as we are currently working on PLO assessment of the AS Physical Science degree. This degree needs significant updates if it is not archived to meet other college/university standards, including a Geology course and a Capstone course. I would also recommend doing different concentrations ie Chemistry, Earth Science, Geography, etc.

I recommend archiving this degree as exhibited by student number in the program in the last 10 years. There have been zero graduates from the degree in the last 10 years (the last graduate with an AS Physical Science degree was in 2000). In the time the program has existed (since 1993), there have only been 3 students ever enrolled in the program. One graduated in 2000 with an AS Physical Science (entered 1990), one graduated with a different degree in 1995 (entered 1991), and one has not taken classes at SGU since Fall of 2008 (entered 2003).

Current Syllabi for 2014-2016

d) Attach a current syllabus for each program-specific course in the degree program.

Please see **Appendix A** for the most up to date Syllabi for 2014-2016 A&S courses.

The following courses have not been offered in two or more years:

BI 102	CS 301**	CW 241	HI 400**
BI 240*	CS 312	CW 242	HI 450
BI 246	CS 321	CW 261**	
BI 355**	CS 322	CW 271	PHIL 200**
BI 389	CS 331	CW 461	PHIL 300
BI 390	CS 402	CW 471	
BI 442*	CS 480	CW 487	PL 100

BI 499*	CS 490		
		EN 250	PS 200
CH 100	EL 101	EN 251**	
CH 285*	EL 102	EN 260	SP 300
CH 311**	EL 211	EN 280	
CH 410	EL 212	EN 281	TA 101
CH 485*		EN 320	TA 111
		EN 322	TA 151
EGY 200	MA 100	EN 350	TA 161
	MA 160	EN 351	TA 211
ESC 121	MA 190	EN 352	TA 261
ESC 205**	MA 204	EN 361	TA 291
ESC 250	MA 305	EN 380	TA 295
ESC 271	MA 380	EN 421	TA 365
ESC 283	MA 410	EN 450	
ESC 285*	MA 415		RSEC 205
ESC 299	MA 430	MC 100	RM 415
ESC 331*		MC 120	
ESC 410*	PH 100	MC 201	
	PH 101	MC 202	
NR 250	PH 102		
	PH 310		

**new courses that have been created within the last 3 years but due to reduced faculty they have not been offered yet.*
***courses not offered 2 or more years ago, but currently being offered fall 2016*

Student Evaluations and Instructor Narratives

e) Provide a composite of student evaluations for each instructor, including adjunct instructors, teaching in the program for the current academic year. Based on the data from the student evaluations, what decisions were made regarding what worked, what didn't work, and what decisions were made at the course and program level

All evaluations and narratives from each instructor about what worked, what didn't work, and what recommendations they would make to improve the course and make the program more successful are located in **Appendix B**.

Section 6. Human, Financial, and Physical Resources

a) *Using the chart on the next page, list full-time and adjunct instructors teaching in the program, including their degree attainment and/or evidence of known expertise in their content area. Describe the strengths this instructor brings to the program. Summarize professional development activities completed by faculty/staff over the past four years. Also provide SGU committee participation and community service activities completed by each.*

PROGRAM HUMAN RESOURSES (FACULTY)						
Instructor	**FT / A Status**	**Degree/Known Expertise**	**Strength to Program**	**PD Accomplished or Attended**	**Active SGU Committee Membership**	**Community Service Completed**
Dana R. Gehring	FT	-BA Biology, Jamestown College, 2002 -MA Biology, University of South Dakota, 2005 -10+ years teaching experience in Biology & Environmental Science at SGU -Graduate Teaching Assistant, 2003-2005 -Teaching Assistant, 1999-2002 -NASA Kiksapa REU/NASA Haskell ELO GIS/Research Project Training (3wks each June 2014, 2015, 2016)	-Extensive Biology background -Serve as the Campus Coordinator for the SD EPSCOR Grant -Adjunct for Nursing Department -Environmental Science Curriculum Development & Course Design, SGU, 2013 -Biology Curriculum Development & Course Design, 2014-16 -Grants received: >NASA/EPSCOR Travel Grant >NASA EPSCOR Biotech Research Grant >SD BRIN Grant -Advisor for SD Space Grant	-In Progress PhD in Health Sciences, Trident Univ. -AISES Leadership Summit, 2016 -National Disaster Preparedness Training, 2014 -NCAR Incorporating Climate & Weather into GIS curricula, 2016	-A&S Department Chair (2015-present) -Chair of Chairs (2015-2016) -Previous member and secretary of Faculty Council (2011-2015) -Senior Thesis/Research Advisor	-AISES chapter advisor (2015-present) -1 hr/wk WECA technology teacher (2009-Present) -Science workshops for kids (2013-present) -NAPIRE Home Faculty Mentor, 2014 -NASA Kiksapa REU Faculty Mentor, 2014 -NASA Haskell ELO Faculty Mentor, 2015 -NASA Haskell ELO Faculty Mentor, 2016 -Science fair judge (2008-2016) -IPCCWG member & governance committee member (2015-16)
Melissa Bancroft	FT	-BS Mathematics, Missouri Southern State University -BS Education, Chadron State College, NE -Paraprofessional for 2.5 years -Teacher at Kennedy School for 3 months	-Extensive Math background -Math Tutor for 25 years	-15cr graduate level Math courses, Southern Methodist University -In Progress MS Education w/emphasis Mathematics, Sinte Gleska University -Substitute Teacher		-Youth Activities, including Dance, Boosters club, and post prom

Lisa Krug	FT	-BA Social Science, Wayne State -30+ hours of graduate credit in Indian Studies	-20+ years of continual employment within the department -Training and expertise in curriculum	-Enrolled in the Montana State University program online for a Graduate Certificate in Native American Studies	-Recruitment and retention -Instructors' self-help group -Previously served on Faculty Council -SGU Scholarship Committee	-Continued support for the Timothy House homeless shelter -Retention efforts in Parmelee and n. Antelope areas
Mary Henson	FT	-MA Liberal Studies, Lake Forest College -MA English/ Creative Writing, Iowa State University -12 years teaching Freshman English , Native American Literature and Creative Writing at Sinte Gleska University -5 years teaching Composition at Iowa State University and William Penn College for Working Adults	-Native American Literature and Film -Lakota Studies: History and Culture; Language I-IV; Native American Film; Sicangu Communities; Lakota Arts; Etc.	-Attended Native American Writer's Festival- 3yrs -Presented at Native American Literature Symposium -Presented at Western Literature Conference -Presented at Willa Cather Conference Attended Lannon Foundation Native American Literature Symposium at Newberry Library -Two articles on teaching writing to Native American students published in Tribal College Journal	-Faculty Development -Senior Thesis Committee Member	-Witten, Wood, Colome Volunteer Fire Department Fundraising -Witten Annual Earth Day Clean up -Cowboys and Indians Poetry Festival -SGU Clean up -Maintain Arts and Sciences Center flower planters -Attend HIV, Diabetes, Breast Cancer, etc Awareness Walks -Performing Arts Club -AIHEC Knowledge Bowl Cheerleader -Poetry Slam / Open Mike Nights
Vanessa Wandersee	FT	-BS Zoology, Michigan State University -4 yrs research experience working with wildlife in Alaska	-Experience in the wildlife management field from Alaska -Held a biological aid position in Valentine, NE -previous supervisor experience for two years managing students of all ages and experience	-AISES Leadership Summit, 2016	-Faculty Council Member -Senior Thesis Committee Member	-AISES Chapter Co-advisor -Volunteer for Rosebud Free spay/neuter clinics -IPCCWG member -Science day camps for children in the summer at SGU -Science Fair Judge 2015-16
Rod Bordeaux	FT	-BS Computer Science, Evergreen State College -12 graduate credits in MS Computer Science, Dakota State University -Certifications in Programming, Troubleshooting/P	-Systems Analysis Consulting with IHS and Veterans Administration -Information Mgmt Consulting -Computer Networking Consulting -Local utilities improving internet	-ACM Member -Communication Workers of America -Attending Case Study Institute at Evergreen State College (June) -Information Management Workshops/Semina	-Faculty Council Member and Officer -Board of Regents Faculty Representative -Assistant Department Chair for A&S to Godfrey Loudner	-Tribal Utility Commission -alternative energy projects (wind, solar, etc) -Cherry-Todd Electric BOD -Tribal Council -Veterans Administration

		roblem solving, Installation, Hardware/Software, Patient Database, Computer Networking, -30 yrs teaching experience at SGU -5 yrs Information Systems Officer at HIS -US Air Force Electronics/Communications Training -5 yrs Computer Hardware Communications, Electronic Switching Systems, and Programming at Western Electric & AT&T	technologies and cellular service -Consulting with Tribal Colleges to implement student tracking mechanisms -Extensive training in Programming, Information systems, and mathematics.	rs for student tracking at Tribal Colleges and AIHEC conference		-Informally work with WRHS students
James Spresser	FT	-PHD Speech Communications; Multi – Cultural Studies -MS Speech and Rhetoric	-Teaches: Speech, English, Theatre, Playwriting -Strength in basic Speech -Worked on Speech/English Programs	-Attended AIHEC Conferences -Wrote 2nd edition "Peoples Poetry" book - Wrote essay on Black Elk. Received from elders		-Volunteer / Assist at Sundances Assist local artist -Helped homeless animals -Worked at many poetry slams - 2016 – 2017 AIHEC Speech Team advisor -Drama Club Advisor
Jerry Lester	FT	-MS Mathematics, -30 years of teaching experience -Taught at COE College 2 yrs -Taught at University of Illinois 7 yrs	-Teaching Experience -Research Program: Locally Compact Quantum G -New methods for multiplication in College Algebra -New methods for computing repeating decimali	-Research on Quantum Groups new methods for College Algebra -Research on Teaching methods at COE college -Methods for using computers Harvard University -Busch Grants		-Active in Christian Life Fellowship Church -Jail Ministries
Michael Wandersee	A	-BS Biosystems Engineering, Michigan State University -6 yrs as working as an environmental engineer	-Experience in the environmental science field -first career position held was in the environmental law field -Physics, soils, watershed mgmt., environmental	-Environmental Engineer for IHS	-Senior Thesis Committee Member	-Boys & Girls Club Soccer Coach -Technical assistance to RST -Waste water consultations -RST Water/Waste Water Trainings

			monitoring, science, and law instructor -extensive grant writing & research experience			
Jurgita Antoine	A	-Ph.D. Anthropology, University of Oklahoma, 2008 -M.A. American Studies, University of Wyoming	-Extensive research and writing experience -Community-based research and collaborative projects -reviewer and author, *Tribal College Journal*	-American Anthropological Conference Annual Meeting, presenter, 2015 -Foundation for Endangered Languages Conference, presenter, 2015	-Senior Thesis Committee	-Director of Lakota Documentaries project: prepared a book manuscript and DVD, did public presentations -application of the mentor-apprentice model to translation and translator training
Annemarie Michaels	A	-J.D. University of South Dakota -M.A. English, University of South Dakota	-Managing Attorney Dakota Plains Legal Services	Info not provided		Info not provided

b) Describe how the staffing of your program is meeting the needs of your program; include any gaps you anticipate needing to address.

Staff is adequate for teaching core classes, but some classes are taught only once every four years. Science classes are especially thin due to not being able to replace instructors who have moved on or are deceased.

Current staffing of our program is not meeting the needs of the programs and students. Students do not benefit as much from an instructor who is teaching a very high course load, as office hours are limited and availability outside of class is as well. We have two vacant instructor positions, one in Computer Science and one in Chemistry/Physics. Filling these positions will open the door to more classes being offered and the potential for more degrees being offered.

An unmet need in tribal programs is having employees with GIS capability. We are looking at creating a one year certificate in Geospatial Science also adding this as an emphasis area to the current BS Environmental Science degree. Creating new geospatial courses will require an instructor skilled to teach them.

Summer 2016, we filled 2 positions, one in English/Speech and the other in Environmental Science with qualified faculty.

c) How well are your physical resources meeting your needs, which may include space, equipment, supplies and technology? How well is your budget meeting yours needs?

As far as physical resources, we have adequate supplies, equipment, and technology that we are able to successfully teach courses, but in some instances they are aging. However, with more resources and equipment, the capacity in which we are able to teach and students are able to learn will increase drastically. Giving students the best experience possible to prepare them for their career after graduation is very important. Larger sinks in the lab and more counter space in the stockroom. It would be nice to combine the physics & chemistry stockrooms into one large, usable space (break out the wall in between). The budget seems to run out each year, so we are not able to obtain the resources that we need. The ramps to the Arts and Sciences building are deteriorating and the siding is falling off. Also the foundation is slipping and the windows, where they exist, are in need of new sills. Our offices vary greatly in size, but we make do. The same is true of our classrooms. In some classrooms, technology is available if one doesn't mind hauling it around.

Marketing the Arts and Science Degrees to potential students is difficult because higher level courses students' may wish to take may not be available on the schedule. It's important to not only offer the freshman level courses that are require university wide, but also we need to offer the course that are required by our specific degree programs.

Professional development and pursuing higher degrees is very important for faculty. Additional funding in these areas would be ideal. Further funding for these activities and tuition reimbursement for faculty pursuing higher degrees should be considered by SGU.

Funding sources for science programs include EPSCOR and USDA grants. Funding sources for Humanities/Liberal Arts programs include Title III grant. As far as potential grant funding, there are many opportunities out there, but due to faculty schedules, we recommend a full time grant writer for the university, possibly on a contractual basis. Several grant opportunities have by-passed us this past year in the STEM field, a contracted grant writer would help bring in funds for the university.

Section 7. Recommendations and Preliminary Implementation Plan

Based on the information provided in this program review summarize the strengths of the program.

a) The greatest strength of this program is the inherent diversity of course offerings and flexibility for students to design a course of study relevant to their desires and goals for careers. This is especially designed to be not only culturally relevant, but also of importance to the reservation communities. The diversity and talent of the various instructors in the arts and science department is essential for the campus community. Much of our course offerings is the general education courses to all students at SGU. We advise students that are unsure of future plans. Most of these students start out with the AA Arts & Sciences degree, then from there move onto other degrees either by graduating with this degree or transferring to a different degree once that has been decided on. With that being said the A&S department advises the most students at SGU. We are the largest department with 8 filled positions, 2 positions that were hired to begin summer 2016, and 2 vacant positions. Being a department that is so diverse can have many benefit, but is also very challenging.

We provide STEM outreach to the K-12 schools in the surrounding area by offering different science camps throughout the year.

Even though we are not a research institution, for the past 3 summers, STEM students have been doing research locally either on their own or in collaboration with outside REU programs.

We have dedicated faculty who work together and do all that they can for the students. Definitely the examples of Wolakota are strengths.

Secondly, describe the challenges faced by the program.

b) The greatest challenge faced by the Arts & Science department is the size and diversity of the department. We offer 7 degree programs currently. We have 4 faculty that teach in the Humanities and 6 faculty that teach in the STEM fields. There are 2 vacant positions in the sciences, Computer Science and Chemistry/Physics. Due to the department being so large, I (Dana) was asked by Dr. Paul Robertson (former SGU COO) over a year ago why there were not 2 departments (1st humanities and 2nd STEM). I didn't have an answer except that they have always been Arts & Sciences, I didn't know there was a possibility that we could actually have 2 departments. This has been on the back of my mind for quite some time now. With the size of the department and the wide range of subject areas covered, I would like to recommend that administration look at the possibility of creating 2 departments.

The A&S department faces many challenges including the lack of vital infrastructure such as an active recruiting program for faculty and students, alumni association, professional development, course rotation, to name a few.

We have been under-staffed for some time and filling positions continues to be a problem because of limited university budget for faculty hires. Overall university enrollment has declined which then impacts class size and course offerings as well. These two factors then have served to decrease the availability of courses offered for graduation.

The high course load of the science instructors due to limited faculty has taken a toll. Currently, faculty have to teach 30 credits per year. This is a challenge for the lab sciences as 1 credit equals 3 hours of class time for labs. For lab courses (Biology/Chemistry/Environmental Science/Physics), contact hours are not considered a part of faculty load. This needs to change. Faculty teaching 15 credits (if all are lab courses) are actually in the classroom for 21 hours every week. This puts a strain on preparation, office hours, and time spent grading. It's important that enough courses are offered in a wide range of areas to meet student needs and keep them on track for graduation. Every semester is planned around student needs. The lack of full time faculty in the physics area for instance has resulted in PH203 not being offered because only 2 or 3 students need it but adjunct faculty are required to have 6 in the class for it to move forward. This is definitely a challenge. We have been asked by the RST to offer GIS courses toward a 1 year certificate in Geospatial

Sciences. We face the challenge of developing a sustainable program and having knowledgeable faculty to teach these new courses.

There are not enough faculty to teach all of the courses that students need at regular intervals. There is a lack of time for faculty outside of class, since course load is so high in some of the degree areas. There is a lack of funding to obtain all the resources necessary to sustain a program.

The challenge of further education to meet HLC requirements is something that we need to consider in the future for our current faculty. Due to high teaching loads (especially in the sciences), it is difficult for instructors to find time to take courses toward their masters or doctorate programs. The addition of faculty would definitely help alleviate this problem. If faculty need to take a program that isn't offered at SGU to achieve higher degrees, funding to reimburse at least a portion of tuition in the agreement that they would continue to stay on staff for 2 years (or whatever is decided on) after earning said degree or they would be required to pay that award back to the university. A program like this should be put in place to help meet HLC requirements.

One challenge faced by the English and other programs is instructors' low expectations, sometimes blaming it on culture. This issue extends to college from K-12 school system. For example, lack of understanding of English grammar is attributed to the fact that students come from a different cultural or linguistic background. I believe that instructors must find appropriate methods to teach their subject. For example, using culturally appropriate materials such as literary works by Lakota authors or showing by example how things are done might motivate students. (As an example of a possible oral presentation format, one instructor shared her research poster with her class. She was quite surprised when some students made posters for their final presentations, although this was not required.)

This is a challenging environment, and it takes a great deal of physical and emotional stamina to combat the snow, the isolation, the distances to medical services, family, entertainment, and shopping conveniences that most people in America take for granted. Teaching at SGU requires sacrifice even of people who are accustomed to a rural environment. Our isolation helps us to understand the needs of our students and their families as well. In addition to coursework, instructors regularly provide first assistance to students whose friends and relatives have committed suicide, died in tragic car accidents, suffer from cancer and other medical maladies, have alcohol and/or drug addictions and rely upon the students for financial, physical, and mental support. Because we are a small university, we know our students and their families, and spend time with them outside the classroom in many informal settings. This close proximity gives us the opportunity to do informal recruiting, and advising. We are also able to recommend the places and persons where they can receive the professional help they need whether it is babysitting, tutoring, or spiritual guidance.

That being said, we hold our students to the same standards we have held students in other environments. Most of the Arts and Sciences instructors have taught in other universities. We do not accept less of our students in either amount or quality of work than is expected in any other American university classroom. In fact we expect more, since we are charged with the mission of helping them to learn the culture, history, art and literature of Native America in addition to that of the rest of the country. Our Foundational and Freshman English courses were commended in the last HLC report for the high content of research required. Our English courses are accepted as transferrable to any other University in the country. In fact, our summer classes have a high degree of enrollment by students who plan to enter a larger university in the Fall.

The diverse needs of our students and our diverse offerings to them are both a blessing and a challenge. Grammar, correctness and punctuation refreshers often include comparisons between English, Lakota and texting sentence structure. History discussions often move from the history classroom, to the English classroom to the lunchroom to a Lakota Studies classroom and back. Psychology, Health and Wellness, children's education and Tribal politics are treated in a similar holistic fashion. Our students expect their instructors to have a much wider knowledge base than the average university professor who is expected to specialize. It takes a great deal of preparation and shared experiences to

keep up our reputation as Little Harvard on the Prairie. We have some very bright and motivated students who expect discourse on Mozart, Shakespeare, Nake Nula Waun, and Li'l Wayne.

There are many STEM grants available to tribal colleges. SGU doesn't have a full time grant writer and faculty are limited by the time to write such grants (teaching is the number 1 priority). There are many opportunities for student research funding that we are missing out on because we can't take advantage of the funding right on our door step.

The computer science program (CR# 1996-16) approved in 1996, Section V. Personnel, stated it would add four (4) new computer science faculty in 1997 thru 2000. This did not happen and the existing faculty left SGU around 1999. Since the Fall 1999 semester, there has been one full-time faculty and various adjunct servicing the program. Despite the staffing, SGU has graduated 13 students from the computer science program and all are working or furthering their education. Since program has one full-time faculty and if there was professional development, there is no spare time for taking advantage of it. The one faculty is teaching an overload each semester in order to offer a course rotation that must meet the needs of students from freshmen to seniors. There is no time for computer science faculty to write for grants or perform research. Last, but not least, students request other areas of computer science to be offered such as: computer graphics, multimedia, information management, etc.

There needs to be a better system to do bookorders. This fall semester, we are over a month into the semester and some student don't have their textbooks yet. There is no reason for this, when bookorders are turned in on time, books should be ordered on time. This affect the instructors teaching the courses and also affects the students.

A final challenge faced by the A&S department is being located in different buildings on different campuses. It is difficult as we can go a whole month without seeing faculty on the other campus. Due to the business of schedules etc, this is a great challenge.

Provide recommendations for direction of the program in the next four years.

c) Ideally, we should be looking at matching our course offerings to student interests. Ultimately, our program is looked upon as a service to other departments first and that needs to change to service to our department students first. While still offering the core courses necessary, we could then offer more of the higher level courses for majors.

One recommendation made is to provide more hands-on and physical learning opportunities in the classroom. The majority of our students are adults who prefer learning with a purpose and therefore the abstractions of Algebra may elude them until a formula is needed to ascertain the proper amount of fertilizer to apply to that oddly shaped acreage that is more slope than flat.

There must be more opportunities for instructors and students to interact informally and formally to exchange insight, technique and content so that knowledge is disseminated in a wider range for a better purpose.

An active recruiting program at SGU would be ideal. A full time staff member to go visit the area high schools all year round recruiting those students to SGU would be beneficial for the A&S programs as well as all programs across campus.

Usually, English programs have two components - literature and linguistics, therefore, I would recommend adding a course Intro to Linguistics/Intro to Language/Foundations of Language. This course could introduce students to basic linguistic terms and analysis. (Similar courses are taught at other tribal colleges.)

We would like to see the vacant positions filled to further meet the needs of future students and students that are already enrolled in the various programs. The Computer Science program will not grow if students have greater interest in various computer related courses and degree programs that are not offered here, not all students want to be programmers. Although the computer science program offers several subjects, there is room to expand into other disciplines.

A goal for this year is to begin a biology degree that will fill the needs of students that want to pursue degrees in the medical field or veterinary fields. At least one more faculty member is required so that we can regularly offer courses in chemistry and physics. There is also interest in a science specialization for the education degree. This is something that students want and have been asking for.

An unmet need in tribal programs is having employees with GIS capability. We are looking at creating a one year certificate in Geospatial Science also adding this as an emphasis area to the current BS Environmental Science degree. Creating new geospatial courses will require an instructor skilled to teach them.

Build stronger connections with between the portions of the department that is located on the other campus. We have numbers of those who have graduated from the program, but I'd like to see those numbers increase. I'd like to somehow involve the community more and get more upcoming students interested in the sciences. Outreach or community service may be a good place for recruitment of new science students.

We recommend archiving the AS physical science degree as exhibited by student number in the program in the last 10 years. There have been zero graduates from the degree in the last 10 years (the last graduate with an AS Physical Science degree was in 2000). In the time the program has existed (since 1993), there have only been 3 students ever enrolled in the program. One graduated in 2000 with an AS Physical Science (entered 1990), one graduated with a different degree in 1995 (entered 1991), and one has not taken classes at SGU since Fall of 2008 (entered 2003).

The need for an A&S ethics class is very important. Ethics are an important part of all areas of the A&S degree programs. Its also a PLO for just about every degree program that is offered in the A&S degree. The current ethics class is a business ethics class, which misses many of the important areas of ethics.

A capstone course and internship for the liberal arts degrees also need to be considered to bring this degrees in current standing with other liberal arts programs.

It is also recommended that we bring our degrees in line with degrees around the country due to the contraints of financial aid, we are working on reducing credit hours to 120 for BA & BS degrees and 60 for AA and AS degrees. With this comes directed electives that we require of our students. Program curriculum maps will have to be updated to reflect status sheet changes.

A system should be put into place to track paperwork through administration (POs/travel requests/services rendered/receipts/bookorders).

There should be a method for faculty to access student advisee information and student class lists via jenzabar.

Final recommendation, for the university to hire a full time grant writer, and search out grants that can be used for faculty fellowships to fund current faculty in the pursuit of higher degrees to meet HLC requirements.

Describe the human, physical and financial resources needed to accomplish the mission of the program.

d) To be able to accomplish the mission of the Arts & Sciences program and therefore the mission of SGU, we must have enough faculty to meet the needs of the various degrees offered in the Arts & Sciences department.

Currently, 2 vacant positions have been frozen and 2 positions were filled summer 2016; filling these positions would greatly increase the course offerings to students.

Computer Science requires at minimum two full-time faculty to be able to offer and rotate classes currently required for graduation. In order to add emphasis areas, additional faculty with specific degrees and experience are required. The natural science courses require a chemistry/physics instructor with ideally a PhD. We are also in need of a GIS instructor

(or current faculty to achieve further degrees) in this area to meet the need of the RST tribal programs. With that being said, the A&S department could use at least 3 more faculty members.

Library and computer lab services came up as an obstacle. Library holdings are outdated as most books were published in the 1980's and 1990's. I brought up this issue to the library director who accepted my suggestions for updates. Also, some students were frustrated due to institutional limits on their computer use and printing. They had to print their homework assignments for my class, and sometimes they were not able to do that. While I think that printing needs to be controlled, students must be able to print their homework assignments at the university.

It all revolves around enrollment. This then points to a need to increase PR efforts as well as utilizing the existing alumni to contribute to recruitment efforts.

In regards to faculty development, one faculty believes that university policies should ensure that publishing and research presentations are not a privilege, but a requirement to keep the faculty up-to-date and current in their academic field.

SGU desperately needs to improve its salary offerings in order to attract more people of all talents for its workforce. Further, housing is needed for students, staff, and faculty.

This may already be stated above, but I'd like to see the programs built up and resources readily available for labs and other hands on activities. For biology and related courses, it would be great to have fossils, skeletons, pelts, etc., available for students to handle and appreciate rather than just hearing about. I think that would ramp up excitement and also create a memory that will stick with the student.

A university wide grant writer or consultant is needed to pursue grants that are available on a daily basis to find activities university wide.

Additional funding is needed for faculty to pursue higher degrees as required by the HLC. Tuition reimbursement should be considered an important augmentation to budgets.

Faculty salaries also need to be evaluated, and a salary scale needs to be created that takes into consideration years of teaching and experience. Right now, there is inequity in the faculty salaries.

Faculty are in need of technology equipment such as projectors and computers in all of the classrooms. Ceiling mounting these projectors so they don’t take up the needed space in the classroom. Also, projectors on carts in the chemistry lab could be a potential hazard. Technology equipment like “airslates” would be useful in the physics and math classes.

I will also note the struggle to track orders, submit orders, ensure paperwork gets to the person that it should. A system in jenzabar where we can submit POs/travel requests/services rendered/receipts/bookorders should be put in place to be able to more efficiently track this paperwork.