

Program Review for the Associates of Science in Science Degree

**Arts and Sciences Division
University of New Mexico, Gallup
January, 2016**

Document 1: Self-Evaluation Report from Arts and Sciences Division Interim Chair Bruce Gjeltema, Ph.D.

The Arts and Sciences Division of the University of New Mexico at Gallup was inaugurated in the fall of 2011 as a result of a reorganization based on function. It is constituted by the former separate departments of Math and Science, Arts and Letters, Transitional Studies, and Social Sciences. All of the programs and courses within the Arts and Sciences Division are closely aligned with the various departments at the University of New Mexico in Albuquerque. Our curriculum includes developmental courses to foster mathematics and language literacy and to prepare students for college level academic work. Beyond the developmental foundation, the Arts and Sciences Division offers a full array of college-level core courses that meet the needs of associate degree and certificate programs across the campus and the first two years (lower division) curriculum for transfer.

The mission of the Arts and Sciences Division is to serve as the junior college portion of the institution, primarily serving Strategic Direction #1 of the January, 2012 UNM-Gallup Strategic Plan which calls for "strengthening programmatic and instructional excellence and innovation." Sub-points speak to our division's responsibilities to "ensure that all programs are academically and professionally excellent, viable, and serve the needs of our students and the community," and to provide "clear programs and paths allowing students to progress to bachelor's degree programs" (UNM-Gallup Strategic Plan, January, 2012). The division is currently served by over thirty full-time and more than twenty adjunct faculty.

The Associate of Science in Science degree is set up to provide a broad background and preparation for the student who plans to transfer to a four-year institution to pursue a bachelor's degree in science, engineering, or a health related field. Because of variations in academic preparations and career aspirations, each student in the AS in Science program is required to meet with a Mathematics and Science field advisor to develop an individualized program. The program outlines the sequence of required courses and elective the student will take. This degree has a required science core of twenty-four (24) credit hours in biology, chemistry and Physics and an additional fourteen (14) credit hours of science electives. In order to fit these credit hour requirements into a sixty-three (63) hour degree, the amount of core courses allowed is less than the basic core requirements of most UNM Albuquerque's bachelor's degree programs in the sciences. This means that students transferring may have completed a significant amount of science courses, but may have to pick up additional course in English, social and behavioral sciences, humanities, and foreign languages.

Under the direction of Mr. Chris Platero, we have had an active grant at our Gallup campus to encourage our students to pursue sciences degree and science careers entitled, "Roads to Achieving a Degree in Science (RADS)" which has worked in conjunction with this degree program as has Dr. Kamal Sharma's summer internship in science at New Mexico State University. Yet in the past eight years (sixteen semesters), UNM-Gallup has graduated a total of eight (8) students with an AS in Science. With these low numbers, however, there are currently nearly four hundred (400) students declaring themselves to be in the Associates in Science in Science degree program at UNM-Gallup. The reason for this is that enrollment into the nursing program and other health career programs is competitive and takes place after a student has completed some of the preliminary requirements before being accepted and assigned to a specific cohort. Since the banner system requires all students to declare a specific program, students typically "park" themselves temporarily in the AS in Science program until they either make it into nursing or switch to some other program of study. As for the students who complete the AA in Science degree as it was intended, we do not currently have data on how many students have transferred to a four year school, nor how many students who began at Gallup have

graduated with a bachelor's degree. We do, however, have some anecdotal information concerning some successful individuals.

Because of the nursing program and several popular associate's degrees in health careers, UNM-Gallup has been regularly been offering courses in Biology, Chemistry, Earth and Planetary Sciences, and Physics. We have been offering three sections of Biology for Health Related Sciences (Biol 123), two sections each of Biology for Non-Majors (Biol 110), Human Anatomy and Physiology Laboratory for Non-Majors (Biol 139), and Human Anatomy and Physiology for the Health Related Sciences (Biol 200), and one section each of Human Anatomy and Physiology for Non-Majors (Biol 136), Human Anatomy and Physiology laboratory (Biol 227), and Human Anatomy and Physiology I for the Health Sciences (Biol 237) and an occasional Molecular and Cell Biology (Biol 201). The average head count total has been 467 since we moved to two full-time and one part-time faculty in the fall of 2013.

As far as our offerings that serve as the basis for the bachelor's in science, the most useful that are offered at UNM-Gallup are Molecular and Cell Biology (Biol 201), General Chemistry (Chem 121), General Chemistry II (Chem 122), Introduction to Geology (EPS 101), and The Blue Planet (ENVS 101). Nearly all of our students at UNM-Gallup, however, come unprepared for college level coursework in mathematics or the sciences and need to complete a sequence of math courses to be able to succeed at College Algebra (Math 121) and also need to work through Physics for non-majors (Phyc 150 and Phyc 151) before they are ready for Physics for math and science majors (Phyc 160 and Phyc 161), which we do not offer at the Gallup branch.

The courses that are currently required for the Associate of Science in Science degree include the chemistry and physics courses listed above. They also include Biology for Health Related Sciences (Biol 123) and Human Anatomy and Physiology I for the Health Sciences (Biol 237) which are not part of the required courses in any of the standard science bachelor's degrees. Introduction to Geology (Eps 101) and the Blue Planet (Envs 101) are not included in our AS in Science's requirements, although they are potentially useful for completing bachelor's degrees in various science areas. Given the inclusion of potentially unusable courses in the requirements and the small number of courses that are offered at UNM-Gallup, our Associate of Science in Science degree does not appear to provide an effective first two years of coursework needed for a bachelor's degree in science offered at four-year institutions.

The much more exercised use of the AS in Science degree program is as a temporary place for students looking to move forward into the associate's degree in nursing or one of the other health career's associate's degrees offered at UNM-Gallup, once some of the pre-requisites are completed. The most active of these register with the nursing department's academic counselor who does the lion's share of working with students within this degree. This practice is preferable to the past practice at UNM-Gallup of students "parking" in the looser and less focused Associates of Arts in General Studies degree program. This often misused program has gone through a significant reform and reduction in the last few years, prompting the shift towards the AS in Science for this purpose. As long as the nursing program continues to be a five-semester program where cohorts are competitively selected to join limited second-semester cohorts, students appear to need to make temporary use of this particular program.

Efforts have been made in recent years to reshape the AA in Science program by offering concentrations in Physical Science and Biological Science. These efforts were inadequate, in part, because of our inability to offer Molecular and Cell Biology (Biol 201) on a regular basis. Also the sparseness of our offerings in many of the basic required courses without a much larger faculty and science lab commitment undermined these reforms.

Analysis of our current Associate of Science in Science degree program included the following:

1. The major purpose of the AS in Science degree program appears to be to serve as a temporary home for students who are taking required courses and who are preparing to apply for the nursing program and other health career associate degree programs.
2. The associate's degree program is too broad and open to provide much guidance for potential transfer students as presented in the course catalogue. A more useful program might select required courses that are specifically part of main campus' four-year math and science programs. We would also need to replace some of the 14 credits of science electives with required core courses that will also better prepare them for their bachelor's degree work.
3. Given the nature of the preparation of a vast majority of our incoming students, continuing to offer an Associates' degree adequately designed to cover the first two years of a college bachelor's degree may be inappropriate.
4. Although the graduation rate for the AS in Science degree is low, our current offerings in chemistry, biology, physics, and earth and planetary sciences are employed to serve health careers majors and transfer students not enrolled in the AS in Science degree. Having the AS in Science therefore does not seem to add additional costs.
5. We currently fail to adequately identify, advise and support students for successful completion of the degree leading to transfer.

We recommend that as we go forward, we restructure the AS in Science degree in a couple of ways:

- I. Gather data on the students currently enrolled in the AS in Science degree to determine how many are actually interested in attaining the foundation for a bachelor's degree in science, and how many are using the AS in Science as a place to "park" as they prepare themselves to apply for admittance to the nursing program.
- II. Gather data on the number of students who have taken coursework at UNM-Gallup and then transferred to main campus or other four-year schools. Also gather data on how many people who transferred before earning an associates' degree went on to complete a bachelor's degree at a four-year school.
- III. Develop one or more health careers or pre-nursing certificates that can better serve as places for students at UNM-Gallup to prepare for nursing or other health careers. Design these certificates to encompass necessary courses for that aim.
- IV. Develop a pre-STEM certificate that includes pre-college math and physics for non-majors and other preliminary science courses that will organize curriculum that UNM-Gallup students need to prepare for math and science bachelor degree coursework.
- V. Maintain the current configuration until we can design "meta majors" influenced structures to more efficiently and effectively meet the needs and reward the efforts of our students to

prepare for both our in-house nursing program and transfer to bachelor's degree programs at four-year schools.

Current AS in Science Program

Area

Writing and Speaking (6 credits)

ENGL 110 Accelerated Composition	3
ENGL 120 Composition III	3

Mathematics (11 credits)

MATH 162 Calculus I	4
MATH 163 Calculus II	4
CS 151L Comp Progr Fund	3

Physical and Natural Sciences (24 credits)

BIOL 123(124L) Biol for Hlth Rel Sciences	4
BIOL 237 (227L) Human Anat & Physiology	4
CHEM 121 (123L) General Chemistry I	4
CHEM 122 (124L) General Chemistry II	4
PHYC 151 (151L) General Physics I	4
PHYC 152 (152L) General Physics II	4

Fine Arts/Humanities/Social Science (6 credits)

See UNM Core

Health Promotion/Physical Education (2 credits)

See UNM Core

Foreign Language (3 credits)

See UNM Core

Electives (14 credits) Choose CHEM 212, BIOL 238 (238L), 202, EPS 101/105, 201

Fine Arts (3 credits)

See UNM Core

Draft Proposal for a Pre-STEM Certificate

Writing and Speaking (9 credits)

ENGL 110 Accelerated Composition	3
ENGL 120 Composition III	3
ENGL 219 Technical Writing	3

Mathematics (11 credits)

MATH 121 (107) College Algebra	4
MATH 123 Trigonometry	3
MATH 150 (108) Pre-Calculus Mathematics	4

Physical and Natural Sciences (12 credits)

BIOL 123 (124L) Biol for Health Related Sciences	4
CHEM 111 General Chemistry	4
PHYC 151 (151L) Physics for Non-Majors I	4
PHYC 152 (152L) Physics for Non-Majors II	4

Draft Proposal for a Pre-Nursing Certificate

Writing and Speaking (9 credits)

ENGL 110 Accelerated Composition	3
ENGL 120 Composition III	3
CJ 130 Public Speaking	3

Mathematics and Statistics (4 credits)

MATH 120 (106) Intermediate Algebra or MATH 121 (107) College Algebra	4
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Physical and Natural Sciences (12 credits)

BIOL 123 (124L) Biol for Hlth Sci and N-Maj	4
BIOL 237 (227L) Human Anat and Phys I for Hlth Sci	4
BIOL 238 (228L) Human Anat and Phys II for Hlth Sci	4
CHEM 111 Elements of General Chemistry	4

Social and Behavioral Sciences (6 credits)

PSYCH 105 General Psychology	3
PSYCH 220 Developmental Psychology (Lifespan)	3

Academic Outcome, Total # Awards by Term for the following

	Summer 2007	Fall 2007	Spring 2008	Summer 2008	Fall 2008	Spring 2009	Summer 2009	Fall 2009
AA Art Studio						1		
AA Liberal Arts	1	4	7			1	12	
AA Psychology		1	3	1		1		
AAS General Studies	2	8	14	3	5	18	1	12
AS Science						1		

UNM Gallup Office of Institutional Research

Drafted: 27JULY2015

Data File Source: ODSMGR.Academic_outcome

SAS Program: V:_mariejulienne\GALLUP\SAS Data\ADHOCDATAREQS\SPRING2015\VACAOUTC

Analyst: Marie Julienne

Spring 2010	Summer 2010	Fall 2010	Spring 2011	Summer 2011	Fall 2011	Spring 2012	Summer 2012	Fall 2012	Spring 2013	
			3	8	1	3	6	4	5	1
7				1			1		2	11
1										2
17	3	6	25	7	7	22	1	11	17	17
										2

COMES.SAS

Summer 2013	Fall 2013	Spring 2014	Summer 2014	Fall 2014	Spring 2015	Total
		2	2		3	9
		2	15	1	6	8
1		4			1	2
5		3	15	2	7	9
		1			2	2
						8



Current Assessment Plan

Each of the courses within the AS in Science degree have appropriate Student Learning Objectives and assessment benchmarks that contribute to program learning goals. Since there is no capstone course or pan-ultimate endorsement testing, there is not built-in program assessment system and no program assessment plan.

Courses in the laboratory sciences at UNM-Gallup, however, are designed to include the New Mexico Higher Education Department Laboratory sciences competencies that include the following:

1. Describe the process of scientific inquiry
2. Solve problems scientifically
3. Communicate scientific information
4. Apply qualitative analysis to scientific problems
5. Apply scientific thinking to real world problems

The basic program learning goals reflect these competencies:

1. Mastery of knowledge, skills and behaviors necessary to continue their studies with an end to completing a bachelor's degree in one of a variety of fields related to science, engineering, or the medical professions.
2. Specific mastery of knowledge and concepts and the ability to effectively apply them for two of the following areas: biology, chemistry, or physics.
3. Ability to apply the scientific method of inquiry, critically evaluate experimental design, and create and interpret numerical and graphical data.
4. Ability to demonstrate basic laboratory skills to investigate scientific questions.

NM HED Area III: Laboratory Science Competencies

Competency <i>Students will:</i>	Rationale <i>Students should:</i>	Assessment Suggestions
Describe the process of scientific inquiry.	Understand that scientists rely on evidence obtained from observations rather than authority, tradition, doctrine, or intuition. Students should value science as a way to develop reliable knowledge about the world.	Presentation of case studies, problems, and/or laboratory exercises that call for the student to apply the "scientific method."
Solve problems scientifically.	Be able to construct and test hypotheses using modern laboratory equipment (such as microscopes, scales, and computer technology) and appropriate quantitative methods. Students should be able to evaluate isolated observations about the physical universe and relate them to hierarchically organized explanatory frameworks (theories).	Presentation of case studies, problems, and/or laboratory exercises that call for the student to construct and test hypotheses related to the scientific discipline they have elected to study.
Communicate scientific information.	Communicate effectively about science (e.g., write lab reports in standard format and explain basic scientific concepts, procedures, and results using written, oral, and graphic presentation techniques).	Require written and oral work to be evaluated according to college level writing criteria, as well as the standards of the field being studied.
Apply quantitative analysis to scientific problems.	Select and perform appropriate quantitative analyses of scientific observations. Students should show familiarity with the metric system, use a calculator to perform appropriate mathematical operations, and present results in tables and graphs.	Presentation of case studies, problems, and/or laboratory exercises that call for the student to apply appropriate quantitative techniques for the level and type of material being covered.
Apply scientific thinking to real world problems.	Critically evaluate scientific reports or accounts presented in the popular media, understand the basic scientific facts related to important contemporary issues (e.g., global warming, stem cell research, cosmology), and ask informed questions about those issues.	Presentation of case studies, problems, and/or laboratory exercises that call for the student to critically evaluate scientific accounts from the popular media. Exam questions should call upon higher-order thinking rather than rote knowledge.

Core Competencies Assessment FALL 2014: Area III Courses

University of New Mexico-Gallup Branch
CHEM 111 Elements of General Chemistry

Laboratory Science Competencies
NMCCN=11114

<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/ Priorities
<p>1. Students will describe the process of scientific inquiry. Students should:</p> <p>a. Understand that scientists rely on evidence obtained from observations rather than authority, tradition, doctrine, or intuition.</p> <p>b. Students should value science as a way to develop reliable knowledge about the world.</p> <p>2. Students will solve problems Scientifically. Students should:</p> <p>a. Be able to construct and test hypotheses using modern lab equipment (such as scales, pH meter, microscopes, computer technology) and appropriate quantitative methods.</p> <p>b. Be able to evaluate isolated observations about the physical universe and relate them to hierarchically organized explanatory frameworks (theories).</p> <p>(continued)</p>	<p>The assessment of student learning outcomes was measured using pre- and/or post-assessment test and/or their final passing grade of 75% or higher in chemistry. During Fall of 2014, students were asked to take a pre-assessment chemistry test at the beginning of the semester. The assessment of students learning was based on their performance in chemistry course at the end of the semester. Students Learning Outcomes 2, 3, and 4 were evaluated using the attached pre-assessment test in chemistry and three tests with multiple choice questions (similar to the pre-assessment test). During the semester, students were also required to do labs and quantify various physical properties of matter, such as mass, volume, density, amount of heat exchange,</p> <p align="right">(continued)</p>	<p>For Fall 2014, SLO2, SLO3, and SLO4 were evaluated using a combination of pre-assessment test and final grade at the end of the semester. Two sections of CHEM 111 classes were evaluated using the same SLOs and the same criteria. Scores in pre-assessment, homework, classwork, quizzes, lab reports, three one-hour exams and final exams were part of the criteria.</p> <p>Fall 2014: 64.8% of total chemistry students showed improvement in their knowledge of chemistry at the end of the semester. Only 11.10% of students showed slight improvement and 13% of students showed no improvement. The remaining students (24.10%) showed no improvement.</p> <p align="right">(continued)</p>	<p>To help students improve on their learning of chemistry, and solving problems scientifically using quantitative analysis, following steps will be taken:</p> <ol style="list-style-type: none"> 1. Surveys and additional exercises related with various chemistry topics will be developed. 2. These surveys and exercises will be used three times per semester in Fall 2015 and the results will be disseminated. 	<p>Goals to be achieved:</p> <ol style="list-style-type: none"> 1. Improve students learning for SLO2, SLO3, and SLO4. 2. Evaluate SLO 5.

Core Competencies Assessment FALL 2014: Area III Courses

University of New Mexico-Gallup Branch
CHEM 111 Elements of General Chemistry

Laboratory Science Competencies
NMCCN=1114

(continuation)	(continuation)	(continuation)	(continuation)	(continuation)
<u>State Competencies</u> (Learning Outcomes Being Measured)	<u>Assessment Procedures</u> (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
<p>3. Students will communicate scientific information. Students should: Communicate effectively about science (e.g., write lab reports in standard format and explain basic scientific concepts, procedures, and results using written, oral, and graphic presentation techniques.)</p>	<p>specific heat, pH, molarity, etc. and identify the correlations if any. The lab reports were in standard format and students had to explain basic scientific concepts associated with the labs. Throughout the semester, students were also asked questions in which they had to perform appropriate mathematical operations and present their results in scientific notation with correct number of significant figures. The questions were part of their homework and three class exams during the semester. Both sections were given identical homework, three in-class exams and the final exam along with identical labs.</p>	<p>By comparison, the overall percentage rate of improvement in knowledge of chemistry was higher in section 400 than in section 401. This could be due to the fact more of the students in section 400 were attending my help peer study group. The comparative charts are attached.</p>		
<p>4. Students will apply quantitative analysis to scientific problems. Students should: a. Select and perform appropriate quantitative analyses of scientific observations. b. Show familiarity with the metric system, use a calculator to perform appropriate mathematical operations, and present results in tables and graphs.</p> <p align="right">(continued)</p>	<p align="right">(continued)</p>			



Core Competencies Assessment FALL 2014: Area III Courses

University of New Mexico-Gallup Branch
CHEM 111 Elements of General Chemistry
 (continuation)

Laboratory Science Competencies
 NMCCN=1114

State Competencies (Learning Outcomes Being Measured)	Assessment Procedures (Process/Instrument named or described – rubric attached)	<u>Assessment Results</u>	<u>How Results Will Be Used To Make Improvements</u>	<u>(Optional)</u> Recommendations/Goals/Priorities
<p>5. Students will apply scientific thinking to real world problems. Students should:</p> <ul style="list-style-type: none"> a. Critically evaluate scientific reports or accounts presented in the popular media. b. Understand the basic scientific facts related to important contemporary issues (e.g., global warming, stem cell research, cosmology), and ask informed questions about those issues. 	<p>The combined data for two sections of CHEM 111 (Fall 2014) are reported and are summarized in the appendix. The data from both classes in Fall of 2014 (two sections) semester are reported and summarized in the appendix.</p> <p>Example of the pre-assessment test is also provided in the appendix.</p>			
<p align="center">End – Laboratory Science</p>				

Program Instructor List

The Associate in Science of Science degree is one of our broad, transfer-orientated degrees, and the courses included cover a fairly wide spectrum of general education disciplines. If we focus specifically on the science courses, however, our core faculty include Dr. Kamala Sharma, Chris Platero, Dr. Antoinette Abeyta, and Vickie Olson.

Kamala Sharma, Ph.D., Professor of Chemistry

Education: Ph.D. in Chemistry, Oregon Graduate Institute of Science and Technology
Masters in Chemistry, University of Oregon

Courses Taught: Chemistry 111, 121, 122

Chris Platero, Associate Professor of Physics and Math

Education: Masters in Mechanical Engineering, University of New Mexico

Courses Taught: Physics 151, 152
Statistics 145

Antoinette Abeyta, Ph.D., Assistant Professor of Earth and Planetary Science

Education: Ph.D. in Geology, University of Minnesota
Masters in Geology, University of Minnesota

Courses Taught: Earth and Planetary Science 101 (Geology)
Environmental Science 101

Vickie Olson, Lecturer III in Biology

Education: Masters in Biology, University of South Dakota

Courses Taught: Biology 123, 237, 238

Advisement Summary

The Arts and Sciences division has had a number of discussions with the nursing department (and their advisor) about the current functioning of the Associate of Science in Science degree. We have also had a number of conversations with the Student Services advisors about the students genuinely interested in transfer and those preparing to apply for acceptance into a local associate's degree program in the health careers. They have noted the low completion rate for the transfer students.

There is an overlap, however, of the students enrolled in the Associate of Science in Science Degree and students who participate in both the RADS (Roads to a Science Degree) grant program and the AISES (American Indian Science and Engineering Society) club. Within those organizations, there is encouragement, inspiration and advisement taking place for those who are contemplating transfer.

The majority who are aspiring to acceptance in the Associate of Science in nursing program (or other health careers programs) are served by an in-house nursing program advisor as well as by the student services advisors. We are currently working to better coordinate that work.

Program Advisory Board Recommendations

The Associate of Science in Science Degree is designed as a transfer degree and does not have an occupational program advisory board. No Recommendation from such a board is available. Most of the students in the program, however, are in preparation for application to a health careers degree, many of them the Associate of Science in Nursing degree. Perhaps Issues associated with these students (which are regularly addressed by the in-house Nursing Program advisor) could also be taken up by the Nursing program advisory board.

Nationally or Regionally Accredited External Review, With Recommendations

The Associate of Science in Science Degree and the laboratory science courses offered at the University of New Mexico, Gallup, are part of the accreditation of the University of New Mexico as a whole and are not subjected to an external accreditation review by any separate organization. Our program and its coursework are under the supervision of the various science departments of the University of New Mexico, Albuquerque.

Summary Report from respective Division members

There are no separate formal summary reports from any of the respective division members.

The author of this review, Interim Chair Bruce Gjeltema, Ph.D., has been reviewing the AS Program in Science with two main considerations in mind:

- 1) How does the current program function for the students who instead of seeking an associate's degree in science are declaring themselves enrolled in the program to maintain temporary formal enrollment status? Are there alternative ways to process these students that serve to maintain good standing in the university and allow for access to financial aid?
- 2) What should be the relationship between this degree (or an alternative) and needs of our UNM-Gallup students who seek to prepare for bachelor's level work at a four-year institution? Can a more realistic and functional structure be formulated that provides needed background as well as useful first- and second-year college coursework?

I have conducted both internet conversations and held a face-to-face meeting with Dr. Abeyta, Dr. Sharma, Mr. Platero, and Ms. Olson about these matters, and our recommendations rely heavily on their input. Since mathematics coursework is involved in this current degree and in the various alternatives that are under consideration, the science faculty has requested additional input from the mathematics faculty. I have not yet expanded the conversation to include those individuals.

We recommend that we explore changes in the current associate's degree in science based on accurate data on the needs of two distinct student populations currently enrolled in the degree program. This will require material from institutional statisticians, the registrar's office, and from both student service advisors and the nursing advisor.

Preliminary assessment indicates that offering an associate's degree which constitutes the first two years of the typical bachelor's degrees at four-year institutions is likely unrealistic for nearly all of our students who desire eventual transfer and is inappropriate for those doing coursework in preparation for application to our local nursing program. One alternative that we will pursue is to create two or more certificates that include pre-college math and science coursework that we already offer. One would be a pre-nursing certificate that would recommend courses needed as background for college-level nursing. The other would be a Pre-STEM certificate that would effectively prepare UNM-Gallup students to pursue science bachelor's degrees.

The Arts and Sciences Division will be actively involved in shaping alternatives to the current AS in Science degree, but recommends that we leave the current degree in place until the alternatives are put into place.





Dean of Instruction Office

Thursday, January 28 2016

Dr. Matt Mingus, Chair
Faculty Senate Curriculum Committee
UNM Gallup

Dear Dr. Mingus,

This letter is in reference to this Friday's review of the Associate of Science in Science Degree.

I have read the materials submitted by Dr. Gjeltrema, Chair of Arts and Sciences, and met with him to discuss his recommendation.

The rationale in the documentation shows that Dr. Gjeltrema has consulted widely with the science faculty and Ms. Kathy Head, Director of Nursing, before making his recommendation. After analyzing the current degree, Dr. Gjeltrema asks that the curriculum committee allow the program to continue in its present form until two new certificates can be developed (pre-nursing and pre-STEM.) Dr. Gjeltrema argues that although the present degree is stringent it does not adequately serve students who aspire to either transfer to a four-year degree program or enter one of our Health Career pathways.

The data that is most concerning is that the degree has had only eight (8) graduates but has 400 students as declared majors. Dr. Gjeltrema explains that this disconnect is caused by nursing/health career students needing to register for a degree to be eligible for financial aid, but without any intention of completing that degree. This has adverse effects both on the students and institutional data reporting.

Having this degree in place short-term does serve a legitimate purpose in allowing our students to be eligible for financial aid, but Dr. Gjeltrema predicts that a recommendation will be made in the near future to the curriculum committee to discontinue this degree. How long it will take to write the two proposed certificate programs is unknown.

I recommend that the curriculum committee approve of Dr. Gjeltrema's request that the program be allowed to continue for a limited time. How long that extension should be I will leave to the judgement of the committee.

Truly,

A handwritten signature in black ink, appearing to read "Kenneth R. Roberts".

Professor Kenneth R. Roberts, Dean of Instruction.

Cc. Dr. Gjeltrema.