

## Cover/Signature Page – New Programs Follow-up Report Template

**Institution Submitting Request:** *Dixie State University*  
**Program Title:** *Mathematics and Mathematics Education*  
**School or Division or Location:** *225 South 700 East, St. George, Utah 84770*  
**Department(s) or Area(s) Location:** *225 South 700 East, St. George, Utah 84770*  
**Recommended Classification of Instructional Programs (CIP) Code<sup>1</sup>:** *27.0306*  
**Board of Regents' Approval Date:** *01/21/2011*

**Proposal Type (check all that apply):**

Regents' General Consent Calendar Items		
R401-5 OCHE Review and Recommendation; Approval on General Consent Calendar		
SECTION NO.		ITEM
5.6.1	<input checked="" type="checkbox"/>	Three-Year Follow-Up Report of Recently Approved Programs
5.6.2	<input type="checkbox"/>	Two-Year Follow-Up Report of Fast Tracked Certificate

**Chief Academic Officer (or Designee) Signature:**

I certify that all required institutional approvals have been obtained prior to submitting this request to the Office of the Commissioner.



\_\_\_\_\_  
**Signature**

**Date:** *09/04/2014*

**Printed Name:** *Clare C. Banks, Chair of Mathematics Department*

<sup>1</sup> CIP codes must be recommended by the submitting institution. For CIP code classifications, please see <http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55>.

**Report – Third-Year Report Template**  
**Dixie State University**  
**Baccalaureate Degree, Mathematics and Mathematics**  
**09/04/2014**

**Program Description**

The DSU mathematics department started work on applying for Mathematics and Mathematics Education degrees in Fall 2009. The Utah State Board of Regents approved DSU to offer Mathematics and Mathematics Education degrees in January of 2011. In January 2011, the DSU Mathematics department began admitting students to our Mathematics and Mathematics Education programs. Our first student to graduate with a Mathematics Education degree was in May 2011. As of the end of the third year, we have had a total of seven students graduate with a degree in Mathematics Education and eight students with a degree in Mathematics.

**DSU Mathematics Department Mission and Alignment with the Mission of Dixie State University**

The Dixie State University Mathematics Department helps students to achieve their academic, career, and life goals, including those related to basic computational skills, mathematical processes, and knowledge that develops real-life applications, modeling and problem solving. The Department's comprehensive and integrated offerings help students master mathematical competencies for their future career and educational endeavors. This aligns with DSU's mission to promote a campus-wide culture of learning. (DSU Mission Statement, April 2013)

Dixie State has as a mission to offer baccalaureate programs "in core or foundational areas consistent with four-year colleges". As one of the disciplines most profoundly instrumental to the development of skills in quantitative reasoning, logic, analysis, and critical thinking, widely recognized skills at the heart of education, degrees in mathematics are consistent with this mission. Our robust mathematics program is also essential in preparing students in programs such as nursing and allied health careers, business, accounting and finance, and computer science and information technology. The Math Department strives for excellence in training students in these areas so vitally important to the economic health of the community. Providing this positive community impact is consistent with a key element of DSU's mission, to "...to foster economic growth and a continuum of educational, cultural and recreational enrichment." (DSU Mission Statement, 2013)

**History**

Since we started the program, we have hired two new PhDs to help teach higher level mathematics classes and are now offering Intro to Analysis II. We also share a full time EdD in Mathematics Education with the Education Department. In addition, our Secondary Methods course is now being taught every year rather than every other year. Our department has moved from the North Instructional Building to the Snow Building giving us a better, newer facility for instruction and more study areas for our students.

**Goals**

Dixie State University's Department of Mathematics offers two baccalaureate degrees – a Bachelor of Science/Art Degree in Mathematics and a Bachelor of Science/Art Degree in Mathematics Education. In addition to supporting Dixie State University's larger mission to offer baccalaureate degrees in all core content areas, these programs prepare students, both for successful careers in industry/academia and for graduate-level educational experiences.

In general terms, the goals of the department's instructional programs are similar to those of other four-year-universities-to convey to its students (and thereby to the general population as a whole) the beauty and utility of mathematics and to illustrate its applications in modern society, all the while fostering the development of critical thinking and problem-solving skills.

### **Program Learning Outcomes**

#### **For Our Program**

Dixie State University's Department of Mathematics has established, in close alignment with the recommendations of the Mathematical Association of America (MAA), five specific program learning outcomes:

1. Develop its students' mathematical thinking and communication skills.
2. Communicate to its students the breadth and interconnectedness of the mathematical sciences.
3. Impart to its students the ability to use technology, both to support problem-solving and to promote understanding at every level of the curriculum.
4. Provide its students with a broad (and even philosophical) view of the mathematical sciences.
5. Encourage and nurture mathematical science majors.

#### **For Our Students**

All mathematics courses at Dixie State University support the general education goals of the university, and will require students to:

1. Employ mathematical techniques in solving computational problems.
2. Interpret mathematical models.
3. Construct quantitative and logical arguments.
4. Apply mathematical knowledge to solve real-world problems.
5. Communicate in the mathematical language through the proper use of notation and terminology.
6. Explore and analyze mathematical concepts, using technology to the appropriate extent.

As stated above, the department of Mathematics' specific program learning outcomes were developed directly from the recommendations of the Mathematical Association of America (MAA).

## **Curriculum**

### **Mathematics Program Contribution to General Education**

As a service department, the Department of Mathematics is heavily involved in helping the university attain its general education goals. In particular, the department focuses on imparting, to all of the university's students, the competencies listed in program learning outcomes under "For Our Students". Inasmuch as the department is charged with fostering the development of both critical thinking and problem-solving skills, and as the development of such skills is pre-requisite to the attainment of all other general education competencies, the work of the Department of Mathematics is singularly important to the execution of the university's general education mission. Indeed, in carrying out its charge, the department supports the general education mandates of all other university units, and the health and well-being of the Department of Mathematics is a key indicator for the health and well-being of Dixie State University's general education mission.

### **Distinguishing Features of the Mathematics/Mathematics Education Programs**

The department has recently added a Minor in Mathematics and a Minor in Mathematics Education. These minors represent a new distinguishing feature of the overall program. They are designed to attract more students, to encourage students to take part in interdisciplinary study, and to provide a measure of foundational support and rigor to students engaged in the study of other disciplines.

### **Course Changes/Deletions**

Math 920, Math 990, and Math 1010 have recently been deleted. Math 900 and Math 1000 have replaced these courses. The new Math 900 and Math 1000 courses are taught using the Emporium model (Replacing lectures with a learning resource center model featuring interactive software and on-demand personalized assistance). These changes were made at the recommendation of Complete College of America, a nonprofit whose mission is to increase the number of college students who successfully earn a degree. The Emporium Model is designed to reduce costs while simultaneously providing greater levels of support to remedial students.

### **Extended Learning Experience**

DSU Mathematics Department hosts the MathCounts competition every year. This event brings area middle school students to our campus to engage in exciting mathematics "bee-style" contests alongside other bright motivated students. Mathematics Education students have the opportunity to be MathCounts graders, providing an opportunity to make a connection with the students that they may be teaching in the future.

Students also have the opportunity to work as tutors in the Department's eLAB. As students help others to learn Mathematics, it enhances their Mathematical ability at the same time.

### **Standard Curriculum Policies and Practices**

A variety of policies and procedures are in place to ensure the uniformity of course content, grading standards, and learning outcomes across the program curriculum. Such measures include (but are not limited to) the use of common textbooks, the use of common examinations or common examination questions, mandated faculty discussions, and a formal process of peer review. Different measures are implemented at different levels of the

curriculum in order to allow faculty members a sufficient level of academic freedom in covering the content of their individual courses.

DSU Mathematics Department also participates in Majors Meetings every fall semester to ensure lower division and GE courses are universal and transferrable from institution to institution.

### Core Courses and Course Rotations

Mathematics courses numbered 1210 and below are currently being offered every semester, including the summer sessions. Math 2200 and Math 2210 are currently taught in both the fall and the spring. Other 2000-level Mathematics courses are offered at least once during each academic year. Higher-level course sequences (e.g., Math 3200/3210 Introduction to Analysis I/II, Math 4000/4010 Foundations of Algebra/Abstract Algebra) are offered consecutively in alternate years. Math 4900, the Senior Capstone Seminar for Mathematics majors, is taught each spring. The frequency of course offering is more than adequate to enable all of the department's majors to make timely progress toward meeting their graduation requirements, especially given the department's commitment to run both core and elective courses in low-enrollment scenarios where necessary. The department currently employs an academic advisor whose function is to monitor both the frequency of course offerings and the progress of students in the department's majors.

### Enrollment and Revenue Data

*Use department or unit numbers as reported in the approved R401 proposal for "Prior to Program Implementation" and "Estimated" columns.*

Prior to Program Implementation		Year 1		Year 2		Year 3	
Departmental/Unit Enrollment and Staffing Data		Est.	Actual	Est.	Actual	Est.	Actual
Total Department Student FTE (Based on Fall Third Week Data)			866.5		822.5		785.5
Total Department Faculty FTE (A-1/S-11/Cost Study Definition)			22.92		24.52		20.86
Student FTE per Faculty FTE (from Faculty FTE and Student FTE above)							
<b>Program Level Data</b>							
Total Number of Declared Majors in Program	X		47		57		46
Total Number of Program Graduates	X				5		1
<b>Departmental Revenue</b>		<b>Est.</b>	<b>Actual</b>	<b>Est.</b>	<b>Actual</b>	<b>Est.</b>	<b>Actual</b>
Total Revenue to Department			1,003,383		1,081,575		1,029,644

(Total of Funding Categories from R401 Budget Projection Table)							
<b>Departmental Instructional Cost per Student Credit Hour (per Institutional Cost Study Definition)</b>		<b>X</b>	<b>851.75</b>	<b>X</b>	<b>973.64</b>	<b>X</b>	<b>958.54</b>

### **Institutional Analysis of Program to Date**

The enrollment, staffing and funding have been fairly steady for the past 3 years. What we would like to see is an increase in the number of students in our programs. In order to achieve this we would like to receive funding for scholarships to help attract students that might be considering majoring in Mathematics or Mathematics Education. A faculty member designated to seek out grants for the department would also be a good idea.

### **ENROLLMENT-RELATED INFORMATION:**

#### **Students: Mathematics/Mathematics Education Majors Profile**

In the past 3 years, we have averaged 50 students each year declared as Math/Math Education majors. Among these students, 60% are male and 40% are female. The average age is 24. The average ACT score is also 24. 80% of the students are white, 20% are nonwhite/minorities.

Of our graduates, (we have had a total of 14 up until Spring 2014), 50% have gone on to graduate school and 50% work in a related field. The average time for our graduates to receive their degree is about 5 years.

We expect our enrollment will remain steady for the next few years with about 40-60 declared Math/Math Education majors each year.

### **Assessment of Student Learning**

#### **Curriculum Mapping:**

Please see Curriculum Mapping form B in Appendix A.

#### **Measure of Students Learning**

General Education courses taught by the Mathematics Department are handled in the same way. Each course has a coordinator in charge of creating the syllabus and the common exams. The coordinator holds a meeting with the committee (comprised of all teachers who will be teaching the course) to collect each teacher's opinions as well as to ensure that State guidelines are being followed in creating the course. Afterwards the course is created and the learning outcomes are established. All instructors follow the coordinator's guide in teaching their classes and use the tests the coordinators create. At the end of the semester, the committee meets again to reevaluate and make changes to the course as needed.

For higher level courses text books are selected by the department with instructor input. The Instructor area of specialty is considered when assigning courses with instructors teaching the courses in the field they are most prepared to teach. The DSU Mathematics Department evaluates higher level student performance by opening the students' final project to the public and having the students take the National major's field test.

Dr. Ionita is the Mathematics Department representative for the Institutional Strategic Assessment & Accreditation Committee. He is in charge of reviewing and updating the curriculum map. Dr. Albrecht is on the institution's General Education Committee. He is in charge of collecting artifacts that can be assessed against the associated learning outcomes.

### **Evidence of Students Learning**

Dr. Ionita and Dr. Albrecht work on assessment policies for the DSU Mathematics Department. Form C in Appendix A shows recent results of current assessments. This is an ongoing process. Each year we see improvement and progress. With the new design of our GE classes (online homework and a shared comprehensive online final exam) Dr. Ionita is able to collect data easier than ever before. He analyzes the data and shares the results with the course coordinator so that informed changes and improvements can be made.

For program assessment, students receiving a Bachelor's degree in Mathematics are required to take a major field test. Out of a possible 200 points, our five graduates scored 190, 172, 161, 169, and 158.

Students receiving a Bachelor's degree in Mathematics Education are required to take the PRAXIS II Math content exam. Out of a possible 200 points our graduates scored 198 & 148.

With only 14 graduates to date and with some test results yet to be received we have insufficient data to perform a meaningful analysis of our program.

Program learning outcomes and GE learning outcomes are specified in all syllabi, are communicated to students at the beginning of the semester, and reiterated throughout the course.

### **STAFFING-RELATED INFORMATION**

In Fall 2013, the Math department merged with the Developmental Math Department. The following tables show the number of faculty before and after the merge. Math and Math Ed share the same group of faculty. The 1/2 Tenure track is Dr. Murray who has an EdD in Education. He serves his other 1/2 time in the Education Department. His focus in our department is with Education students only.

Faculty Demographics (Before merging with Developmental Math Department)

Faculty Credential	Tenured and Tenure-track/Full Time Instructor	Contract	Adjunct
Doctoral or other Terminal Degrees	4		2
Masters Degree	5	3	9
Bachelor Degree			
Other			

Faculty Demographics (After merging with Developmental Math Department – taken from Fall 2013)

Faculty Credential	Tenured and Tenure-track/Full Time Instructor	Contract	Adjunct
Doctoral or other Terminal Degrees	4	1	1
Masters Degree	10	5	9
Bachelor Degree		1	1
Other			

DSU Full-Time Mathematics Faculty

<b>Banks, Clare Chair</b>	PhD Major: Mathematics Education Minor: Statistics, University of Northern Colorado
15 years teaching in higher education	MA: Brigham Young University BS: Southern Utah University
Professional Experience	Chair of Mathematics Dept, DSU Chair of Utah Mathematical Association of Two-Year Colleges Secretary of Utah Association of Mathematics Teacher Educators Members of NCTM, RCML, UAMTE, UMATYC, MAA, CCTM
Publication/Presentation	Service Learning in Math Classroom. AMATYC Teaching Preservice Elementary Teachers with Geogebra, AMATYC The Abacus as a Foundation for Mental Mathematics, NCTM Using Culturally Responsive Teaching to Spark Student's Imagination and Greater Learning Through Technology. SITE Themes which emerged from open-ended questions about preservice teacher's epistemological beliefs. RCML A Comparison of Mathematics Teacher's Preparation Requirements in the U.S. and some Countries in Europe and Asia. MAA Teachers' Personal Epistemological Beliefs and Their Relationship to the NCTM Standards. RCML
DSU Committees	Curriculum Committee Professional Educator Coordinator Committee Accreditation Committee

<b>Albreht, Brent</b>	PhD in Mathematics from the University of California, Santa Barbara
6 years teaching in higher education	Master of Arts in Math from the University of California, Santa Barbara Bachelor of Science in Math from Weber State University
Professional Experience	Advisor: Chess and Math Club Member of AMS, SCGAS, MAA, IAS
DSU Committees	Assessment of General Education Committee

<b>Bornholdt, Bryan</b>	PhD in Mathematics from University of Wyoming
17 years teaching in higher education	MS in Mathematics from Colorado State University BS in Math Education from Emporia State University
Professional Experience	Coordinator: TA training (USU) Implementing math placement exam for precalculus courses (USU) Member of MAA
DSU Committees	Undergraduate Research Committee

<b>Decker, Ross</b>	MS in Mathematics Education from BYU
20 years teaching in higher education	BS in Mathematics from Arizona State University
Professional Experience	Judge: Sterling Scholars Competition for 8 years Members of NCTM, AMATYC, MAA
DSU Committees	Faculty Senate, Commencement, Academic Appeal, First Year Experience, General Education, Library, Institutional Improvement and Efficiency, Spirit,

	Promotion and Tenure, Honors and Awards, Student Conduct
--	--

<b>Hansen, Janet</b>	MS in Mathematics from Murray State University
34 years teaching in higher education	BS in Mathematics from Murray State University
Professional Experience	Sterling Scholar Judge for 15 years Lead Teacher: Developmental Mathematics Program Formulated the Academic Probation Intervention Policies
Publication/Presentation	Developmental Mathematics Curriculum Design with a Follow up Outcomes Assessment, NADE
DSU Committees	Academic Appeals (chair), Final Aid Appeals, Student Affairs, Institutional Effectiveness, Executive Faculty Senate, New Faculty Experience (chair)

<b>Hunt, Lynn</b>	MS in Mathematics Education from Oregon State University
25 years teaching in higher education	BS in Mathematics from Utah State University
Professional Experience	Program Coordinator for Math 1010, 1050 Member of AMATYC, UMATYC (Also presenter)
DSU Committees	Athlete Council, Work Load, GE, New Faculty Experience, Student Conduct

<b>Ionita, Costel</b>	BS in Mathematics from University of Bucharest
19 years teaching in higher education	MS in Mathematics from Louisiana State University PhD in Mathematics from Louisiana State University
Publication/Presentation	Teaching Preservice Elementary Teachers with Geogebra, AMATYC (with Clare Banks)
DSU Committees	Workload, International Students, ESL, Undergraduate Research, Institutional Strategic Assessment & Accreditation

<b>Jolley, Gordon</b>	BS in Physical Education from University of Utah
32 years teaching in higher education	
Professional Experience	Chair, Developmental Education Chair, Physical Education
DSU Committees	Athlete Council, ESDL, Curriculum

<b>Liu, Jie</b>	PhD in Mathematics from University of Texas, Arlington
13 years teaching in higher education	MS in Mathematics from University of Texas, Arlington BS in Physics from JiangXi Normal University
Professional Experience	Members of AMATYC, MAA, NCTM
DSU Committees	Faculty Staffing, International Marketing, Academic Integrity, Faculty Senate, Campus Community

<b>Mora-Bornholdt, Claudia</b>	MS in Applied Math from University of Houston
20 years teaching in higher education	BS in Mathematics from Loyola University of New Orleans
Professional Experience	2002 Greater New Orleans Science and Engineering Fair Senior Math Judge 1999-2000 SIAM

	1992-2000 American Mathematical Society 1992-1993 Association for Women in Mathematics 1992-1993 Mathematical Association of America 1992 Departmental Award Committee (Math & CS, Loyola University) 1991-1993 Association for Computing Machinery (ACM) 1993 ACM Loyola Chapter Secretary 1991-1993 Dean's Student Advisory Council (Loyola University) 1990-Present Alpha Sigma Nu 1990-Present Phi Eta Sigma
Publication/Presentation	B. L. Keyfitz and C. A. Mora, Prototypes for Nonstrict Hyperbolicity in Conservation Laws, Proceedings of the Conference on Nonlinear PDE's, Dynamics and Continuum Physics (J. Bona, R. Saxton, and K. Saxton, eds.), Contemporary Mathematics 225 (2000) 125-137.
DSU Committee	Strategic Enrollment Management Council

<b>Mortensen, Scott</b>	M.Ed. from Utah State University
26 years teaching in higher education	BS in Mathematics Education from Utah State University
Professional Experience	President, UMATYC Chair, DSU Math Dept.
State Wide Committees	Tuning committee, TICE committee, Math Majors Committee, Complete College Academy Committee
DSU Committees	Curriculum, General Education

<b>Murray, Greg</b>	PhD. In Education emphasis in Mathematics from Utah State University
4 years teaching in higher education	M.Ed. Secondary Education, Utah State University BA Secondary Education, University of Montana
Professional Experience	Member of NCTM (1991~current)
Publication/Presentation	Journal of Education: <i>Relationship between Classroom Schedule Types and Performance on the Algebra I Criterion-Referenced Test</i> (tentatively 2014) NCTM National Conference Presenter (1999, 2000, 2002, 2006) Teacher-in-Residence (1997). Institute of Advanced Studies, Princeton, New Jersey. Teacher-in-Residence (1996). Institute of Advanced Studies, Park City, Utah
DSU Committees	PECC (Professional Educators Coordination Committee) 2011-2014 Hiring Committees 2013 and 2014 Education Department Accreditation (TEAC) committee DSU STEM committee 2011
Volunteering	Mathcounts National test writing committee (2005-2008) Mathcounts regional competition DSU (2014)

<b>Poast, Michele</b>	MS in Mathematics Education from Fayetteville State University
15 years teaching in Higher Education	BS in Mathematics from Hawaii Pacific University
DSU committees	ESL, Awards, Student Conduct

<b>Russell, Gordon</b>	MEd in Mathematics Education from USU
------------------------	---------------------------------------

32 years teaching in higher education	BS in Mathematics from USU
Professional Experience	Utah Meritorious H.S. Teaching Award Most Influential Teacher Award for encouraging HS students to attend college Presidential Teaching Award for USA Teacher of the Year Award from WCSD, WSU, DSU
DSU Committees	Advisor to Returning Adults ADA committee, Teaching and Learning Committee, D-Week committee

### **Staffing Related Information**

Last year the workload requirement for full time faculty members went from 30 credit hours/year to 24 credit hours/year. The current workload is much better as it provides time for our faculty to serve on various committees and to prep for their teaching duties. The disproportion of PhD and Instructors without a PhD is due to our recent merge with the Developmental Mathematics Department. All faculty members are assigned to proper classes and are capable of delivering a high quality curriculum.

Many of our GE classes are taught by adjuncts, therefore, many homework assignments are more or less check-marked without detailed grading. A recent improvement we have made is to move homework online. Assignments are graded by computers allowing teachers to focus entirely on communicating content. Less administrative work for instructors.

### **Advising**

The DSU mathematics department has a .50 contracted advisor, Kathie Ott. She has worked for the department for 17 years. Prior to the beginning of the school year, Ott attends all new student registration events that occur during the summer. After she identifies which new students have declared themselves as Mathematics majors, she contacts the students and makes an appointment with them to discuss their plans.

Her office hours average 10~12 each week. Students can also make an appointment to see her outside her regular office hours.

At the end of each semester, Ott visits all the College Algebra and above classes to advertise and recruit students to be Math/Math Ed majors.

Ott is also an advisor for the Math Club, allowing her the opportunity to interact with students informally.

There is no formal evaluation in place for the advising process. Informal evaluation is done by the chair of the department as the interaction between students and Ott is observed. The students rank her as very helpful, knowledgeable and approachable.

Putting in to place a formal evaluation of the advising process is an item that we need to work on.

### **Research**

Research is one of the weaker areas in our department. This is likely due to Dixie's mission and focus on serving the community with excellent teaching, and our rather recent transition from a college to University in 2013. Current research being done includes:

Dr. Greg Murray, our Mathematics Education professor, publishes regularly in recognized Mathematics Education Journals.

Dr. Brent Albrecht is currently working on a paper related to assessment.

Dr. Bryan Bornholdt has recently been appointed to be on the DSU research committee. His job is to promote research in our department. Following his leadership we expect to see more and improved research activity in our department.

### **Service**

All faculty members serve on multiple DSU committees. The major areas of contribution to DSU are in Accreditation, Assessment, Faculty Senate, and the General Education Committees. The major contributions to the community are service to the statewide steering committee, TICE committee and Complete College Academy Committee.

### **Future Hiring and Recruitment**

Our department would like to see Actuarial Science offered in the future so hiring a PhD with a Statistics degree will be needed.

### **Staff**

The Math Department's administrative support staff consists of a full time secretary, a part time advisor, and a part-time work-study student.

The Math Department has plans to request that our Secretarial position be changed to a Department Support Specialist position. This position will allow for additional secretarial support as well as developmental studies support. With the implementation of our developmental Emporium learning model we have realized the need for this additional fiscal and generalized support.

DSU offers professional development opportunities through the staff association, of which our secretary is heavily involved. Our Dean of Science & Technology has extended support to staff for involvement in several different organizations throughout the state, such as UHESA (Utah Higher Education Staff Association), and UWHEN (Utah Women of Higher Education Network). Training is offered periodically on campus for Banner, safety, institution policies, health & wellness, and multiple service opportunities, as well as a myriad of other helpful topics.

## **Funding Related Information**

### **Technology**

The DSC Mathematics Department moved to a newly renovated building (SNOW) where each classroom is a smart classroom providing adequate technology for instruction.

The basement of SNOW building has 120 computers dedicated for use by developmental students. We manage with the facilities given to us and have plans to convert one of the classrooms on the main level into a computer lab. We will then have one classroom full of computers so instructors can instruct fully using technology.

### **Distance Learning**

Although we don't offer a formal distance learning program, our department offers 3 courses online in support of DSU's Distance Learning Associate Degree.

The purpose is to reach students who live out of the area, have scheduling conflicts, or prefer alternative delivery methods. We offer Math 1000, Math 1040 and Math 1050 online. These are all GE classes or prerequisites.

Four faculty members are currently involved in teaching online courses.

### **Library**

The holdings of the DSU library have been useful for Math Ed. students. A large collection of typical classroom textbooks and supplements is available for use by professors and Math Ed. students. The library staff has been very helpful in making resources available and locating needed materials.

The strengths are the wide assortment of K-12 materials contained in the library's holdings. In addition, when requested, the library staff has brought in outside materials.

### **Facilities**

Classroom facilities for upper division classrooms are adequate. A lab space and a tutor for upper division is desired. The computer lab for developmental students is a good improvement. We hope the result will be more and better qualified students coming into the math department.

We could use an overhead projector installed in the computer lab for instructors to use.

All the computers in the adjunct office are ancient (7 years old). We anticipate inheriting newer computers from the computer science department.

## **Conclusion**

### **Department Strengths:**

- Quality faculty members: Many of our faculty members have been recognized for their excellence in teaching. All have excellent student evaluations.
- Excellent curriculum: faculty members constantly change and refine the department curriculum. This is an ongoing process; when a problem is recognized, we address it promptly and work constantly to further strengthen the curriculum.
- Excellent support staff: Secretary Sylvia Bradshaw awarded Classified Staff of the year.
- Faculty retention: faculty members have a good retention rate.
- New computers for faculty members: last year all full-time faculty members received new computers to replace our 7 year old computers. Faculty members adept with current technology.

### **Department challenges:**

- Need more staff support: When the Math and Developmental Math departments combined, the Math department received the students and faculty but not their operating budget. The Department Chair and secretary serve a great deal with no added salary or the funds to make it work.
- With the new method for teaching lower level courses, our adjuncts need more training. This is also a funding issue.
- There is no Math Lab for higher level students. We once had a lab in NIB 202 and the funding to hire tutors to staff the lab. Our higher level students would benefit greatly if we had a lab currently.
- Support from outside the math department is limited. The Science department took away Math department adjunct space, making tight quarters even tighter for the Math department.
- Due to open enrollment at the school, the retention rate is low.

**Future plans and Needs:**

- Add an Actuarial Science emphasis to provide students with an additional career option.
- Ongoing improvement to the Academic program and courses.
- Recruit high quality faculty.
- Support and encourage student & faculty research activities and professional development.
- Assign faculty member to work with the Alumni Association in locating funding for scholarships to help in recruiting high quality students.
- Salary increase for our secretary.
- Funding for adjunct training
- Funding for adjunct space and newer computers.
- Support from other departments and the Administration.

**Employment Information**

Name	Date	Degree	Work
Janett Stratton	Sp 2011	Math Ed	Dixie Middle School
Brett Pruitt	Fall 2011	Math	Business co-owner
Chelsey Baldwin	Sp 2012	Math	Behavior Facilitator at Washington County School District
Hannah Lewis	Sp 2012	Math	Utah State (Graduate School)
Andrew Goll	Sp 2012	Math	Big Pine Academy (Florida)
John Call	Sp 2012	Math	Financial Representative at Northwestern Mutual (SLC)
Sara Scholes	Sp 2012	Math Ed	Mountain Heights Academy (online public charter school)
Matthew McCleve	Fall 2012	Math	Sales and Operations Analyst for Allconnect
April Subashe	Sp 2013	Math/Art	
Brianna Larmore	Sp 2014	Math Ed	Jordan School District (Salt Lake)
Aubrey Ence	Sp 2014	Math Ed	Desert Hills High School (St. George)
Nathan McArthur	Sp 2014	Math Ed	Buckeye School District (Phoenix)
Travis Read	Sp 2014	Math Ed	McCormick Jr. High (Wyoming)
Rebecca Stevens	Sp 2014	Math Ed	Kane County School District
Brigitte Spinks	Sp 2014	Math	

Mathematics/Mathematics Education 2013-2014						
Mathematics Science Dixie State University						
PLO Identify the PLO(s) assessed in the current AY (1-2)	Measure(s) 1. Direct or indirect 2. Description of measure (upload instrument & sample artifacts) 3. Scoring strategy (upload rubric) 4. Score scale (e.g., 4=exemplary, ... 1=unacceptable)	Baseline / Threshold / Benchmark/ Target	Data Collection Method 1. Course(s) number 2. Semester collected 3. Sample size	Results For each PLO, consider all the data and summarize the three important findings  Highlight whether the targets were met, partially met, or not met Include summary reliability indices	Action Taken (closing the loop) State action(s) taken to improve student learning	
PLO1: Employ mathematical techniques in computational problems.	Direct Measure: Common question on the Final Exam. Rubric based grading.  Indirect Measure(s):	>70% met or partially met.	MATH 1210 Fall 2013 73 students	Met 46 Partially Met 14 Not Met 13	There are 60 students that have met or partially met the PLO. That is 82% of the students that have taken the exam. Emphasize more the concept of integration by parts and the importance of setting the parts properly.	