

WSU Five-Year Program Review
Self-Study

Cover Page

Department/Program: Developmental Math

Semester Submitted: Fall 2022

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Brief Introductory Statement

The Developmental Mathematics Program offers pre-college level math courses designed to prepare students for college level mathematics. The Developmental Mathematics Program at Weber State University offers Pre-algebra (Math 0950), Beginning Algebra (Math 0990), Intermediate Algebra (Math 1010), and Pathway to Contemporary Math (Math 0970). A mathematics review course is being piloted currently under the course number Math 0810. Courses are offered in three modalities: face-to-face, online (asynchronous), and virtual (synchronous). Face-to-face classes are generally offered in a flipped format (MBL) or Inquiry & Exploration Learning format (IEL). Developmental Mathematics faculty teach one course per semester for the mathematics department. Many of them teach the Math 1035 Contemporary Mathematics Corequisite classes offered by the Mathematics department. It is the goal of the WSU Developmental Mathematics program to assist students in gaining the math skills they need for success in college level mathematics in as short a time as possible.

Standard A - Mission Statement

The Developmental Mathematics Program of Weber State University opens doors of opportunity by preparing students for success in college level mathematics courses. The program seeks to build confidence, promote learning skills, develop problem-solving skills, and teach mathematical concepts in a learner-centered environment.

Standard B - Curriculum

Curriculum Map

Core Courses in Department/Program	Outcome #1 Procedural Knowledge	Outcome #2 Conceptual Knowledge	Outcome #3 Persistence	Outcome #4 Complete QL
Math 0970	3	3	3	3
Math 1010	3	3	3	3

Note^a: Define words, letters or symbols used and their interpretation; i.e. 1= introduced, 2 = emphasized, 3 = mastered or I = Introduced, E = Emphasized, U = Utilized, A = Assessed comprehensively; these are examples, departmental choice of letters/numbers may differ

Note^b: Rows and columns may be transposed as required to meet the needs of each individual department

The courses listed above are directly prerequisite to Quantitative Literacy courses. After assessing the needs of Weber State students, we determined a need for a non-STEM path, thus the Math 0970 Pathway to Contemporary Mathematics course is prerequisite to Math 1030 Contemporary Mathematics. We were also involved in the development of Math 1035 a corequisite course, which is mostly taught by Developmental Math instructors. Our curriculum is designed to meet the above learning outcomes, which support our mission to provide opportunity, build confidence, promote learning skills, develop problem-solving skills, and teach mathematical concepts in a learner-centered environment. Weber State is one of a few institutions in the state that provide an opportunity for a student to start in pre-algebra and earn a master's degree in a STEM field. We consistently review the needs of our students to determine curricular needs. We are giving consideration to offering a basic mathematics course because so many of our students struggle in prealgebra.

Standard C - Student Learning Outcomes and Assessment

A. Measurable Program Learning Outcomes

- a. Outcomes must be identified for every undergraduate degree or certificate offered by the program or department. List each credential and the associated outcomes separately.
- b. Outcomes are very likely shared between the credentials and well-defined in your curriculum grid.
- c. If the program has modified, added, or removed program level learning outcomes since the last review, please provide a short narrative that discusses those changes.

After completing their last course in this program (Math 0970 or Math 1010):

SLO #1: Students will be able to demonstrate procedural knowledge of mathematics by competently performing algebraic operations.

SLO #2: Students will demonstrate understanding of foundational concepts such as identity, inverse, and equivalence.

SLO #3: Students will persist through difficulty and work through the entire semester.

SLO #4: Students who complete one or more developmental math courses will have the knowledge and skills needed to successfully complete a Quantitative Literacy course.

Since the last review, we have removed the following SLO because of the difficulty of accurately measuring it. *Students will attend to precision by avoiding common errors, using math symbols and mathematical language appropriately, and neatly writing out their work.*

b. Provide a brief summary of the program’s contribution to supporting, improving, and/or revitalizing the General Education program at WSU:

n/a

c. Provide a brief summary of the program’s contribution to Concurrent Enrollment (if applicable)

We offer concurrent enrollment Math 1010 Intermediate Algebra in Weber, Davis, Ogden, and Morgan School districts. This fall, we have 1,170 students in 20 high schools.

Year	Total Enrolled
Fall 2016	745
Fall 2017	1092
Fall 2018	1125
Fall 2019	1224
Fall 2020	1156
Fall 2021	980

In the summer between 2020 and 2021, the Math 1010 curriculum was adjusted and rearranged by the Math 1010 committee in the developmental math department at WSU. These changes aimed to ensure that students who take Math 1010 will be better prepared for Math 1050. This goal was met: of the 643 students who passed Math 1010 in the Fall of 2021 with a 'C' or higher, 93% passed Math 1050 in the Spring of 2022 and earned their QL credit.

In the Fall of 2021, 980 students enrolled in CE Math 1010. This was a drop of 18% of students enrolled for Math 1010 compared to 2020. The test score distributions matched previous years. Of the 980 students, 950 passed the course with a D or higher. Additionally, 803 students passed CE 1010 with a ‘C’ or higher, a prerequisite for CE Math 1050 in the spring. Of these 803 students eligible for CE Math 1050 in the spring, 167 students opted not to continue to CE Math 1050 in the spring. Possible reasons were: (a) the students felt that CE mathematics is very challenging and time-consuming. They wanted an “easy” spring semester; (b) Students who barely passed with a ‘C’ did not feel they would be successful in Math 1050; (c) Several students did not realize that the prerequisites expire after two years. They planned on taking a break or serving a religious service mission before continuing to college. If these 167 students were retained, we would have had growth in CE Math 1050.

A Dev Math instructor writes the assessments for Math 1010. He writes two versions of three exams, as well as the rubrics, then attends the rubric parties where he listens to teacher feedback and clarifies the purpose of specific assessment questions. He also communicates with teachers regularly via email when they have questions. For Fall 2023, we are working with 26 teachers. This number stays consistent.

B.

Five-year Assessment Summary

[In this section you should provide a summary of your assessment findings and actions since your last program review. Annual assessment reports for each of those years can be found at https://www.weber.edu/ie/Results/Department_Results.html. Please be sure to include information from each of the four years prior to this report. If you do have data to report for the last academic year, evidence-of-learning grids can be included in appendix G.]

Assessment indicates several areas that have room for improvement. The key purpose of developmental education is to raise college-unprepared students to the level of college-prepared students.

In the past five years, developmental math has acted in many areas to improve student success in our classes and in subsequent QL classes. Through reviewing current literature about mathematics education and assessing our students, we recognize three factors that contribute to improved assessment findings: quality teaching, student preparation, and student mindset. Thus, all our efforts center on these factors.

Quality Teaching: A first major action was to eliminate tutoring in the hub as a duty of dev math faculty. The tutoring assignment was a carry-over from our former emporium model. We wanted faculty to be focused on classroom teaching. Additionally, in the past five years we have continued to learn more about effective teaching and emphasized improved pedagogy in our classes. Our course offerings diversified into multiple modalities, but as we progress in providing better options for our students, we have sought a middle ground. A major accomplishment in recent years was the work to find a balance between the MBL and IEL formats for Math 1010 Intermediate Algebra. A committee of developmental math and mathematics faculty identified the skills and knowledge necessary to succeed in College Algebra and built an Intermediate Algebra curriculum through backwards design that is used for all Intermediate Algebra courses. Consistency in pedagogy is sought, but not achieved. Effective teaching continues at the top of our list of priorities. Conversations at local and national levels about diversity, equity, and inclusion have directed our latest efforts to educate our faculty on these important ideas. In summer 2022, we did a summer read with a selection of books related to DEI and teaching.

Student Preparation: Accurate placement continues to challenge us. Two years ago, we studied student performance on the ALEKS placement test and adjusted our placement scores to better align ALEKS topics with course content. Then COVID happened. It has been difficult to produce good assessment with all the confounding factors created by the pandemic. Anecdotally, faculty are sensing an improvement in student preparation since the change was made, but more improvement is needed.

Student Mindset: Mindset lessons continue to be embedded in all our courses. Assessment findings show success in persistence, which is often a result of mindset. We could benefit from a review of these lessons as we integrate them into what we are learning about DEI.

Assessment of Graduating Students

A narrative describing assessment processes for graduating students (at the associate, bachelor, and/or graduate level) should be provided.

n/a

Standard D - Academic Advising

Role of Advisor/Learning Strategist

Developmental Mathematics has one full-time employee in the position of advisor and learning strategist whose role is to:

- Provide accurate information about the program to new, continuing, and prospective students in person, via email, via zoom, or over the phone
- Suggest appropriate courses to be taken, based on student's major
- Assist students with enrollment and registration
- Ensure students have the right prerequisite to take a class
- Notify students of expiring prerequisites
- Serve as an additional resource in addition to instructors
- Meet frequently with struggling students to help them understand expectations and requirements to succeed in math as well as understand the content
- Counsel students in implementing learning strategies
- Help students and departments have comprehensive knowledge of the progressive changes we are making
- Work closely with other departments
- Participate in various campus committees
- Oversee the ALEKS placement program

Advising Strategy and Process

The goal of Developmental Math Advising is to provide students and campus advisors with accurate information which aids students in choosing the most accurate path to completing their general education math requirement. The advisor also reaches out to students who are currently struggling in their Developmental Math course. These students are identified via instructor referrals, other campus advisor referrals, Banner Reports, manual review of MML gradebooks, and Starfish flags.

Additionally, the advisor acts as a learning strategist. Depending on the needs of a student, the advisor may assess a student's math background, learning strategies currently being used, and awareness of campus and community resources. Based on this assessment, the advisor may provide recommendations that meet the individual needs of the student. When needed, the advisor helps students connect to needed campus resources.

Lastly, each semester, the advisor uses available reports to identify students who have prerequisites that are about to expire. Each of these students are notified and encouraged to continue their math path to QL completion.

Effectiveness of Advising

The advisor does not have a formal assessment process in place to measure the effectiveness of advising. Having an advisor in place has generally improved the effectiveness of the department by removing the load of advising from the administrative assistant, allowing her to focus on departmental needs. Faculty also benefit from having a resource to help struggling students. It is also beneficial having a qualified individual dedicated solely to advising students and assisting them in their learning needs. The climate of student satisfaction has improved due to providing better service to our students. Having the advisor has helped many students take the right math path towards their qualitative literacy.

Past Changes and Future Recommendations

This position was established in August 2012. Prior to this time, the department administrative assistant advised students and managed all registration needs and/or concerns. Having a department advisor and learning strategist has strengthened the department's ability to serve student needs. The following activities are a result of creating this position.

- Learning strategies are discussed in meetings with students.
- An advising web page has been created with essential information for students and other campus advisors/stakeholders.
- Through instructor referral or via Starfish flags, interventions are made with struggling students through intentional advising and provides help: coping with anxiety, test taking skills, time management, and refer to appropriate support programs.
- Students can meet with the advisor in the absence of an instructor to get additional attempts on quizzes and/or tests.
- Increased collaboration with support programs across campus.
- Administration of the ALEKS placement program.

Future Recommendations:

- Create a tracking/log in system to quantify the number and type of advising session.
- Class visits to ensure students are registered for the right class

Standard E - Faculty

Programmatic/Departmental Teaching Standards

The following are Developmental Math program standards for teaching. This sets a high bar for what a classroom would look like, but much of it is achievable.

Interactive Engagement. Both the students and the instructor will be interactive with each other and with the curriculum throughout the class period. Discussions should provide opportunities for students to think and reason mathematically. Collaborative learning happens best when students are collectively engaged in solving a problem that requires mathematical thinking and reasoning using mathematical discourse.

Development of Conceptual Understanding. Students should be given the opportunity to develop and demonstrate knowledge of conceptual understanding of many topics. Principles of equivalence and inverse, as well as correct use of and understanding of vocabulary should be integrated throughout the course.

Contextual Problem Solving. Students should be given many opportunities to base their understanding in real-life contextual problems. This is not necessary for every topic/lesson.

Procedural Practice. Students should have the opportunity to practice procedural examples that connect the contextual and conceptual ideas throughout the lesson. Ideally, but not always, lessons should not begin with procedural explanations.

Growth Mindset lessons Mindset lessons/activities should either be conducted in class or given as homework assignments.

Faculty Qualifications

Full time Instructor: Master's degree in Mathematics, Mathematics Education, or equivalent plus two years teaching Developmental Mathematics or equivalent.

Adjunct: A bachelor's degree in mathematics or related field. Preference is given for master's degree.

Faculty Scholarship

Scholarship is not required of Developmental Math instructors.

Mentoring Activities

Course Coordinators play a mentoring role for newly hired faculty as well as those new to teaching the course type. They orient the faculty prior to the semester, work collaboratively to develop departmental assessments, observe and provide support during the semester.

Diversity of Faculty

All faculty are Caucasian.

Full time faculty - 13% male and 87% female.

Adjunct faculty - 29% male and 71% female.

Diversity in the faculty is low because our options are minimal. We have had a few failed searches due to not finding any qualified faculty to hire. Diversity has never been an option, unless hiring male faculty counts.

Ongoing Review and Professional Development

Every full-time instructor completes an annual review at the end of each calendar year. Each full-time instructor completes a more in depth review every three years. A formal review process for adjuncts will be implemented in the 2022-23 academic year.

Professional development may be informally conducted in bi-weekly department meetings and at least one departmental professional development retreat per year. The university provides optional professional development retreats for adjunct faculty each semester. Faculty can attend regional and national conferences. Typically, about five faculty attend AMATYC each year. Sometimes faculty attend other conferences and meetings, one per person per year.

Use and impact of high impact educational experiences

Typical HIEEs such as study abroad, internships, research, etc. are not applicable to Dev Math classes. See department teaching standards, above, for how we seek to have effective learning experiences in our classrooms.

Evidence of Effective Instruction

Instructors and Adjunct Faculty are evaluated through student evaluations.

Course coordinators mentor new faculty and teaching ideas are shared freely across the department.

Instructors can attend at least one national conference per year. Several attend AMATYC annually.

Several instructors participate in professional development opportunities on campus: Student Success Seminar Series, Teaching and Learning Forum programs, IT training courses, etc.

Standard F – Program Support

Support Staff, Administration, Facilities, Equipment, and Library

Adequacy of Staff, including Administrative Support

Staff includes:

- 1 - Program Director
- 1 - Advisor and Learning Strategist
- 1 - Administrative Specialist

The number and capabilities of the staff are adequate to meet the mission and objectives of the program. All staff are highly qualified and perform exceptionally in their positions. Compensation for staff positions (advisor and admin) is not adequate.

Staff Development

Staff participate in the following:

- Monthly CoS administrative and advisor meetings
- Monthly ASSET meetings
- Trainings offered by the institution
- LinkedIn trainings - (Excel, InDesign, Six Morning Habits of High Performers, Building Trust, Body Language at Work, Improving Your Listening Skills, etc.)
- Annual Employee Learning Week
- Self-directed training to learn programs or skills

Adequacy of Facilities and Equipment

The only facilities we really need are classrooms. When the Tracy Hall Science Center was built, it did not include any classrooms for developmental math. We now have one dedicated classroom in the building and part-time use of another classroom. All other dedicated classrooms are in the Lind Lecture Hall which was adjacent to the former science building. It is not conveniently located, but we are making do. Unfortunately, these classrooms are not conducive to implementing the pedagogical standards we desire to use in our courses – there is not enough room for the instructor and students to move freely about the room for interactive learning. We will reduce the number of seats in each classroom beginning Spring 2023 to alleviate the problem. The classrooms need remodeling that is not possible due to the potential of exposing asbestos. We are working with IT and facilities to make any improvements that are possible.

Adequacy of Library Resources

n/a

Standard G - Relationships with External Communities

Description of Role in External Communities

The only relationship we have outside of the university is with concurrent enrollment high schools. We have a concurrent enrollment director who manages all interactions. She is supervised by the Mathematics department chair.

Summary of External Advisory Committee Minutes

n/a

Community and graduate Success

n/a

Standard H – Program Summary
Results of Previous Program Reviews

Problem Identified	Action Taken	Progress
<p>Issue 1: Faculty concerns</p> <p>1. Some faculty were concerned that Math 1010 curriculum changes were being made in some classes and not communicated to all faculty.</p> <p>2. Adjunct faculty need to feel a part of the developmental math community.</p> <p>3. Ratio of adjunct to full-time is high</p> <p>4. Faculty are hired as instructors but expected to do much of the work of a tenured/tenure-track faculty member.</p> <p>6. Apparent lack of camaraderie between the Math Department and the DMP.</p> <p>Recommendations:</p> <p>1. Changes to curriculum communicated to full-time and adjunct faculty.</p> <p>2. Build a mentor program for adjunct</p> <p>3. (No related recommendation)</p> <p>4. Create a tiered contract for Instructors.</p> <p>5. Determine whether having instructors spend required work hours in the HUB is an efficient use of program funds.</p> <p>6. Build a working relationship with the Math Department that will support the goals of both the DMP and the Math Department.</p>	Previous 5 Year Program Review:	(Correlated to numbering in left column)
	Year 1 (18-19) Action Taken:	<p>2. Discussed ideas for adjunct mentoring. Determined we don't have the resources for more than we are doing with course leads mentoring the faculty teaching their courses. Started annual dept Christmas party and Spring picnics for more social interactions. (except during COVID)</p> <p>6. Dev Math and Math faculty liasions attend faculty meetings</p>
	Year 2 (19-20) Action Taken:	<p>1. Curriculum information documents made available to all faculty</p> <p>4. Instructor contracts increased to 2 years. Requested improved rank and opportunity for faculty in Strategic Planning Report</p> <p>5. Faculty removed from working in Hub</p>
Year 3 (20-21) Action Taken:	<p>1. Mathematics established a committee of faculty from math and dev math to determine content for Math 1010. The committee sought input from all instructors and provided documentation of final decisions to all faculty.</p> <p>4. Requested new faculty rank to meet the needs of instructors in Strategic Planning Report</p>	

		6. New math dept chair and Dev Math director start working collaboratively.
	Year 4 (21-22) Action taken:	<p>1. Instructors voted to invoke academic freedom and do what they want in their classes, provided the outlined curriculum was being taught. In our Fall 2022 back to school meeting, specific elements of all course types were shared with all faculty.</p> <p>3. Ratio of adjunct to full time has reduced as a consequence of lower enrollments. We've needed fewer adjunct and maintained the same number of full-time instructors.</p> <p>4. Instructor contracts expanded to 3 years. Faculty senate created Senior Instructor rank, which helps our program, but does not solve all our challenges.</p> <p>6. New co-requisite Math 1035 course introduced, developed, and taught collaboratively by math and dev math faculty. A dev math instructor is elected to faculty senate.</p>
<p>Issue 2: Student Success</p> <p>1. A subpopulation of students who require remediation are not enrolling in math during their first year as a student at WSU.</p> <p>2. Too much emphasis is placed on the mid-term and final exams. Students in the Developmental Math program often have test anxiety and therefore the emphasis on</p>	Previous 5 Year Program Review:	
	Year 1 (18-19) Action Taken:	<p>1. Recently created QLTF meets bi-annually to address all math success related topics, including advisor knowledge about math.</p> <p>2. Instructors are not open to non-traditional options of assessment, but our courses have always provided unit tests (not a single mid-term) with multiple</p>

<p>the mid-term and final exams work against them.</p> <p>3. Some instructors using outdated terminology such as “cancel,” “reduce the fraction,” or not explaining the concepts behind the procedures.</p> <p>Recommendations:</p> <p>1. Institution should educate advisors on importance of taking math early in college career.</p> <p>2. Explore options other than mid-term and final exams to assess the mastery of mathematical concepts or students.</p> <p>3. (No related recommendation)</p>		<p>retakes to achieve mastery, as well as multiple low-stakes quizzes. Courses have been teaching Growth Mindset and other skills to address anxiety for several years prior to this review.</p> <p>3. Every Fall dept back-to-school meeting includes pedagogical training, including use of correct terminology.</p>
	Year 2 (19-20) Action Taken:	<p>1. Standardized campus messaging encourages students to complete math within first 90 credits.</p> <p>3. Every Fall dept back-to-school meeting includes pedagogical training, including use of correct terminology.</p>
	Year 3 (20-21) Action Taken:	<p>1. Creation of Math 1035 corequisite provides</p> <p>2. Instructors learn about and implement some non-Google-able problems that often require more authentic mathematical thinking.</p> <p>3. Every Fall dept back-to-school meeting includes pedagogical training, including use of correct terminology.</p>
	Year 4 (21-22) Action taken:	<p>1. With more sections offered of the corequisite Math 1035, advisors have greater confidence in directing students to take math early.</p> <p>3. Every Fall dept back-to-school meeting includes pedagogical training, including use of correct terminology.</p>

Summary Information (as needed)

The 2018 program review report contained 22 recommendations. Six were out of the control of Developmental Math. Several recommendations did not reflect a full understanding of our program, such as maintaining the web site – we do that. Additionally, not all recommendations corresponded with listed challenges. Therefore, I have selected key, useful recommendations, identified related challenges (whether listed or not), and grouped them into the above categories.

Action Plan for Ongoing Assessment Based on Current Self Study Findings

Action Plan for Evidence of Learning Related Findings

Problem Identified	Action to Be Taken
Issue 1 No system/plan for collecting evidence of effective instruction.	Current 5 Year Program Review: Recognized a need to create a plan
	Year 1 Action to Be Taken: Meet with C. Hoagstrom and other experts to develop a plan
	Year 2 Action to Be Taken: Implement plan and collect evidence
	Year 3 Action to Be Taken: Implement plan and collect evidence
	Year 4 Action to Be Taken: Implement plan and collect evidence
Issue 2 We don't have a good way to measure our learning outcomes.	Current 5 Year Program Review:
	Year 1 Action to Be Taken: Consult with assessment experts to create a good assessment plan.
	Year 2 Action to Be Taken: Implement the plan
	Year 3 Action to Be Taken: Implement the plan
	Year 4 Action to Be Taken: Implement the plan

Summary Information (as needed)

Action Plan for Staff, Administration, or Budgetary Findings

Problem Identified	Action to Be Taken
Issue 1 No tenure-track positions for faculty.	Current 5 Year Program Review: Progress made in institutional creation of Senior Instructor position
	Year 1 Action to Be Taken: Establish and implement criteria for Senior Instructor. Request new tenured position “Teaching Professor” or such.
	Year 2 Action to Be Taken: Continue to advocate for faculty
	Year 3 Action to Be Taken: Continue to advocate for faculty
	Year 4 Action to Be Taken: Continue to advocate for faculty
Issue 2	Current 5 Year Program Review:
	Year 1 Action to Be Taken:
	Year 2 Action to Be Taken:
	Year 3 Action to Be Taken:
	Year 4 Action to Be Taken:

Summary Information (as needed)

APPENDICES

Appendix A: Student and Faculty Statistical Summary

	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Student Credit Hours Total	15,553	15,369	16,242	15,320	14,855
Student FTE Total	518.4	512.3	541.4	510.7	495.2
Student Majors	n/a	n/a	n/a	n/a	n/a
Program Graduates	n/a	n/a	n/a	n/a	n/a
Student Demographic Profile Female Male					
Faculty FTE Total	9.0	7.7	7.1	5.4	N/A
Adjunct FTE	7.3	5.7	5.9	4.2	N/A
Contract FTE	1.7	2.0	1.2	1.2	N/A
Student/Faculty Ratio	57.5	66.6	76.5	94.2	N/A

Student Credit Hours Total represents the total department-related credit hours for all students per academic year. Includes only students reported in Banner system as registered for credit at the time of data downloads.

Student FTE Total is the Student Credit Hours Total divided by 30 for undergraduate and by 20 for graduate.

Student Majors is a snapshot taken from self-report data by students in their Banner profile as of the third week of the Fall term for the academic year. Only 1st majors count for official reporting.

Program Graduates includes only those students who completed all graduation requirements by end of Spring semester for the academic year of interest. Students who do not meet this requirement are included in the academic year in which all requirements are met. Summer is the first term in each academic year.

Student Demographic Profile is data retrieved from the Banner system.

Faculty FTE is the aggregate of contract and adjunct instructors during the fiscal year. **Contract FTE** includes instructional-related services done by "salaried" employees as part of their contractual commitments. **Adjunct FTE** includes instructional-related wages that are considered temporary or part-time basis. Adjunct wages include services provided at the Davis campus, along with on-line and Continuing Education courses.

Student/Faculty Ratio is the Student FTE Total divided by the Faculty FTE Total.

Appendix B:

Faculty (current academic year)

	Tenure and tenure-track	Contract	Adjunct
Number of faculty with Doctoral degrees	0	0	1
Number of faculty with Master's degrees	0	11	9
Number of faculty with Bachelor's degrees	0	3	7
Other Faculty	0	0	0
Total		14	17

Contract/Adjunct Faculty Profile (Beige highlight indicates full-time faculty. Blue highlight is the program director.)

Name	Gender	Ethnicity	Rank	Tenure Status	Highest Degree	Years of Teaching				Areas of Expertise
						Weber FT	Adj Adj*	Other FT *		
Acor, Brenda	Female	Caucasian	Instructor	n/a	MS	20	2	11	0	Math Education
Ball, Cynthia	Female	Caucasian	Adjunct	n/a	BS	0	3.5	1	0	Math Education
Barrett, Catherine	Female	Caucasian	Adjunct	n/a	BS	0	11	3	0	Math Teaching
Christiansen, Matthew	Male	Caucasian	Adjunct	n/a	MA	0	4	4	1	Math Teaching
Dunn, Christopher	Male	Caucasian	Instructor	n/a	MEd	5	0	17	7	Math Education
Fisher, Angie	Female	Caucasian	Adjunct	n/a	BS	0	4	0	0	Computer Science
Hansen, Amber	Female	Caucasian	Instructor	n/a	MEd	4	7	0	0	Curriculum and Instruction
Hodson, Madison	Female	Caucasian	Adjunct	n/a	BIS	0	1	0	0	Math, Health Promotion and Family Studies
Jennings, Cristine	Female	Caucasian	Instructor	n/a	MA	9	11	0	1	Applied Math
Johnson, Jeffrey	Male	Caucasian	Adjunct	n/a	MEd	0	8	23	0	Math Education
Jones, Charity	Female	Caucasian	Instructor	n/a	MEd	9	5	4	4	Math Education
Kunzler, Amber	Female	Caucasian	Adjunct	n/a	BS	0	2	5	0	Mathematics and ESL
Leavitt, Stacie	Female	Caucasian	Instructor	n/a	BS	1	0	3	0	Math Education
Markham, Makaela	Female	Caucasian	Adjunct	n/a	BS	0	2	4	0	Mathematics
Marriott, Katrina	Female	Caucasian	Adjunct	n/a	MEd	0	12	3	0	Curriculum and Instruction
Mau, Jarrod	Male	Caucasian	Adjunct	n/a	MS	0	5	0	0	Mathematics
McKee, Debi	Female	Caucasian	Instructor	n/a	MS	11	8	6	0	Dev Math
Orton, Natasha	Female	Caucasian	Adjunct	n/a	BS	0	6	0	0	Psychology

Penrod, Janette	Female	Caucasian	Instructor	n/a	MEd	9	5	0	5	Math Education
Pincock, John	Male	Caucasian	Adjunct	n/a	MS	0	7	18	0	Professional Communication
Poore, Darrell	Male	Caucasian	Instructor	n/a	BS	21	0	0	0	Mathematics
Price, Jessica	Female	Caucasian	Adjunct	n/a	MS	0	1	9	7	Curriculum and Instruction
Quesnell, Carrie	Female	Caucasian	Instructor	n/a	MEd	19	3	0	1	Mathematics
Remy, Colette	Female	Caucasian	Adjunct	n/a	MEd	0	4	14	0	Mathematics
Rich, Michelle	Female	Caucasian	Instructor	n/a	MBA	2	9	0	0	Mathematics Statistics
Sandoval, Lynette	Female	Caucasian	Instructor	n/a	MS	1	0	15	0	Mathematics
Symonds, Kassidy	Female	Caucasian	Instructor	n/a	MEd	4	4	0	0	Math Education
Thompson, Julie	Female	Caucasian	Instructor	n/a	BS	1	0	0	0	Math Education
Van Wagoner, Kathryn	Female	Caucasian	Director	n/a	PhD	10	0	17	0	Math Education
Ward, Jonathan	Male	Caucasian	Adjunct	n/a	MEd	0	6	16	1	Physics
Wilcox, Jennifer	Female	Caucasian	Adjunct	n/a	EDD	0	9	0	18	Curriculum and Instruction
Woodbury, Sara	Female	Caucasian	Adjunct	n/a	MS	0	7	6	1	Math Teaching

*High School and Jr. High School teaching years included as applicable

Appendix C: Staff Profile

Name	Job Title	Years of Employment	Areas of Expertise
Kathryn Van Wagoner	Director	11 (Weber) 11 (Other)	Math Education & Leadership PhD
Katrina Marriott	Advisor & Learning Strategist	4 (current position) 9 (adjunct)	
Shawnette Horton	Admin Specialist	5 (Weber) 5 (Other)	

Summary Information (as needed)

Appendix D: Financial Analysis Summary
 (This information will be provided by the Office of Institutional Effectiveness)

Program Name					
Funding	17-18	18-19	19-20	20-21	21-22
Self Support Tuition	1,271,421	1,309,524	1,412,309	1,367,275	1,092,842
Appropriated Fund	492,822	357,328	325,154	306,917	263,039
Other: IW Funding from CE	121,962	127,695	142,450	126,360	115,720
Special Legislative Appropriation					
Grants or Contracts					
Special Fees/Differential Tuition	487,835	252,070	12,863	0	0
Total	2,374,040	2,046,617	1,892,776	1,800,552	1,471,601

Student FTE Total	518.4	512.3	541.4	510.7	495.2
Cost per FTE	4579.3	3995.0	3496.1	3525.9	2971.9

Appendix E: External Community Involvement Names and Organizations

n/a

Appendix F: Site Visit Team (both internal and external members)

Name	Position	Affiliation
Suzanne Mozdy	Associate Dean	Salt Lake Community College
Louise Moulding	MEd Program Director	WSU Moyes College of Education
Andrea Martinez	Assistant Professor	WSU Moyes College of Education

Appendix G: Evidence of Learning

(use as a supplement to your five-year summary, if needed. Be sure to delete the sample text before using)

Evidence of Learning: Courses within the Major					
Measurable Learning Outcome	Method of Measurement	Threshold for Evidence of Student Learning	Findings Linked to Learning Outcomes	Interpretation of Findings	Action Plan/Use of Results
Students will...	Direct and Indirect Measures*				
Learning Outcome 1: Students will be able to demonstrate procedural knowledge of mathematics by competently performing algebraic operations.	Measure 1: Specified procedural problems on the final exams of every course.	Measure 1: 80% of the specified questions will be answered 100% correctly.	Measure 1: Math 1010: 56.5% Math 970: 70% Full summary in Appendix C.	Measure 1: We continue to question the validity of using the final exam data, as students are rarely doing their best work on the final exam. Anecdotally, we see many students figuring out the bare minimum final exam grade needed to pass the class. This data makes the threshold of 80% seem unrealistic. I would expect this outcome to be somewhat in line with course pass rates.	Measure 1: Exams for Math 1010 will be better standardized across all delivery formats. We may start pulling data from unit tests where students may be more often doing their best work. We need to consider options that provide us with students' best effort.
Learning Outcome 2: Students will demonstrate understanding of foundational concepts such as identity,	Measure 1: Measured with 3 multiple choice questions on final exams, one for each concept.	Measure 1: Students who take the final exam will get 80% of the specified questions correct.	Measure 1: Math 1010: not measured Math 0970: 71%	Measure 1: Again, we wonder if the final exam scores are providing an accurate picture of student abilities.	Measure 1: We previously considered looking for a different way of measuring this outcome but decided to try this

inverse, and equivalence.					method again. We need to get a committee together to consider better options.
Learning Outcome 3: Students will persist through difficulty and work through the entire semester	Measure 1: Course retention rates	Measure 1: 80% of students enrolled at 3 rd week will persist through the end of the semester.	Measure 1: Retention Rates: 2017 – 18: 74% 2018 – 19: 85% 2019 – 20: 86% 2020 – 21: 81% 2021 – 22: 81%	Measure 1: 20-21 brought a reduction in virtual classes and a return to a more typical set of course offerings. However, a large COVID outbreak on campus in early spring semester 2022 undermined students' ability to attend class and forced many classes virtual for a time and/or hybrid. In spite of the challenges, the threshold was met.	Measure 1: Anecdotally, faculty are noticing a big change in the preparation and dedication of students. We are doing a deep dive investigation into Math 0990 to identify factors contributing to success and failure in the course, including why students don't complete the course.
Learning Outcome 4: Students who complete one or more developmental math course will have the knowledge and skills needed to successfully complete a Quantitative Literacy course	Measure 1: QL course pass rates of students who took dev math	Measure 1: Students who enrolled in one or more dev math classes will pass QL courses at a rate of 70% or better.	Measure 1: Overall pass rate of dev math students in a QL course is 70%. Threshold met.	Measure 1: Our reporting tool is including Math 1010 as one of the measured QL courses, this needs to be correct. Without measuring Math 1010, the overall pass rate would be higher. Either way, the threshold is met.	We will continue to focus on student success and improving learning. We are learning about equitable and inclusive teaching and implementing many new strategies in our classes. Additionally, we will be doing more to assess effective teaching in our classes.

	Measure 2: Comparison of the dev math cohort's QL pass rate with those students who placed directly into QL.	Measure 2: The pass rate of the dev math cohort of students will be statistically similar to or better than the pass rate of students who placed directly into QL.	Measure 2: See full summary in next table	Measure 2: Since last measured the gaps between the Dev Math and Directly Placed cohorts is narrowing. All pass rates are over 70%, which is a positive outcome.	Measure 2: Dev Math students are generally expected to be less prepared in student skills, as well as math skills, therefore, we are comfortable with these scores.
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*At least one measure per objective must be a direct measure. Indirect measures may be used to supplement evidence provided via the direct measures.

Pass rates for students who completed QL courses Fall 2017 through Spring 2022

Course	Dev Math Cohort		Directly Placed Cohort	
	N (Passed)	% Passed	N (Passed)	% Passed
Math 1030	3169	79.2%	6072	80.8%
Math 1040	841	73.3%	2285	76.1%
Math 1050	5749	74.9%	10,512	76.9%
Total (including 1010)	9759	75.8%	18,869	77.9%

Appendix H: sample Signature Assignments
Not applicable

Additional Summary Information (as needed)