WEBER STATE UNIVERSITY

2017-2018 PROGRAM REVIEW **EXECUTIVE SUMMARY**

DEPARTMENT OF MATHEMATICS

December, 2017

Introduction

The Mathematics Department is highly motivated to offer the best possible programs and instruction given the resources it has. Faculty work hard at providing quality courses and generally have high standards.

There are three programs (emphases) leading to Bachelor Degrees, BA and BS and a fourth submitted for approval:

      Applied Mathematics
      Mathematics
      Mathematics Teaching
      Computational Statistics and Data Science (BS only, in the approval process)

There are two minors, Mathematics, Mathematics Teaching and an Associate's degree.

There are three required math courses for Elementary Education Majors and a program for the same majors ("Specialists") consisting of four Math Education (MTHE) courses and two math courses. The latter program allows elementary education graduates to extend their math endorsement to grades 7 and 8.

The courses meeting the General Education Quantitative Literacy (QL) requirement are housed in the Mathematics Department. Math, CSME, Dev Math coordinate a large and growing concurrent enrollment program to offer MATH 1010, Intermediate Algebra, MATH 1030 QL, Contemporary Math and Math 1050 QL, College Algebra in our service area, Davis and Weber counties.

Math coordinates with the DevelopmentalreW˙ḣBT23 Tm0 g0 G( )]TA011EĄd W792 re0 3(D)-2(e)4(ve)4(lopm)3(e.5⁹

The CSME and MATH coordinate efforts to offer courses for in-service teachers and the concurrent enrollment program.

Curriculum

The programs and courses are very similar to others across the US. Program requirements start with calculus. The Mathematics emphasis is more traditional and theoretical. It is recommended to students intending to go to graduate school. The Applied Mathematics emphasis prepares majors to gain employment in industry. The Mathematics Teaching emphasis prepares majors to teach in Utah secondary schools. The courses required for the teaching major are those needed for a graduate to add a math endorsement to their secondary license.

The required upper division courses are offered at least every other year, and most are offered every year. Courses up through Linear Algebra (Math 2270) and Differential Equations (Math 2280) are offered every semester including summer. There are usually two topics courses each semester that are offered as "reading courses" for one to three students. They are taught voluntarily by faculty as part of service or scholarship. Occasionally required courses are also offered as reading courses to enable students to get courses during a semester in which they are not usually offered. This is typically only done if a student needs a course to graduate before it is offered in our regular rotation. Offering upper division courses more often is desirable, and would happen, if there were more faculty and more majors.

Many of our lower division courses are required in other programs. The students in our calculus sequence are majoring in chemistry, computer science, engineering, math, or physics. The other science programs do not require calculus. The college of business offers business calculus and business statistics. We are open to suggestions by others in regards to these courses, but most are very standard across the country.

The courses for each math program have been the result of a thoughtful and ongoing process. We frequently review programs around the country for new ideas and to see that the current curriculum is relevant and close to what other quality institutions are offering. We work with other departments to offer courses that meet their needs. For example, we worked with the electrical engineering department to adjust some of our course content to ensure that their program could meet national certification.

Enrollment

For the last 10 years total enrollment in QL courses has remained flat, averaging 1230 per semester, fall