



EASTERN OREGON
UNIVERSITY

**Longitudinal Program Review (L-APR)
Executive Summary**

College of Science, Technology, Mathematics
and Health Sciences

Mathematics

- Major in Mathematics
 - Minor in Mathematical Studies
 - Minor in Statistical Mathematics

2020-2021



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The Mathematics Program offers a degree designed with three types of students in mind -- those who plan to do quantitative work in business or industry, those who plan to teach high school mathematics, and those who plan to enter graduate school. The program offers a core of lower and upper division statistics and mathematics courses for all of these students. Prior to the sustainability plan of 2014 the mathematics program offered three different concentrations targeted to these audiences. Since then, the mathematics program removed the concentrations, but continues to offer an array of upper division electives into which students are advised depending on their post-graduation plans. In addition to the courses for mathematics majors, the program offers numerous general education and service courses primarily for majors from other disciplines. These out-of-program classes regularly account for over 90% of the SCH offered by the mathematics program.

The most significant goal from the last review was the development of the Data Analytics major, a new degree housed within the mathematics program. This degree will increase our online offerings and is expected to commence in the Winter 2022 term.

Goals & Recommendations

Near term goals & recommendations:

- Improvement of DFWU rates through supplemental instruction for critical developmental and introductory mathematics courses as successfully piloted with STAT 243.
- Establishment of a mathematics pedagogy course for students aspiring to serve as mathematics tutors and supplemental instructors for EOU and continue to teach in high schools. The course will cover common mistakes in lower division mathematics as well as way to help students overcome common misconceptions and strategies to help students through these.



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- Splitting of the online developmental mathematics course MATH 095 (4 credits – prep course for MATH 111) into two two-credit courses MATH 095A and MATH 095B to allow some online students to take the MATH 095 coursework over the span of two terms instead of one. This is also will be more manageable for high-school students who may wish to take the course with their regular schoolwork.
- Offering the developmental math courses MATH 098, which is the prep course for MATH 105, also online.
- Implementation and build-out of the Data Analytics program initially online, with a view toward offering it on-campus at a later date.

Longer term goals & recommendations:

- Comprehensive redesign of the approach to teaching developmental mathematics with the overall goal of greatly reducing the time spent by students in these non-program-credit bearing courses and using various strategies such as just-in-time co-remediation (e.g., supplemental instruction), teaching the developmental material in a more organic and application-focused way as co-remediation with (program and/or general education credit-bearing) science courses, creation of additional, more audience-specific college-level math courses, etc.
- Retooling the Statistical Mathematics minor into a Data Analytics minor, allowing students in data-intensive majors to add agata analytics credentials to their degrees.
- Consider putting the Mathematical Studies minor fully online.
- Construction of "common quiz banks" for multi-section classes. that could be used either by any faculty member teaching a section of such a course as an assessment tool or for students taking those courses as highly focused self-assessments.