

ACCELERATED B.S. IN MATHEMATICS (4-8 MATHEMATICS CERTIFICATION) / M.S. IN MATHEMATICS

Web Site: <https://twu.edu/mathematics/undergraduate-programs/>

Marketable Skills

Defined by the Texas Higher Education Coordinating Board's 60x30 Strategic Plan (<https://reportcenter.highered.texas.gov/agency-publication/miscellaneous/theccb-60x30-strategic-plan/>) as, "Those skills valued by employers that can be applied in a variety of work settings, including interpersonal, cognitive, and applied skills areas. These skills can be either primary or complementary to a major and are acquired by students through education, including curricular, co-curricular, and extracurricular activities."

Degree Skills

- a. Apply mathematical theories and techniques to the solution of practical problems in business, engineering, the sciences, or other fields.
- b. Develop mathematical or statistical models of phenomena to be used for analysis or for computational simulation.
- c. Determine appropriate methods for data analysis.
- d. Perform computations and apply methods of numerical analysis to data.
- e. Demonstrate personal accountability and work habits, integrity, and ethical behavior.
- f. Assemble sets of assumptions and explore the consequences of each set.
- g. Proficient in the software tools to achieve the skills listed, such as Matlab and R, SAS, SPSS, and modeling software.

Teacher Certification Skills

- a. Appropriately explain the impact of effective planning and communication (within the chosen area of concentration) to relevant internal and external stakeholders in an education or community setting.
- b. Identify, select, and implement entry-level instructional plans when serving as an instructor in the school setting.
- c. Successfully manage organizational and student behavior when teaching in the school setting.
- d. Efficiently and accurately assess student progress and use data to develop and modify instruction for K-12 students.
- e. Work effectively and collaboratively with students and families from diverse backgrounds.