Mission, Vision, and Goals for the UNT School of Mathematics and Science Foundations

Mission Statement:

The UNT School of Mathematics and Science Foundations is dedicated to advancing excellence in foundational science and mathematics education through innovative curricular design, collaborative and evidence-based pedagogy, and a focus on student learning and academic success. Guided by a student-first approach, we strive to foster intellectual growth and personal achievement to prepare students for advanced studies and real-world challenges.

Vision Statement:

The UNT School of Mathematics and Science Foundations empowers every learner to thrive through an integrated, evidence driven, and interdisciplinary STEM foundation that inspires curiosity, supports diverse needs, and prepares students to lead and innovate in a complex world.

Goals:

1) **<u>Build</u> a coherent, essential, and aligned foundational STEM curriculum**
    - Establish core and cross-cutting concepts across introductory STEM courses
    - Ensure horizontal and vertical alignment, consistent assessments, and coordinated foundational courses
    - Use backward design and standards-based outcomes to drive coherence and discipline relevance
2) **<u>Develop</u> student self-efficacy**
    - Provide equitable access to high-quality instruction and resources
    - Deliver targeted support for under-prepared and at-risk students to close achievement gaps
    - Strengthen students' confidence and ability to seek help early

3) **<u>Discover</u> innovative, evidence-based teaching practices that advance student success**

- Embed science practices that teach students how to think, not just compute answers
- Use targeted assessments and co-requisite structures to improve learning outcomes
- Share and refine practices that reduce DFWI and course-repeat rates

4) **<u>Drive</u> student engagement, completion, and career readiness**

- Integrate real-world contexts, experiential learning, and industry partnerships at all levels of STEM instruction
- Involve students in research and other high-impact learning experiences early and often
- Promote cross-disciplinary and thematic learning that connects math and science to emerging technologies and career pathways

5) **<u>Engage</u> instructors in reflective and evidence-based teaching practices supported by ongoing professional development and collaboration**

- Foster interdisciplinary collaboration and cooperation
- Support and reward faculty for innovating and transforming courses, including adopting active learning and new course formats
- Incentivize continuous improvement of STEM instruction through clear performance expectations and a culture of celebrating individual and team achievements