The Mathematics Learning and Teaching program at Drexel was developed with the same philosophy and vision that guides the Math Forum: “People Learning and Teaching Mathematics Together.” In particular, this is reflected in the emphasis on collaborative mathematics problem solving that takes place throughout the program. The MLT program provides opportunities that are grounded in classrooms -- and often, each participant's own classroom:

- **500-level “content” courses** provide opportunities to think deeply about middle and secondary math content: organizing, extending, and generalizing it with an emphasis on student thinking and development.

- **600-level courses** help participants focus their attention on student thinking as a resource for instructional decision making and developing mini “action research” projects focusing on student development.

All courses are **100% Online and Asynchronous**, allowing students to learn and advance their career on their own schedule.

**Program Options**

- **The M.S. in Mathematics Learning & Teaching** consists of a core set of math education courses, cutting-edge education courses, and related electives (45 graduate credits).

- **The Certificate of Graduate Studies in Mathematics Learning & Teaching** consists of five courses selected from the lower and upper level MTED courses in consultation with your advisor.

**Sample Course Descriptions**

**MTED 501—Proportional and Algebraic Reasoning**
This course is about learning and teaching algebra, focusing on patterns, functions and graphs, proportionality, and algebraic connections. Participants will collaboratively explore open-ended problems, discussing, evaluating, revising, and analyzing others' solutions. This is the first course in a sequence to prepare teachers for implementing student-centered, content-based and technology-enhanced instruction.

**MTED 511—Functions through the Curriculum**
This course will consist of an extended analysis of the conception of function, including its historical development. Participants will gain personal experience in thinking of function as a unifying idea on mathematics as well as with conceptual instructional materials.

**MTED 601—Diagnosing Mathematical Thinking**
This course is about student-centered learning and teaching of mathematics. This goal is to develop participants' expertise in analyzing student work, understanding student thinking, and using that understanding to guide subsequent interactions and interventions with the student.

**MTED 621—Collaborative Lesson Design & Analysis I**
This course focuses on teachers identifying critical areas from their colleagues’ classrooms that are in need of improvement and designing and implementing a substantive, outcome-driven response. The course will involve analysis of curricular goals, student outcomes, lesson planning and classroom-based “action research.”

**Comments from Graduates**

“Now I am armed with tools and knowledge to better ground the activities in math theory and application.”

“The online M.S. in Mathematics Learning and Teaching works better than a traditional graduate program for me. I have time to truly think about and digest the material presented and to pose questions that facilitate my personal understanding.”


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