PAGE: MATHEMATICS EDUCATION (X.MTHED)

X.MTHED-408 Professional Development for Coaching Mathematics
Credits: 2
This course is designed for elementary math specialists with responsibilities for supporting teachers in the development of strong mathematics education programs. Participants explore issues related to: learning mathematics while in the context of teaching; facilitating the professional development of colleagues; teachers' and students' ideas about mathematics and learning; and fostering a stance of collaborative investigation. By way of a central theme of mathematics learning, the institute will offer coaches opportunities to explore, through the coaching perspective, ideas of number and geometry in the elementary grades.
Applies to requirement(s): Meets No Distribution Requirement
P. Wagner

X.MTHED-409 Educational Leadership I: Exploring the Roles of Math Teacher Leadership
Credits: 2
This course will explore the roles of teacher leadership in math education at the local, state, and national level. Topics will include coaching, mentoring, writing (blogs, journals, op-eds, articles), professional learning communities (virtual and face- to-face), and advocacy. Participants will consider current issues and challenges facing students and teachers with regard to math education and will work to develop action plans to address these issues in the coming school year.
Applies to requirement(s): Meets No Distribution Requirement
The department

X.MTHED-410 Developing Mathematical Ideas: Facilitator Training
Credits: 2
This institute focuses on learning to teach one of the Developmental Mathematical Ideas (DMI) modules. Participants will choose a particular DMI module on which to concentrate their facilitation work. The institute will include examination of the central mathematical ideas of the module, identifying key goals for each session, discussion of the process of interacting with participants both in the institute sessions and through written responses, as well as opportunities for practice facilitation.
Applies to requirement(s): Meets No Distribution Requirement
V. Bastable
Advisory: Prior experience with a DMI seminar recommended.

X.MTHED-411 Educational Leadership II: Facilitating Adult Learning
Credits: 2
This course provides opportunities for participants to develop skills and knowledge to enable them to design and implement professional learning opportunities in mathematics for adults. Activities focus on four aspects: the importance of identifying key ideas and goals for professional learning, strategically using both small and whole group formats, an analysis of the range of professional learning opportunities for teachers, and opportunities to practice facilitating professional learning with an audience of teachers.
Applies to requirement(s): Meets No Distribution Requirement
M. Carrington, L. Van Cleef

X.MTHED-465 From Theory to Practice: The Learning and Teaching of Mathematics
Fall. Credits: 4
This course focuses on the teaching and learning of mathematics and considers how we move from theory to practice. The course focuses on the pedagogical moves of the teacher and the impact on students' mathematical experiences. Participants in the course will produce written cases of practice based on audio or videotaped classroom discussions and interviews with their own students. They will analyze their own cases and those of their colleagues to examine the learning of students and the impact of teacher moves. Course instructors will provide individual feedback based on the classroom cases.
Applies to requirement(s): Meets No Distribution Requirement
M. Garcia, The department
Restrictions: This course is offered for graduate students only.
Notes: Online.

X.MTHED-466 Advocacy Through Math Teacher Leadership
Not Scheduled for This Year. Credits: 4
The course involves exploring teacher leadership roles in mathematics education and how to advocate for change in the field. Students will create an action plan related to a change initiative in math education, develop a capstone project, and share findings and reflections so the group can provide critical feedback and support. The scalable nature of this work allows each student to define a leadership role and project to fit their interests and professional goals.
Applies to requirement(s): Meets No Distribution Requirement
M. Garcia, H. Patel
Restrictions: This course is offered for graduate students only.
Advisory: X.MTHED-465