

M.A. Program in Mathematics - General

Program Rationale:

The Master of Arts in Mathematics - General provides an abstract introduction to mathematics at an advanced level. This program is suitable for students wishing to improve their mathematics backgrounds before applying to doctoral programs, for candidates interested in teaching at the community-college level, and for high school teachers looking both to broaden and deepen their understanding so as to advance their teaching.

Program Learning Outcomes:

Students in this program will be expected to:

- deeply understand analytic arguments, using such common notions as epsilon/delta, infinite sums, and limits, as well as considerations for more general spaces than the real numbers, such as spaces of functions;
 - develop a basic understanding of measure theory and use it to study the Lebesgue integral;
 - deeply understand basic algebraic and discrete notions, such as facts about vector spaces and counting arguments, and expand this to include ideas about rings and fields;
 - develop a basic understanding of Galois theory;
 - follow and create analytic proofs involving abstract metric spaces;
 - follow and create algebraic proofs, with an understanding of groups, rings, and fields; and
 - independently investigate advanced topics in mathematics and present results to others in a clear way.
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