# DEPARTMENT OF MATHEMATICS

## COLLEGE OF ARTS AND SCIENCES

### Faculty

George Moss (2009). Professor of Mathematics and Department Chair. B.S., Auburn University; Ph.D., Virginia Polytechnic Institute and State University.

Bryan Dawson (1998). University Professor of Mathematics. B.S. and M.S., Pittsburg State University; Ph.D., University of North Texas.

Chris Hail (1995). Professor of Mathematics. B.S., Campbellsville College; M.A., Morehead State University; Ed.D., University of Kentucky.

Matt Lunsford (1993). Professor of Mathematics. B.G.S., Louisiana Tech University; M.S., University of Nebraska; Ph.D., Tulane University.

Troy Riggs (1993, 2000). Professor of Mathematics. B.S., University of South Dakota; M.A., and Ph.D., University of Nebraska-Lincoln.

Staff
Amy Eads

VII. Minor in Actuarial Science as earned with a Business Major and BSBA—21 hours

A. Prerequisites (applicable to other requirements): ACC 211, 212; ECO 211, 212; FIN 320; ECO 411 or 412; MAT 208, 211; CSC 115 or 255. Note: In the BSBA core MAT 208 substitutes for MAT 114, and CSC 115 or 255 for 105.

B. MAT 212, 213, 305, 315.

C. MAT 400, 401, 402.

## Admissions and Progression in the Major in Mathematics with Discipline-Specific Honors

Admission to the Program requires completion of at least 15 hours through Union University or transfer to include MAT 207 and MAT 213 with a minimum GPA of 3.50
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207. Transition Mathematics (3) F
Corequisite: MAT 212
An introduction to abstract mathematical reasoning, including reading and writing proofs. Topics include logic, types of proofs, set theory, functions and relations.

413. College Geometry (3) Three-semester rotation
Prerequisite: MAT 207 and 212.
Topics include axiomatic foundations of Euclidean and non-Euclidean geometry, models for incidence geometries, and development of theorems in the geometries of the Euclidean plane and the hyperbolic plane.

415. Abstract Algebra (3) Three-semester rotation
Prerequisite: MAT 207 and 212.
An introduction to the theory of groups and rings. Topics include elementary properties of groups and rings, permutation groups, cyclic groups, subgroups, Lagrange's theorem, normal subgroups, quotient groups, homomorphisms and isomorphisms, subrings, integral domains, fields, and characteristic.

416. Abstract Algebra II (3) As Needed
Prerequisites: MAT 315 and 415
A continuation of MAT 415. Topics include polynomial rings, ideals, quotient rings, extension fields, and finite fields.