

# Applied Mathematical and Computational Sciences, PhD

The PhD program in applied mathematical and computational sciences is broadly based and interdisciplinary. It is designed to help students achieve a command of applied mathematical techniques and computational tools and obtain basic knowledge in another area (e.g., in physics, engineering, operations research, chemistry, computer science, economics, statistics, geography, or in the biological, medical, or social sciences). The program is flexible; students can concentrate on applied mathematics areas, such as differential equations and numerical analysis, or on other applicable techniques in mathematics. Scientific computing is an important part of applied mathematics, so it is often a part of student training and dissertation research. Prospective students should have a desire to apply mathematical techniques or theory to relevant problems in an outside area.

## Learning Outcomes

Students will gain:

- proficiency in core applied mathematics subjects and broad knowledge in mathematics;
- proficiency in computer programming/scientific computing;
- excellent knowledge in at least one application area outside mathematics;
- ability to communicate knowledge and research work to various audiences; and
- ability to carry out research and work independently at a professional level.