Applied
Mathematical and
Computational
Sciences, Ph.D.

The Ph.D. program in applied mathematical and
computational sciences is autonomous, broadly based, and
interdisciplinary. It is designed to help students achieve a
command of theoretical and applied mathematics 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, 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 research/work independently at a
professional level.