APPLIED COMPUTATIONAL MATHEMATICS AND STATISTICS

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Associate Chair:
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Program of Studies

The partnership of applied mathematics, computational mathematics and statistics brings the tools of modeling, simulation and data analysis to bear on real-world problems, producing solutions with the power to predict and explain complex phenomena. These methods, often applied computationally, are being used in a wide variety of areas in business, engineering, the natural sciences, and the social sciences.

The Department of Applied and Computational Mathematics and Statistics (ACMS) offers programs of study leading to the bachelor of science degree in applied and computational mathematics and statistics and to the bachelor of science in statistics. Computational skills, which are often required to solve real-world problems, will be developed continuously throughout the curriculum. For many students, significant work in an area of application will complement their core studies. Graduates of the program will be well prepared for the following post-graduate opportunities.

- Further training in professional masters or doctoral programs in applied mathematics or statistics;
- Graduate study, at the masters or doctoral level, in bioinformatics or computational biology;
- Employment in technical fields requiring skills in statistics and computation;
- Employment and further study in actuarial science and quantitative methods in business and economics.

In addition to the core bachelor of science in ACMS major, ACMS offers a concentration in biological sciences, which will prepare students for further study or employment in computational biology, bioinformatics, ecological modeling, or epidemiology.

ACMS also offers supplementary majors in applied and computational mathematics and statistics and in statistics. Students in numerous areas of study can benefit from advanced study in applied and computational mathematics and statistics. This is true for students in business and the social sciences as well as those in the natural sciences and engineering. These supplementary majors are well suited for these students.

- Applied & Computational Mathematics & Statistics (BS) (https://catalog.nd.edu/undergraduate/science/applied-comp-math-stats/applied-computational-mathematics-statistics-bs/)
- Applied & Computational Mathematics & Statistics (Supplementary Major) (https://catalog.nd.edu/undergraduate/science/applied-comp-math-stats/applied-computational-mathematics-statistics-supp/)
- Scientific Computing (Minor) (https://catalog.nd.edu/undergraduate/science/applied-comp-math-stats/scientific-computing-minor/)
- Statistics (BS) (https://catalog.nd.edu/undergraduate/science/applied-comp-math-stats/statistics-bs/)
- Statistics (Supplementary Major) (https://catalog.nd.edu/undergraduate/science/applied-comp-math-stats/statistics-supp/)