Computational Modeling and Data Analytics
College of Science
Degree Types: B.S.

Description

The CMDA program draws on expertise from four departments at Virginia Tech whose strengths are in quantitative science: Statistics, Mathematics, Computer Science, and Physics. By combining elements of these individual disciplines in innovative, integrated courses, with an emphasis on techniques at the forefront of applied computation, CMDA imparts a suite of quantitative skills that the workplace is demanding. The program focuses on extracting information from large data sets, as well as analyzing and solving problems by modeling, simulation, and optimization, drawing on the computational skills that make solving the complex problems of the 21st century possible.

Options: No Option, Economics, Physics

Sample Careers

Jobs our graduates qualify for:
- Analytics for sports teams or internet/social media companies
- Consulting in defense/space/homeland security
- Modeling in the oil/gas/alternative fuel energy sector
- Data analysis for medical/pharmaceutical firms
- Quantitative modeling in finance/insurance

Curriculum

- Statistics
- Mathematics
- Computer Science
- Physics
- Data Analytics

Skills

- Analytical
- Logical Thinking
- Teamwork
- Computer Programming
- Math
- Communication
- Problem Solving

Related Majors

- Accounting and Information Systems
- Economics
- Computer Science
- Mathematics
- Statistics
- Packaging and Systems Design

Resources

Academy of Integrated Science, CMDA: http://www.ais.science.vt.edu/programs/cmda.html
CMDA Club: https://gobblerconnect.vt.edu/organization/CMDA

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