BOB JONES UNIVERSITY
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Department of Computer Science

Announces

The Computational Science Sequence

A recommendation for students with strong math aptitudes majoring in the natural sciences

Computational science is an emerging discipline concerned with the design, implementation and use of mathematical models to analyze and solve scientific problems. It involves the development and application of computational models and simulations, often coupled with high-performance computing, to solve complex physical problems arising in natural phenomena. It has been described as the "third mode of discovery" (next to theory and experimentation).

The Department of Computer Science encourages undergraduates in the natural sciences who have strong math aptitudes to consider taking the following **computational science sequence** of courses to enhance their degree:

- **CpS 110 Object-Oriented Programming I** provides an extensive introduction to programming in Python, a popular programming language used in to conduct research in the natural sciences. This is an entry-level programming class, requiring no programming background.

- **CpS 210 Data Structures** builds on the foundation of CpS 110 by supplying students with the knowledge needed to write programs that run efficiently and produce research results quickly. This course has a prerequisite of CpS 209, which we will waive for students who receive an A in CpS 110 and who are taking this sequence.

- **CpS 408 Parallel and Distributed Algorithms** teaches students to write programs that leverage multicore CPU's and high-performance computing clusters to process the enormous data sets common in natural science research.

A little knowledge goes a long way: students can benefit significantly from taking just CpS 110, or the CpS 110 + CpS 210 combination. A fundamental knowledge of programming will serve you well in your future career regardless of whether you plan to be involved in research.

For more information, contact Dr. Stephen Schaub <sschaub@bju.edu>.