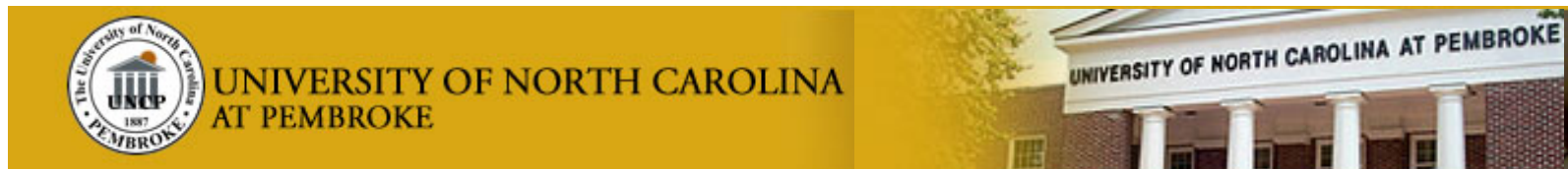




Department of Mathematics and Computer Science



www.uncp.edu



Computer Science Information Technology

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What is Computer Science and Information Technology?

- The study of computers and the systems built around computers.
- Development of programs to control these systems, and work on applications that use computers.
- Computer applications solve problems across all of society, and computer scientists work with all aspects of these applications



What will You Learn Studying Computer Science and Information Technology?

- All the basics of computer science
 - Hardware and software components
 - Programming and algorithms
 - Databases, operating systems, and network administration
 - Web site development and maintenance
- Once you understand how computers work and the technology behind them, you will learn:
 - How to apply this knowledge in a business setting
 - How to customize and integrate systems to meet business and individual user needs
 - How to design networking systems
 - How to handle security problems



Typical Jobs Requiring Computer Science and Information Technology Degrees

- Job areas
 - Design and build hardware and software systems
 - Design, build, and maintain web sites
 - Write computer games
- Typical starting salaries
 - \$47,000 a year: U.S. Department of Labor estimates
- Types of businesses
 - Federal, state, and local government
 - Practically all industries
 - Educational institutions
 - Medical facilities



Typical Computer Science Career Fields

- Artificial intelligence (making computers look intelligent)
- Computer algebra (using computers for Mathematical problems)
- Computer architecture (Hardware components of a computer)
- Computer graphics (making pictures with computers)
- Computer networks (hooking computers to other computers)
- Computer programming (writing, or making, computer programs)
- Computer security (making computers and their data safe)
- Databases (a way to get and store data)
- Data structure (how to form or group data)



Typical Computer Science Career Fields ...

- Distributed computing (using more than one computer at a time)
- Information retrieval (getting data back)
- Operating systems (makes a computer run: Linux, MS Windows, Mac OS)
- Programming languages (languages used to make computer programs)
- Program specification (what a program is supposed to do)
- Program verification (does a computer program do what it is supposed to do)
- Robots (Using machines controlled by computers)
- Software engineering (making computer programs better)



Degrees Offered at UNCP

- Bachelor of Science in Compute Science
 - Minor in Computer Science
 - 128 majors
 - 9 graduates per semester
- Bachelor of Science in Information Technology
 - Minor in Information Technology
 - Program started in Fall 2008



Computer Science

- Four year degree
- General Education: 45 hours
- Core Computer Science: 44 hours
 - Computer Science: 30 hours
 - Mathematics: 14 hours
- Advanced Computer Science: 12 hours
- General Electives: 19 hours



Computer Science...

- Core Computer Science
 - Java and Object Oriented Programming
 - Algorithm Development
 - Discrete Structures
 - Data Structures
 - Digital Logic and Computer Architecture
 - Operating Systems and Networking
 - Software Engineering



Computer Science...

- Mathematics
 - Calculus I and II
 - Linear Algebra
 - Probability and Statistics



Computer Science...

- Two tracks in advanced courses
 - Computer Systems
 - Network Management
 - Compiler Design
 - Operating Systems
 - Computer Architecture
 - Application Programming
 - Database Management Systems
 - Component Based Computing
 - Programming for the World Wide Web
 - Data Mining



Information Technology

- Four year degree
- General Education: 45 hours
- Core Information Technology: 46 hours
 - Computer Science: 33 hours
 - Information Technology: 6 hours
 - Mathematics: 7 hours
- Advanced Information Technology: 12 hours
- General Electives: 17 hours



Information Technology...

- Core Information Technology
 - Java and Object Oriented Programming
 - C and C++
 - Data Structures
 - Discrete Structures
 - World Wide Web Information
 - Operating Systems and Networking
 - Software Engineering
 - Human Computer Interactions
 - System Administration



Information Technology...

- Mathematics
 - Calculus with Applications
 - Introduction to Statistics



Information Technology...

- Two tracks in advanced courses
 - Information Systems
 - Advanced Computer Systems
 - System Administration
 - Computer Network and Data Communication
 - Application Software Development
 - Web Database Development
 - Windows and Game Programming
 - Website Development and Multimedia



Contact Information



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