Department of Computer Science

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Department of Computer Science

Purdue Computer Science is one of the country's top-ranked programs. Faculty members are shaping the future of information technology through cutting-edge research. Students can take courses that include such topics as artificial intelligence and machine learning, security and cryptography, software engineering, networking, operating systems, graphics and animation, competitive programming, distributed systems, information systems, and bioinformatics. Computer Science graduates pursue careers in software engineering, data science, systems

development, animation and visualization, computational finance, consulting, information security, wireless systems, embedded systems, and biotechnology. Many also go on to graduate or professional school in areas such as engineering, business, law, or medicine.

The Department also offers a Data Science program. A major in data science puts graduates at the forefront of an emerging field and prepares them for an exciting career at the intersection of computer science and statistics. Data Science is the interdisciplinary field of inquiry that uses quantitative and analytical methods to help gain insights and predictions based on big data. Students learn about key computational methods and statistical techniques and develop the deep analytical thinking skills needed to reason reliably, intelligently and creatively from data. The vast amounts of data generated every day has created a data-rich and data-driven world. The data science major opens pathways to careers in virtually every area of society, from healthcare, security and sustainability to education, business

and economics.

The department is located in the Lawson Computer Science Building, which opened in 2006. In addition to offering an inviting and comfortable environment, the building is equipped with cutting-edge networking and computing technologies, including 10-gigabit Ethernet cabling and wireless access throughout the building. There are four classrooms, five instructional labs, five research labs, and a student activity center. The building also offers students a variety of interaction areas, and a deli-style café and espresso bar. A 16-by-9 foot tiled video wall is used for a variety of purposes, including notices of campus events, workshop and colloquium speakers, news and information, sporting events, research demonstrations, and class projects.

The Purdue Computer Science Department offers a Bachelor of Science (BS), a minor in computer science, or a 5-year combined BS/MS degree. The department also offers an Honors Program, and the opportunity to participate in the Cooperative Education Program. A transfer program is also available, TSAP in Computer

Science.

Computer Science Website

Faculty

Contact Information

General Department Contact
Purdue University
Department of Computer Science
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Graduate Information

For Graduate Information please see Computer Science Graduate Program Information.

Programs

Baccalaureate

- Artificial Intelligence, BS
- Computer Science Honors: Algorithmic Foundations, BS
- Computer Science Honors: Computational Science and Engineering, BS
- Computer Science Honors: Computer Graphics and Visualization, BS
- Computer Science Honors: Database and Information

Systems, BS

- Computer Science Honors: Machine Intelligence, BS
- Computer Science Honors: Programming Language, BS
- Computer Science Honors: Security, BS
- Computer Science Honors: Software Engineering, BS
- Computer Science Honors: Systems Software, BS
- Computer Science: Algorithmic Foundations, BS
- Computer Science: Computational Science And Engineering, BS
- Computer Science: Computer Graphics and Visualization, BS
- Computer Science: Database and Information Systems, BS
- Computer Science: Machine Intelligence, BS
- Computer Science: Programming Language, BS
- Computer Science: Security, BS
- Computer Science: Software Engineering, BS

- Computer Science: Systems Software, BS
- Data Science, BS (CS)

Minor

- Computer Science Minor

Pre-Program

- Data Science First Year (CS)

Courses

Computer Sciences

- CS 10100 - Digital Literacy
- CS 15900 - C Programming
- CS 17600 - Data Engineering In Python
- CS 17700 - Programming With Multimedia Objects
- CS 18000 - Problem Solving And Object-Oriented Programming
- CS 18200 - Foundations Of Computer Science
- CS 18300 - Professional Practice I
- CS 18400 - Professional Practice II
- CS 19000 - Topics In Computer Sciences
- CS 19100 - Freshman Resources Seminar
- CS 19300 - Tools
- CS 19700 - Freshman Honors Seminar
- CS 21100 - Competitive

Programming I

- CS 23500 - Introduction To Organizational Computing
- CS 24000 - Programming In C
- CS 24200 - Introduction To Data Science
- CS 25000 - Computer Architecture
- CS 25100 - Data Structures And Algorithms
- CS 25200 - Systems Programming
- CS 28400 - Professional Practice III
- CS 28401 - Professional Practice Part-Time
- CS 29000 - Topics In Computer Sciences
- CS 29100 - Sophomore Development Seminar
- CS 29199 - Cooperative Experience I
- CS 29299 - Cooperative Experience II
- CS 30700 - Software Engineering I
- CS 31100 - Competitive Programming II
- CS 31400 - Numerical Methods
- CS 33400 - Fundamentals Of Computer Graphics
- CS 34800 - Information Systems
- CS 35100 - Cloud Computing

- CS 35200 - Compilers: Principles And Practice
- CS 35300 - Principles Of Concurrency And Parallelism
- CS 35400 - Operating Systems
- CS 35500 - Introduction To Cryptography
- CS 37300 - Data Mining And Machine Learning
- CS 38001 - C++ Programming
- CS 38002 - Advanced Java Programming
- CS 38003 - Python Programming
- CS 38100 - Introduction To The Analysis Of Algorithms
- CS 38600 - Professional Practice IV
- CS 39000 - Topics In Computer Sciences
- CS 39100 - Junior Resources Seminar
- CS 39499 - Extensive Cooperative Experience IV
- CS 39599 - Extensive Cooperative Experience V
- CS 39700 - Honors Seminar
- CS 40700 - Software Engineering Senior Project
- CS 40800 - Software Testing
- CS 41100 -

Competitive Programming III

- CS 42200 - Computer Networks
- CS 42600 - Computer Security
- CS 43400 - Advanced Computer Graphics
- CS 43900 - Introduction To Data Visualization
- CS 44000 - Large Scale Data Analytics
- CS 44800 - Introduction To Relational Database Systems
- CS 45600 - Programming Languages
- CS 47100 - Introduction to Artificial Intelligence
- CS 47300 - Web Information Search And Management
- CS 47500 - Human-Computer Interaction
- CS 47800 - Introduction to Bioinformatics
- CS 48300 - Introduction To The Theory Of Computation
- CS 48700 - Professional Practice V
- CS 48900 - Embedded Systems
- CS 49000 - Topics In Computer Sciences For Undergraduates
- CS 49700 - Honors

Research Project

Consumer Science

- CS 39399 - Cooperative Experience III

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