

Department of Computer Science

The Department of Computer Science in the College of Engineering at NC State University offers a Bachelor of Science (BS) in Computer Science degree. The BS degree is accredited by the Computing Accreditation Commission of (<https://www.abet.org>) ABET (<https://www.abet.org>). Additionally, the Department of Computer Science offers a Minor in Computer Programming and a Post Baccalaureate Computer Programming Certificate.

Core computing courses provide a foundation for all students in programming languages, data structures, software engineering, computer architectures, the theory of computation, the basics of building secure software and systems, teaming and communication, and the social and ethical dimensions of the practice of computer science. Students explore the mathematical methods needed to analyze and compare both computation problems and alternative approaches to solving them. All Computer Science majors must complete a team project in Senior Design. Projects under the auspices of the department's Senior Design Center (<https://sdc.csc.ncsu.edu/>) may have industrial sponsors, so student teams gain experience working jointly with industry representatives to achieve project goals. Senior Design teams are expected to solve a technical computing problem while effectively communicating their work and process to various audiences.

Students take a variety of computing courses to explore more advanced areas, among them artificial intelligence, cloud computing, compilers, computer architecture and multiprocessors, computer graphics, cryptography, database management systems, data science, development and operations, educational technology, file organization and processing, human-computer interface design, multimedia technology, networks, privacy, security (computer, network, and software), sensor systems, social computing, and web services.

We offer three concentrations in Artificial Intelligence (<https://www.csc.ncsu.edu/academics/undergrad/bs-csc-ai.php>), Cybersecurity (<https://www.csc.ncsu.edu/academics/undergrad/bs-csc-cyber.php>), and Game Development (<https://www.csc.ncsu.edu/academics/undergrad/bs-csc-gdc.php>), which allow for specialization. We also offer two undergraduate elective tracks in Security (<https://www.csc.ncsu.edu/academics/undergrad/tracks/security.php>), Robotics (<https://www.csc.ncsu.edu/academics/undergrad/tracks/robotics.php>), and Entrepreneurship (<https://www.csc.ncsu.edu/academics/undergrad/tracks/entrepreneurship.php>). The tracks provide the opportunity for students to focus some of their Computer Science Restricted Electives on areas of interest without the depth of the concentration.

Departmental Highlights

NC State Computer Science was established in 1967 and is one of the oldest Computer Science departments in the county.

Computer Science majors can:

- Participate in undergraduate research and independent study projects mentored by faculty. These projects are the starting point for completing the CSC Honors Program.
- Apply their learning through our award-winning capstone Senior Design Center projects. Many projects are industrially sponsored

and all projects challenge students to deliver a cohesive, high-quality software system solving a problem.

- Interact with more than 100 companies that actively partner with the department via sponsored programs, research, scholarships, projects, and initiatives.
- Participate in a variety of student organizations (https://www.csc.ncsu.edu/academics/students_orgs.php) for leadership skills, service, networking, and informal learning opportunities, including ACM/AITP, App Development Club, Artificial Intelligence Club, Code Black, HackPack, LA/CSC, Linux Users Group, STARS, and WiCS among others.

Our areas of expertise include artificial intelligence, bioinformatics & computational sciences, computing education, graphics and visualization, high-performance & power-aware systems, networks, security, software engineering, and theory & algorithms.

Departmental Information

The Department of Computer Science is located in Engineering Building II on NC State's Centennial Campus.

Department of Computer Science

Contact: Computer Science Academic Advising

Faculty

Department Head

G.A. Rothermel

Associate Department Head

R. Dutta

Directors

W.H. Enck, *Director of Wolfpack Security & Privacy Research (WSPR) Laboratory*

S. Heber, *Director of Graduate Programs*

S.S. Heckman, *Director of Undergraduate Programs*

M. Heil, *Director of Senior Design Center*

J.C. Lester, *Director of the Center for Educational Informatics*

L. Rand-Pickett, *Interim Director of Development & External Relations and Director of Graduate Career Services*

G.N. Rouskas, *Director for Faculty Advancement*

Assistant Director

T.S. Coates, *Assistant Director of External Relations*

T.A. Marini, *Coordinator of Undergraduate Advising*

D.L. Roberts, *Assistant Director of Undergraduate Programs*

Distinguished Professors

T.M. Barnes, *Distinguished Professor of Computer Science*

C.G. Healey, *Goodnight Distinguished Professor of Analytics, Institute for Advanced Analytics*

J.C. Lester, *Goodnight Distinguished University Professor in Artificial Intelligence and Machine Learning*

M. Rappa, *Distinguished University Professor*

G.N. Rouskas, *Alumni Distinguished Graduate Professor*

M.P. Singh, *SAS Institute Distinguished Professor and Alumni Distinguished Graduate Professor*

L.A. Williams, *Goodnight Distinguished University Professor*

Professors

M. Chi

R.Y. Chirkova

R. Dutta

W.H. Enck

E.F. Gehring

X. Gu

S. Heber

T.J. Menzies

F. Mueller

G.A. Rothermel

X. Shen

M.F. Stallmann

R. Vatsavai

Associate Professors

K. Anyanwu Ogan

J. Bradley

M. D'Amorin

W. K. Guez Assunção

Z. Guo

K. Harfoush

A. Jhala

A. Kapravelos

S. Kuttal

C. Lynch

N. Matsuda

T. Price

S. Raghvendra

B. Reaves

D.L. Roberts

A. Scafuro

M. Shahzad

D.R. Sheehy

K.T. Stolee

S. Vallin Thankachan

B. Watson

W. Wen

Assistant Professors

B. Akram

V. Cateté

A. Das

P. Gao

J-E. Kim

C.H. Lee

J. Li

H. Li

J. Liu

X. Liu

Yuan Liu

Yuchen Liu

A. Mallavarapu

J.P. Ore

D. Wermke

B. Xu

C. Xu

D. Xu

M-K. Yoon

R. Yu

Teaching Professors

T. Battestilli

S.S. Heckman

Associate Teaching Professor

J. Jennings

J. King

C. Satyavolu

J.Y. Schmidt

D.B. Sturgill

K. Titus

Assistant Teaching Professor

S.P. Balik

C. Batista de Melo

A. Card

I. Dominguez

A. Gaweda

A. Haque

S. Jiao

S. McLeod

I. White

Lecturers

A. Allard

M. Heil

T.A. Marini

Academic Advisor

A. Hamilton

J. Kelsey

Emeritus

D. Bahler

W. Chou

E.W. Davis

J. Doyle

R.J. Fornaro

T.L. Honeycutt

D.F. McAllister

H. Perros

D.S. Reeves

W.E. Robbins

C.D. Savage

W.J. Stewart

A.L. Tharp

D.J. Thuyente

M. Vouk

Research and Development Staff

C. Barron

D. Carpenter

K. Cassell

T.S. Coates

M. Hill

Y.J. Kim

V. Kumaran

S. Lee

W. Min

P. Morrison

B.W. Mott

O. Pala

J. Phillips

L. Rand-Pickett

S. Reaves

L. Rodgers

P. Smith

X. Tian

J. Vandenberg

D.R. Wright

Adjuncts

A. Dagnino

G. Jin

C. Martens

C. Parnin

X. Wang

Associate Members of the Department

For a list of Associate Members of the Department, please see the Computer Science Department's webpage

Plans

- Computer Programming (Certificate) (For Post-Baccalaureate Students, Distance Education) (<http://catalog.ncsu.edu/undergraduate/engineering/computer-science/computer-programming-certificate-distance-education/>)
- Computer Programming (Minor) (<http://catalog.ncsu.edu/undergraduate/engineering/computer-science/computer-programming-minor/>)
- Computer Science (BS) (<http://catalog.ncsu.edu/undergraduate/engineering/computer-science/computer-science-bs/>)
- Computer Science (BS), Artificial Intelligence Concentration (<http://catalog.ncsu.edu/undergraduate/engineering/computer-science/artificial-intelligence-concentration/>)
- Computer Science (BS), Cybersecurity Concentration (<http://catalog.ncsu.edu/undergraduate/engineering/computer-science/computer-science-bs-cybersecurity-concentration/>)
- Computer Science (BS), Game Development Concentration (<http://catalog.ncsu.edu/undergraduate/engineering/computer-science/computer-science-bs-game-development-concentration/>)