Department of Computer Science

To see what you will learn while pursuing this program, visit the Learning Outcomes website (https://apps.oirp.ncsu.edu/pgas/).

The Department of Computer Science in the College of Engineering at NC State University offers a Bachelor of Science in Computer Science degree. The degree is nationally accredited by the Computing Accreditation Commission of ABET, http://www.abet.org. Core 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 themselves 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 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 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 two concentrations in Game Development and Cybersecurity, which allow for specialization in depth.

The Department of Computer Science also offers two undergraduate elective tracks in Security (https://www.csc.ncsu.edu/academics/undergrad/tracks/security.php) and Entrepreneurship (https://www.csc.ncsu.edu/academics/undergrad/tracks/entrepreneurship.php). The tracks provide the opportunity for students to focus on a key set of CSC Restricted Elective courses that provide focus in an area of interest. The Undergraduate Track in Security teaches students the skills necessary to build, analyze, and reason about secure and private systems beyond the security coverage in the core curriculum. The Undergraduate Track in Entrepreneurship provides the opportunity for students to engage in entrepreneurial endeavors and connect with the broader entrepreneurial community at NC State. Both tracks are recognized by a letter of completion.

Departmental Highlights

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

- Opportunity for undergraduate research for coursework or stipend.
- Applied learning through our award-winning capstone Senior Design Center projects. Most projects are industrially sponsored and challenge students to deliver a cohesive software system solving a problem.
- More than 100 companies actively partner with the department via sponsored programs, research, scholarships, projects, and initiatives.
- A variety of student organizations (https://www.csc.ncsu.edu/academics/students_orgs.php) providing leadership skills, service, networking, and informal learning opportunities, including ACM/AITP, HackPack, Honors Programs/Honors Societies, Linux Users Group, STARS Student Leadership Corps, and Women in Computer Science.
- Academic Alliance Member of National Center for Women and Information Technology (NC WIT)
- Areas of expertise in artificial intelligence, bioinformatics and computational sciences, computer-based education, graphics and visualization, high-performance & power-aware systems, networks, security, software engineering, theory and algorithms.

Departmental Information

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

Department of Computer Science: https://www.csc.ncsu.edu/

Contact: Computer Science Academic Advising: https://www.csc.ncsu.edu/academics/undergrad/advising/

Faculty

Department Head
G.A. Rothermel, and Professor

Director of Graduate Programs
G.N.Rouskas

Director of Undergraduate Programs
S.S. Heckman

Director of Advising (Undergraduate)
B.J. Adams

Distinguished University Research Professor
D.L. Bitzer

Distinguished Professor
M.A. Vouk, and Associate Vice Chancellor for Research Development
L.A. Williams, and Co-Director - NCSU Science of Security Lablet

Distinguished University Professor
J.C. Lester, and Director of the Center for Educational Informatics
M. Rappa

**SAS Distinguished Professor**

J. Doyle

**Alumni Distinguished Graduate Professor**

H. Perros

G.N. Rouskas

M.P. Singh, and Co-Director - NCSU Science of Security Lab

**Professors**

T.M. Barnes

R.Y. Chirkova

R. Dutta, and Interim Associate Department Head

E.F. Gehringer

X. Gu

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

T.J. Menzies

F. Mueller

D.S. Reeves, and Associate Dean for Graduate Programs, College of Engineering

N.F. Samatova

C.D. Savage

X. Shen

M.F. Stallmann

**Associate Professors**

K. Anyanwu Ogan

D.R. Bahler

M. Chi

W.H. Enck, and Director of Wolfpack Security & Privacy Research (WUSR) Laboratory

V. Freeh, and Assistant Director of Undergraduate Programs

K. Harfoush

S. Heber

A. Jhala

N. Matsuda

D.L. Roberts

D.R. Sheehy

R. Vatsavai

B. Watson

**Assistant Professors**

A. Das

G. Jin

A. Kapravelos

C. Lynch

C. Martens

J.P. Ore

C.J. Parnin

T. Price

B. Reaves

A. Scafuro

M. Shahzad

K.T. Stolee

R. Yu

**Research Professor**

P.A. Dreher

**Teaching Associate Professor**

T. Battestilli

S.S. Heckman

D.B. Sturgill

**Teaching Assistant Professors**

B. Akram

S.P. Balik

I. Dominguez

J. Jennings

J. King

J.Y. Schmidt

**Lecturers**

B.J. Adams

M. Heil, and Director of Senior Design Center
D.A. Lasher, and Scheduling Officer
TA. Marini, and Assistant Director of Undergraduate Advising

Emeritus
W. Chou
E.W. Davis
R.J. Fornaro
T.L. Honeycutt
D.F. McAllister
W.E. Robbins
W.J. Stewart
A.L. Tharp
D.J. Thuente

Visiting Research Professor
F. Brglez

Associate Vice Chancellor of Partnerships and Economic Development
D.H. Kekas

Director of Development & External Relations
K. Tate

Director of Development
S. Seltzer

Director of Graduate Career Services
L. Rand-Pickett

Research and Development Staff
V. Catete
T.S. Coates, and Assistant Director of External Relations
K.S. Culbertson
B. Liu
D. Kremer
W. Min
B.W. Mott
S. Reaves

J.P. Rowe
P. Smith
R. Spain
R.G. Taylor
S. Taylor
D.R. Wright

Adjuncts
A.I. Anton
K.E. Boyer
R. Chillarege
A. Dagnino
S.W. Hunter
P. Ning
I. Rhee
A. Rindos
A. Rivers
R.A. St.Amant
J.N. Staddon
J.P. Streck
H.W. Tseng
X. Wang
T. Xie
R.M. Young
T. Yu

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), 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/)