

# Computer Engineering

The Master of Science in Computer Engineering may be earned with thesis option or through the non-thesis option. Either option may be used as preparation for further graduate study or employment in industrial research, development or design.

Also a strong Ph.D. program is available for those who wish to pursue a research and/or teaching career in Industry, Government or Academia.

## Master's Degree Requirements

Thirty-one (31) credit hours; a thesis is optional. Students must have at least 21 hours of ECE courses that cover at least three specialty areas and have at least three credit hours of advanced-level (700-level) ECE courses. Students electing the Option B non-thesis option must meet core course requirements; have ECE courses that cover at least three specialty areas' and have at least three credit hours of 700-level ECE courses.

The Master's degree is offered online through Engineering Online. Applications to these MS on-line programs are through the ECE Department and all students must comply with ECE program requirements.

## Doctoral Degree Requirements

Approximately 54 credit hours are required beyond the M.S. degree or 72 credit hours beyond the B.S. degree. For those with an NC State MS degree in our department, no additional courses are required. For those with an NC State MS degree in another department, 6 credit hours are required in our department. For those with a non NC State MS degree, 12 credit hours of coursework are required. For those with only a Bachelors degree 30 credit hours of coursework are required. The remaining credit hours are research.

The department wishes to evaluate a Ph.D. student's research potential as quickly as possible. Consequently, all Ph.D. students are required to pass a qualifying review before the end of their third semester of study. This review is based on the student's academic performance to date and the results of a project with one of their committee members. Results are presented to the committee in both written and oral form. Based on this review, the committee will decide if the student may continue in the Ph.D. program.

## Student Financial Support

The department offers financial support to qualified students in the form of teaching assistantships, research assistantships, and fellowships. These sources of support generally include coverage of tuition and fees.

## More Information

Computer Engineering Program Website (<https://www.ece.ncsu.edu/grad/>)

## Admissions Requirements

Admission to the M.S. program requires a B.S. in electrical engineering, computer engineering or computer science, and an overall undergraduate GPA of at least 3.0. For non-native English speakers, the minimum acceptable TOEFL score for admission to the M.S. program is 90 (minimum 18 in each area, with minimum of 19 on Speaking). Admission

is further limited by available room in the elected program of study. Meeting the above minimum requirements alone does not guarantee admission.

Applicants to the Master's and PhD programs who do not have a Bachelor's degree in Electrical Engineering or Computer Engineering, but have a closely related degree from an accredited college or university, must have taken the following pre-requisite courses: courses equivalent to ECE 109, ECE 209, ECE 212, ECE 220, ECE 301, ECE 302, ECE 309 and CSC 226.

All international applicants from non English speaking countries must submit TOEFL scores. The TOEFL must have been taken within two years of the date of anticipated admission. On the TOEFL iBT, students must have a minimum of 18 on each section of the test with a minimum total of 90. Scores on previous versions of the TOEFL are considered with the same qualitative standard. On the IELTS, we require a minimum score of 6.5 in each section. This requirement also applies to US citizens whose principal language of instruction has not been English (for example, most applicants from Puerto Rico and the Virgin Islands).

TOEFL - institution code 5496; department code 66  
GRE - institution code 5496; department code 1203

Admission to the Ph.D. program requires a B.S. or M.S. in electrical engineering, computer engineering or computer science with an expectation of an overall GPA of at least 3.25. The minimum acceptable TOEFL score for admission to the Ph.D. program is 90 (minimum 18 in each area, with minimum of 19 on Speaking). The GRE is required for all programs of study but might be waived for NC State graduates or graduates from other US ABET accredited schools with good GPAs. Admission is further limited by available room in the elected program of study, and meeting the minimum requirements as given above does not guarantee admission.

## Applicant Information

### Computer Engineering (MS)

- **Delivery Method:** On Campus, Distance
- **Entrance Exam:** None
- **Interview Required:** None

### Computer Engineering (PhD)

- **Delivery Method:** On-Campus
- **Entrance Exam:** None
- **Interview Required:** None

## Application Deadlines

- **Fall:** January 9 (US and Intl)
- **Spring:** July 1 (US and Intl)

## Degrees

- Computer Engineering (MS) (<http://catalog.ncsu.edu/graduate/engineering/computer-engineering/computer-engineering-ms/>)
- Computer Engineering (MS): Internship Concentration (<http://catalog.ncsu.edu/graduate/engineering/computer-engineering/computer-engineering-ms-internship-concentration/>)
- Computer Engineering (PhD) (<http://catalog.ncsu.edu/graduate/engineering/computer-engineering/computer-engineering-phd/>)

- Computer Engineering (Minor) (<http://catalog.ncsu.edu/graduate/engineering/computer-engineering/computer-engineering-minor/>)
- Computer Engineering (Certificate) (<http://catalog.ncsu.edu/graduate/engineering/computer-engineering/computer-engineering-certificate/>)

## Faculty

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Chau-Wai Wong  
Tianfu Wu  
Gregory Edward Bottomley  
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James Paul Dieffenderfer  
Robert Joseph Evans  
Rachana Ashok Gupta  
Douglas C. Hopkins  
Steven Wade Hunter  
Steven D. Jackson  
Bongmook Lee  
David Lee Lubkeman  
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