

# Computer Science

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## Department Information

- **Department Chair:**  
Simone Ludwig, Ph.D.
- **Graduate Program Coordinator:**  
Changhui Yan, Ph.D.
- **Department Location:**  
258 QBB
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- **Department Web Site:**  
[www.ndsu.edu/cs/](http://www.ndsu.edu/cs/) (<http://www.ndsu.edu/cs/>)
- **Application Deadline:**  
February 1 priority deadline for fall semester; September 1 for spring semester\*\*
- **Credential Offered:**  
Ph.D., M.S.
- **English Proficiency Requirements:**  
TOEFL ibt 79; IELTS 6.5; Duolingo 105

In addition to the minimum Graduate School requirements, the following items are required for all Computer Science applicants seeking an advanced degree:

## Master of Science

- The applicant must have a bachelor's degree from an educational institution of recognized standing. Admission to the program is competitive; the following minimum requirements are necessary but are not sufficient for automatic admission.
- The applicant must show, by a combination of educational background, academic performance, and work experience, the potential to succeed in advanced study and research in computer science. Minimum preparation usually includes the ability to program in one or more modern, commonly used high-level languages (such as Java or C++); and experience in using data structures such as linked lists and binary trees. Minimum preparation for unconditional admission to the master's program would normally include courses in computer science principles and theory equivalent to the NDSU courses.

Code	Title	Credits
CSCI 161	Computer Science II	4
CSCI 222	Discrete Mathematics	3
CSCI 366	Database Systems	3
CSCI 372	Comparative Programming Languages	3

- Applicants to the Computer Science M.S. program must have a cumulative grade point average (CGPA) 3.0 (out of 4.0) or higher in all previous courses to be admitted full standing.
- GRE score is not required for admission. However, a GRE score above the median (50th percentile) for the quantitative reasoning portion is strongly recommended for gaining priority in assistantships.
- International applicants are welcome. They must submit TOEFL, IELTS, PTE Academic score or Duolingo score. Minimum requirements are:
  - TOEFL score of at least 550 (paper based) or 79 (internet based)
  - IELTS score of at least 6.5
  - PTE Academic score of at least 53 or
  - Duolingo score of 100.
- Eligibility for a teaching assistantship/tutor requires the following additional requirements:
  - minimum TOEFL ibT score of 81 (IELTS of 7)
    - TOEFL ibT Speaking subscale score of 23 or above and
    - TOEFL ibT Writing subscale score of 21 or above.
  - IELTS equivalent scores are 6.0 and 6.0, respectively.

- PTE Academic equivalent scores are 62 and 56, respectively
- Duolingo score is 115 or greater.
- The eligibility for a grader requires
  - minimum TOEFL iBT score of 79 (IELTS of 6.5)
    - must score at or above the 40th percentile on the TOEFL iBT Speaking and Writing subscales (currently 19 and 21 respectively)
  - IELTS equivalent scores are 5.5 and 6.0 respectively
  - PTE Academic equivalent scores are 51 and 56, respectively
  - Duolingo is 110 or greater.

## Doctor of Philosophy

The applicant must have at least a four-year bachelor's degree, or a master's degree in computer science. In some cases, students with a degree in a closely related area may be considered, provided the course work includes exposure to the skills listed under M.S. above. Students with only a bachelor's degree should have substantial computer science experience, whether acquired through course work or professional experience.

Admission to the program is competitive, and requirements for admission to this program are more rigorous than for admission to the M.S. program. Students applying with a bachelor's degree only should meet a minimum GPA of 3.25 in previous coursework. The applicant for Computer Science Ph.D. degree program must have a GRE score above the median (50th percentile) for the quantitative reasoning portion. The admissions committee will evaluate the applicant's overall academic record, as well as any relevant employment and professional experience. Of particular importance is evidence of the applicant's potential for scholarship and independent research at the Ph.D. level. International students are welcome. English Language requirements are the same as for the Computer Science M.S. program.

The graduate admissions committee reviews all applications during the month following the application deadline and considers accepted students for any available assistantship positions within the department. If an assistantship is not offered at time of admission, accepted students can then fill out an application on the Computer Science website for later consideration.

## Financial Assistance

Assistantships are available to selected graduate students. Teaching one section of a lower division service course requires 10 hours of work per week and qualifies the student for a monthly stipend. In addition to the stipend, graduate assistants receive a graduate tuition waiver. Tuition waivers cover base tuition for NDSU graduate credits only. Students are responsible for differential tuition, student fees, and tuition for non-graduate level credits taken or Cooperative Education credits.

Other assistantships that provide a stipend and tuition waiver include research assistantships, which involve assisting faculty with their research, and graduate service assistantships, which involve tutoring, grading or computer-related work with faculty members or organizations on campus. Related prior experience increases the likelihood of a teaching or tutoring assistantship being awarded. For all assistantships, a student's chances are greater after they have been at NDSU one or two semesters.