**Graduate Student Handbook**
**Computer Science**

**June 1, 2024**

**The guidelines in this document apply to MS and PhD students who enrolled in Academic Year 2024/2025 (so in or after Fall 2024)**

## PURPOSE OF STUDENT HANDBOOK

The purpose of the Computer Science Graduate Student Handbook is to help guide students as they progress through the MS and PhD programs. Because the MS and PhD programs are conferred and governed by the academic requirements established by the Vanderbilt University (VU) Graduate School, students should also be familiar with the policies and procedures in the Vanderbilt University Student Handbook and Vanderbilt University Graduate School Catalog. For questions about information in the handbook, students should contact their advisor, the Graduate Program Coordinator (GPC), or the Director of Graduate Studies (DGS).

## OVERVIEW OF GRADUATE PROGRAMS

The Department of Computer Science (CS) at Vanderbilt University offers Doctor of Philosophy (Ph.D.) and Master of Science (M.S.) degrees in Computer Science (CS). The graduate program in CS is structured around four primary areas: (1) Computing foundations, (2) Computer and network systems, (3) Information and intelligent systems, and (4) Medical image computing. This structure is designed to help students choose the courses they need to take to prepare for research in their area of choice. The CS graduate program encourages both fundamental and interdisciplinary research. State-of-the-art facilities that include computational resources, networks, and laboratories in several areas are available to support research activities.

## DEGREE REQUIREMENTS

Doctoral candidates are required to complete a total of exactly 72 hours (no more and no less) of graduate work for credit, of which a minimum of 36 hours must be in formal didactic course work. Formal coursework may include at most 6 hours of independent study (CS 8390). Note that the programmatic requirements officially are at least 72 hours, but for financial reasons (excess tuition charges), students should take exactly 72 hours except in exceptional cases. The remainder of the 72 hours, beyond the program requirements in formal didactic course hours, should be in dissertation research hours (CS 8999 before candidacy [prior to passing the qualifying exam] or 9999 after candidacy [after passing the qualifying exam]). Some transfer credit from previous graduate studies may be applied toward the 72 hours if applicable (for details, see the Graduate Catalog for further details). Three milestone examinations are required: a preliminary examination to be completed by the end of the second year (4th semester) in the program, a qualifying examination to be completed before four years in the program, and a dissertation defense examination. General requirements regarding Admission to Candidacy, Residence, the Qualifying Examination, and the Dissertation are set by the Graduate School and are described in the Graduate Catalog (http://www.vanderbilt.edu/catalogs/ ). Program specific requirements are described in the Graduate Catalog CS program description.

### Preliminary Exam and Advanced Standing in the CS Ph.D. Program

Refer to the Graduate Catalog for the Preliminary Examination requirements and process for advancement to advanced standing in the CS PhD program.

### Transfer Credit

Refer to the Graduate Catalog for guidelines and process around transfer credit.

### Qualifying Examination Process

Refer to the Graduate Catalog for the Qualifying Examination requirements. Once you are ready to establish your PhD committee and schedule your qualifying exam, please contact the GPC for additional instructions. The forms needed to schedule your QE and appoint your committee will be due two weeks prior to the QE to the Graduate School, so please ensure that this is initiated in advance to allow time to plan, schedule, and submit these forms by the deadline.

### Dissertation Defense Examination and Dissertation Deposit Process

Refer to the Graduate Catalog for the Dissertation Defense and Dissertation Deposit requirements. Once you are ready to defend, contact the GPC for instructions on how to schedule your defense. The form needed to schedule the defense will

be due no later than two weeks prior to your assessment to the Graduate School, so please ensure that this is initiated in advance to allow time to plan, schedule, and submit the form by the deadline.

The candidate will need to take a copy of the title page and abstract to their defense in order to have the title page signed by the committee members and the abstract signed by the dissertation director. These forms are required to deposit the dissertation at the university level. The Graduate School maintains resources for the official formatting requirements of the dissertation and deposit process.

# RESEARCH EXPECTATIONS

A shared passion for research and education is a hallmark of the Vanderbilt environment, and the graduate program in the Computer Science department exemplifies that drive for excellence. Faculty, research engineers/scientists, and students engage in leading-edge scholarship along with research of significant importance in both industry and government. The unique characteristic of the PhD degree is that students must generate new knowledge. The dissertation demonstrates that the candidate has technical competence in the field and has done research of an independent character. It must add to or modify what was previously known, or present a significant interpretation of the subject based upon original investigation.

There is a minimum of 36 hours of formal (didactic) graduate coursework, and the remainder of the 72 graduate credit hours are typically in dissertation research (CS 8999/9999), but may include other didactic courses, seminars, etc. Students should not take more than 72 total hours as there are financial ramifications.

While there is no formal requirement for publications, a successful PhD student will have published in high quality archival journals and top-tier conferences by the time of dissertation defense. Students work closely with their faculty advisor to publish their research results in a timely manner.

# TRAINING FOR THE PROFESSION

While it is not required, PhD students in CS are strongly encouraged to participate in at least one industry internship program during their graduate studies at Vanderbilt.

## Teaching Expectations

There are no teaching expectations unless communicated and agreed upon with your advisor. Many first-year students are expected to be Teaching Assistants, however. If you are interested in teaching opportunities, please contact your advisor and/or Director of Graduate Studies.

Teaching assistants must attend a teaching orientation – details of which will be sent by your administrators once your role is confirmed. Responsibilities may include teaching, grading, assisting in teaching labs, conducting recitation sessions, and holding regular office hours.

## *Other Training Expectations*

Students are not required to be connected to an advisor when they are applying to the program. However, you are encouraged to contact or list faculty who you may want to work with and/or whose work aligns with your research interest.

To contact professors for research opportunities, you are encouraged to explore the Directory for Computer Science here: https://engineering.vanderbilt.edu/people/cs

## *Advising and Mentoring*

Every semester, students meet with their advisors to ensure their progress in the program and should regularly review their Degree Audit and Academic Record in YES. The advisor should also be the first contact for course selection and research advising.

Once every year, the entire faculty meet and discuss the progress of every PhD student. If the faculty deems that the student has not made sufficient progress in their studies, remedial actions are agreed upon and the student is notified in a formal letter. Faculty may also decide that a student is to be dismissed from the PhD program, for example due to a low GPA, failing the preliminary examination twice, or not making adequate progress in their research. The faculty may decide to grant a terminal MS degree if the student has satisfied the MS requirements.

Students can provide feedback, including student grievances, by contacting the DGS and/or the Chair of the Department.

### *Changing Advisors*

To change advisors, students should contact the DGS. Such change must be approved by the DGS and the new advisor, and a form must be submitted to the Graduate School for processing.

## ANTI-DISCRIMINATION STATEMENT

Vanderbilt University does not discriminate.

## INTERNATIONAL STUDENTS

To support international students, we encourage students to make contact with Vanderbilt's International Student & Scholar Services (ISSS) office. ISSS fosters the education and development of non-domestic students and scholars to enable them to achieve their academic and professional goals and objectives. Julie Wilbers and her staff provide advice, counseling, and advocacy regarding immigration, cross-cultural, and personal matters. They also support an environment conducive to international education and intercultural awareness via educational, social, and crosscultural programs. For more information, you can check out their website or contact them through the following means:

VU International Student and Scholar Services Office
Director, Julie Wilbers
Sarratt Student Center
2301 Vanderbilt Place, Suite 100, Nashville, TN 37235, USA
615-322-2753
isss@vanderbilt.edu

## OTHER RESOURCES

**Vanderbilt University offers a wide array of student support resources for health, wellness, student life and identity, academic support, funding, professional development, and administrative assistance. Please visit Vanderbilt's Graduate School website at https://gradschool.vanderbilt.edu/ where you can find resources for support units such as the University Counseling Center (UCC), International Student & Scholar Support (ISSS), Center for Teaching (CFT), Career Center, and many others.**