

# COMPUTER SCIENCE, PH.D.

The doctor of philosophy degree is regarded as a research degree and is granted on the basis of scholarly proficiency, distinctive achievement in a special field, and the capacity for independent, original investigation.

## Admissions

In addition to meeting the admission requirements established by the Graduate School, students applying for graduate study in the department must also meet the following general requirements:

- Demonstrated competence in programming
- Completion of the equivalent of the department's undergraduate core computer science curriculum
- Applicants who present most but not all of these qualifications may be considered for conditional admission.
- It is strongly recommended that students who wish to be considered for funding opportunities submit a score from the GRE general exam.

See the Admission Criteria section of this catalog for more information.

## Curricular Requirements

Core Course Requirements	Hours
Core CS Courses:	12
Select at least one course from each of the following three areas	
Software Courses	
CS 503	Programming Languages
CS 507	Software Interface Design
CS 515	Software Design & Development
CS 516	Testing and Quality Assurance
CS 520	Software Evolution
CS 534	Compiler Construction
CS 544	Software Security
CS 545	Software Reverse Engineering
CS 603	Organz Program Languages
CS 630	Empirical Software Engineering
Systems Courses	
CS 526	Intro Operating Systems
CS 538	Computer Comm & Networks
CS 548	Network Security
CS 567	Computer Systems Architecture
CS 581	High Performance Computing
CS 606	Analys Operating Systems
CS 613	Adv Computer Comm & Networks
CS 618	Wireless Mbile Netwrk Protocl
Theory Courses	
CS 570	Computer Algorithms
CS 575	Formal Languages & Machines
CS 602	Adv Formal Lang & Machin
CS 612	Advanced Data Structures
Elective Graduate CS Courses:	18
Students may not count CS 592, CS 598, CS 599, CS 692 or CS 699 courses towards this total.	
Courses outside of CS can count towards this total, if proposed by a faculty member and approved by a vote of the CS Faculty.	

At least 9 hours total of the Core CS Courses and the Elective Graduate CS Courses must be taken at the 600 level

Other coursework:	18
CS 592 or CS 692	Independent Study Independent Study
Additional graduate CS courses	
Courses taken outside of CS, subject to the approval of the Graduate Program Director and the student's advisor (where applicable). Students should contact the Graduate Program Director and their Advisor (where applicable) prior to registering for courses outside of CS.	
Dissertation Credit Hours:	18
CS 699	Dissertation Research
<b>Total Hours</b>	<b>66</b>

## Transfer Credit

Graduate coursework can be transferred from other institutions with departmental approval under the following conditions:

- No more than 6 hours can count towards the Core CS Courses
- No more than 12 hours total can count toward the Core CS Courses and the Elective Graduate CS Courses
- Any additional approved transfer hours will count towards Other Coursework
- Graduate School information on Transfer Credit.

## Doctoral Plan of Study Requirement

- Graduate School information for the Doctoral Plan of Study.

## Comprehensive Exams

- The student must pass the Ph.D. Qualifying Exam.
- The student must select an advisor for their Ph.D. Qualifying Exam and choose three additional Computer Science faculty members to complete their Ph.D. Qualifying Exam committee.
- The Ph.D. Qualifying Exam is composed of a Qualifying Exam Written Document and an Oral Presentation. The student must pass both portions.
  - The Written Document either describes original research (Track 1) or is a review and synthesis of core papers in a particular research area (Track 2).
  - Written Document Track 2: The document must pass an initial editorial review, after which the written document is rated by the student's Ph.D. Qualifying Exam committee as either (1) Pass, (2) Needs Modification or (3) Fail. For documents rated as Needs Modification, students will have two weeks to modify the document to be reviewed by the committee and rated as either Pass or Fail.
  - Oral Presentation: the student must deliver a conference-style presentation of the research contained in the paper. The committee members and faculty members present will then question the student regarding the contents of the written document and the presentation. The student's committee and other members of the faculty who are present will rate the Oral Presentation as either a Pass or a Fail.
- Students are allowed two attempts to successfully complete the Ph.D. Qualifying Exam. Students who do not pass their first attempt

must retake the exam at the next offering of the Ph.D. Qualifying Exam.

- Deadlines for taking the Ph.D. Qualifying Exam
  - For students with an M.S. in CS, the first attempt at the qualifying exam must occur at the beginning of the third semester in the PhD program.
  - For students with only a B.S. in CS, the first attempt at the qualifying exam must occur at the beginning of the fourth semester in the PhD program.
  - For students who do not have a B.S. in CS, the first attempt at the qualifying exam must occur at the beginning of the fifth semester in the PhD program.
  - The student may withdraw from the process before the due date of the Ph.D. Qualifying Exam Written Document if the advisor feels the student attempt at the qualifying exam is not sufficient. However, a withdrawal will be counted as a fail on the Ph.D. Qualifying Exam.

## Continuous Enrollment Policy

- Graduate School Policy on Continuous Enrollment.

## Dissertation Requirements

- The student must select a dissertation advisor and a dissertation committee. At least four members, including the dissertation advisor, must be from the faculty of the Department of Computer Science, and at least one member must be from outside the department.
- The student must develop a dissertation proposal composed of both a written document and an oral presentation. A student is admitted to candidacy after the successful completion of both portions of the dissertation proposal.
  - The written document should contain an introduction to the research area, a review of relevant literature in the area, a description of problems to be investigated, an identification of basic goals and objectives of the research, a methodology and timetable for approaching the research, and an extensive bibliography.
  - The student must deliver an oral presentation of the dissertation proposal, which is followed by a question-and-answer session that is open to all faculty and which covers topics related directly or indirectly to the research area. The student's committee will then examine the proposal privately with the student.
- The student must develop a written dissertation that demonstrates that the student has performed original research that makes a definite contribution to current knowledge. Its format and content must be acceptable to both the student's committee and the Graduate School.
- The student must defend the written dissertation. The defense includes an oral presentation of the dissertation research, followed by a question-and-answer session. The student's committee will determine whether the defense is acceptable.
- Graduate School information on Dissertation Requirements.

## Time Limits for Degree Completion Requirements

- Graduate School information on Time Limits.

## Students Progress Requirement

- Students must complete the Qualifying Exam by the specified deadlines
- Graduate School information on Student Progress.

## Withdrawals and Leave of Absence Information

- Graduate School information on Withdrawals and Leave of Absence.

## Academic Grievances Information

- Graduate School information Academic Grievances.

## Graduate School Deadlines Information

- Information on Graduate School Deadlines.

## Application for Graduation Information

- Information on the Application for Graduation.

## Doctoral Degrees

The University offers several types of doctorates, each of which is described below.

The minimum period in which a doctoral degree can be earned is three full academic years of graduate study after completion of a baccalaureate degree, although in most disciplines the period is longer. Graduate teaching assistants (GTA) or graduate research assistants (GRA) whose work assignments are 10 hours per week (i.e. the equivalent of 3 semester hours) or more should expect to take more than the minimum period of 3 academic years to earn a doctoral degree. The only exception to the three-year minimum is the practice-focused DNP.

### Doctor of Philosophy Degree

The Doctor of Philosophy (PhD) degree is regarded as the researcher's degree. Program requirements include the acquisition of special skills for conducting independent, scholarly research of publishable quality. Requirements traditionally include a working knowledge of one or more foreign languages, but currently a number of foreign-language alternatives have been approved by departments. Through acquisition of these skills, PhD candidates demonstrate their potential for careers as independent, publishing scholars. Refer to departmental sections of this Catalog for details on foreign-language requirements or alternatives.

The Doctor of Philosophy (PhD) degree is granted on the basis of scholarly proficiency, distinctive achievement in a special field, and capacity for independent, original investigation. The first two criteria are tested in coursework and a comprehensive examination, the last in a dissertation in which the student must present clearly and effectively the results of substantial research. A combination of these accomplishments, rather than the mere accumulation of residence and course credits, is the essential consideration in awarding the PhD degree. The PhD differs from the EdD in a number of ways, including the fact that the PhD Plan of Study and comprehensive examination demonstrate a higher-level research focus, and there is a greater number of dissertation hours and higher level of complexity and independent thought in a PhD-level dissertation.

Field of Specialization - A defined field of specialization as outlined in the student's Plan of Study is required of all candidates for the Doctor of Philosophy degree. A minimum of 36 semester hours of non-dissertation course credit is required. Departments or programs may require more

than this minimum. Candidates should consult their departments or the appropriate section of this Catalog for additional requirements. The doctoral course as a whole must be unified, and all its parts must contribute to an organized program of study and research. In addition, a student must complete a minimum of 18 hours of dissertation research.

Research skill/language requirements - There is no university wide foreign language/research skill requirement for doctoral students; each college or department offering the PhD degree may set its own requirements. This policy reaffirms the importance of research skills and foreign languages in the highest academic degree granted by American universities, but it also recognizes that the departments offering the degrees are in the best position to determine the number and nature of such requirements in the interests of their students. For further information about PhD foreign language/research skill requirements, students may contact their departments.

## Interdisciplinary Studies

There is a PhD degree program in interdisciplinary studies, and it is administered by the Graduate School. In addition to the general requirements for the PhD degree, the program of study and the supervisory committee for the prospective interdisciplinary studies degree candidate must be approved by the dean of the Graduate School before the student is admitted to the program. See Interdisciplinary Studies (IDS) at the Graduate School's website for information on prerequisites, admission procedures, course of study, and other aspects of IDS programs.

## Doctor of Education Degree

The Doctor of Education (EdD) requires a minimum of two years of graduate study beyond the master's degree for the completion of the EdD program. The student is required to complete 60 semester hours in approved graduate coursework research beyond the master's degree, or 90 semester hours of approved graduate courses, and to defend a dissertation. The student must complete a minimum of 12 hours of dissertation research. In the College of Education section of the Graduate Catalog, there are specific regulations governing the EdD program.

## Doctor of Musical Arts Degree

The Doctor of Musical Arts (DMA) degree requires a minimum of 48 semester hours beyond the Master of Music degree, plus recitals and other examinations as determined by faculty of the School of Music. Specific requirements for each major area are outlined in the School of Music section of the Graduate Catalog.

## Doctor of Nursing Practice

The Doctor of Nursing Practice (DNP) is a practice-focused degree that is detailed in the Nursing section of this Catalog.

## Doctor of Social Work

A Doctor of Social Work (DSW) degree is a practice doctorate degree in social work. It provides coursework on theory and skills in social work practice that are more advanced than what one would typically experience in an MSW program for social work.

## Admission to Doctoral Degree Programs

Admission to any doctoral program is limited to students whose scholastic records show distinct promise of success in doctoral study. Admission to the Graduate School and the earning of a master's degree from The University of Alabama does not guarantee acceptance into a doctoral program. Students in doubt about their acceptance into doctoral programs should consult with departmental advisors and the Graduate School, which makes the final decision about admission. A department

may terminate a student's doctoral admission if there is documented unsatisfactory academic or other progress toward completion of the degree.

## Residency Requirements

The University of Alabama recognizes that doctoral students should be immersed in advanced study and inquiry, interact extensively and meaningfully with faculty and peers, engage with the academic community in their field, and have access to the educational resources of the University. To achieve these goals, a minimum of 50 percent of coursework hours to be counted in a student's doctoral program must be from The University of Alabama (exclusive of dissertation research hours and subject to the Graduate Catalog's Transfer of Credit policies). Additionally, 100 percent of dissertation credit hours must be from The University of Alabama. Diverse academic traditions, rapidly changing instructional modalities, and new student populations are acknowledged and accommodated with this policy.

## Graduate Credit

A student must be admitted to the Graduate School and must register as a graduate student in order to receive graduate credit. Approval for graduate registration must be obtained from program advisors prior to registration.

## Graduate Credit for Noncredit Experiences

All course credit used toward a UA graduate degree must be taught at the graduate level. No graduate credit may be earned by correspondence study or for experiential learning not conducted under the direct supervision of graduate faculty of The University of Alabama. UA does not offer graduate credit for noncredit workshops, seminars, continuing education experiences, professional development, internships, work/life experience, and so forth.

## Transfer of Credit

Graduate credit earned in the field of the doctoral degree from a regionally accredited institution in which the student was enrolled in the graduate school of that university may be considered for transfer and applied towards the requirements for a doctoral degree if approved by the department and the Graduate School. Evaluation of credit for transfer will not be made until after the student has enrolled in the Graduate School of The University of Alabama.

In some cases, foreign educational credentials may not meet the Graduate School's criteria for transfer of credit. It may be necessary for students in this situation to secure an evaluation of their credentials from World Education Services Inc. (WES), an external foreign credential evaluation service. Additional information on their services can be found at their website.

There are two options for possible transfer of graduate credit at the doctoral level.

1. All doctoral programs: Up to one-half of the required coursework (exclusive of dissertation research hours) for a doctoral degree may be transferred from another institution if the credit was in-field and was earned during the six-year period (18 fall, spring and summer semesters) preceding the semester of admission to the UA doctoral program. Revalidation (recertification) of credits more than 18 semesters old at the time of admission to a doctoral program is not an option. Only courses in which a student earned a "B" grade or better may be transferred. Under this option, a Request for Transfer of Graduate Credit form must be submitted to and approved by the Graduate School.

2. PhD Programs Only: A student holding an earned, in-field master's degree may request approval for up to 24 hours of credit to be applied to the PhD. To do this, the student must have earned at least a "B" overall graduate GPA from the awarding institution. If approved for transfer, these hours would count toward the minimum 48 coursework hours required for the PhD degree. When exercising this option, a Request for Transfer of Graduate Credit form must be submitted to and approved by the Graduate School. The requested transfer credit hours must be listed on the PhD Plan of Study as MSC501 under the transfer credit section. If the in-field master's degree was awarded *more than six years prior to admission to the current doctoral degree program*, the graduate program director or department head/chair must also submit to the Graduate School for evaluation, a Field-Related Employment Since Earning Master's Degree form with the student's CV must be submitted by the department through the UA DocuSign system in myBama. In addition, the department is asked to provide the following, attached to the approved Plan of Study :
- An annotated work history from the student. This history should include job titles and major duties for all positions since earning a master's degree.
  - A brief paragraph from the corresponding faculty member, attesting that he/she has reviewed the work history and how that work applies to the current Ph.D. degree program.

The Graduate School will make the final determination about whether up to 24 prior master's hours can be applied to the Ph.D. requirements.

PhD awarding departments that want to participate in offering Option 2 to their doctoral students, need to "opt in" by informing the graduate dean in writing that they wish to be among the approved departments.

Consideration of transfer of credit or the acceptance of an earned master's degree as credit toward a PhD program is subject to a final decision by the Graduate School. In either case the student must ensure that the Graduate School has an official transcript of all credit involved. This will ensure that the student and advisor are fully aware of course hours needed when submitting the required Plan of Study, which must be submitted by the time the student completes 30 hours of transfer plus UA coursework. Planning to transfer courses in the final semester typically will delay graduation.

Please note that some departments allow fewer than 24 hours of graduate transfer credit. Be sure to check with your department's graduate coordinator regarding your department's transfer policy. Dissertation Research (699) may not be transferred in from an outside institution.

## Time Limits

All requirements for the doctoral degree must be completed within nine years (27 fall, spring, and summer semesters) following admission to the doctoral program, with the following specific exception approved by the Graduate Council: Modern Languages and Classics (ten years if entering the doctoral program with a baccalaureate, not master's, degree).

Previous graduate credit may be applied to the doctoral degree if the credit was earned during the six-year period prior to admission to the doctoral program or accepted by the Graduate School as part of Option 2. Such credit must be identified clearly on the Outline of PhD Program (Plan of Study) and requires Graduate School approval. Only those students graduating within the time limit for their doctoral program may apply previously approved graduate credit to the doctoral degree.

## Revalidation of Expired Credits

There may be particular and limited instances where a student is re-admitted to a graduate program, and revalidation of expired credits is justified. In such cases, where the department and Graduate School feel it is appropriate to do so, the student may work with the graduate program director to petition for such revalidation, on a course-by-course basis. For each course for which revalidation is requested, the student must demonstrate, to the department's satisfaction, that the knowledge and skills gained in that course are still current. Currency will be evaluated by a committee of faculty, composed of at least three graduate faculty members within the degree program to which the student is requesting re-admission, and two from a separate department.

The committee will then issue a recommendation to the dean of the Graduate School, who will rule on the petition.

Some methods for demonstrating currency may include but are not limited to 1) a professional portfolio; 2) an exam or essay linked to each course and demonstrating up-to-date knowledge; 3) a re-take of the comprehensive exams under current program guidelines, and/or 4) other methods deemed appropriate by the committee.

Students may request revalidation of up to 50% of the required minimum coursework for their degree. Credits earned from an institution other than The University of Alabama may not be revalidated.

Consideration of revalidation, and a plan of study based on the demonstration-of-currency and other remaining requirements, must be completed as part of the student's re-admission to the Graduate School. Revalidation of credits is not guaranteed. From the time of re-admission, students must complete the degree within the standard time limit, as specified in the Graduate Catalog at the time of the student's re-admission.

The Continuous Dissertation or Document Registration requirement for 699 and 799 enrollment will be waived for the intervening years between the student's cessation of doctoral work and re-admission.

## Plan of Study

Early in the graduate program, each student must confer with the appropriate departmental advisor or major professor to select courses, discuss when and by which method the doctoral residency requirement will be completed, discuss research interests, and so forth. Then a Plan of Study must be prepared and submitted to the Graduate School by the time the student has completed 30 coursework hours.

The PhD, DMA, and DSW Plans of Study are submitted by the department through the UA DocuSign system in myBama. The Plan of Study for other doctoral programs (Ed.D., DNP) are available from the student's department, college, or school. All doctoral students must have a completed Plan of Study approved by the Graduate School no later than the semester during which the student will complete 30 semester hours of UA and/or transfer credit toward the doctoral degree. Otherwise, a "hold" may be placed on future registrations.

A copy of the approved Plan of Study must be submitted to the Graduate School when the department submits the Admission to Candidacy for Doctoral Degree form through the UA DocuSign system in myBama.

## Preliminary or Comprehensive Examination

A preliminary or comprehensive qualifying examination is required of all doctoral candidates. This examination is given after

- any foreign language/research skill requirements are met (PhD students only);
- two full years of graduate study are completed; and

- the supervisory committee deems the student to have adequate preparation in the major and minor fields of study.

The examination is conducted by the student's supervisory committee or other committee established in the program area. Whereas one of the purposes of the preliminary examination is to determine the student's research competence to begin work on a dissertation, the examination should be completed at least nine months before the degree is to be awarded. A student may take the oral or written examination only twice. Failing the examination twice results in dismissal from the degree program and the Graduate School.

## Admission to Candidacy

The designation of candidacy reflects the student's demonstration of foundational knowledge and readiness to conduct independent research, in the discipline. The requirement for advancing to candidacy is determined by the faculty of the degree program and delineated in the program's section of the Graduate School Catalog and the program's Graduate Student Handbook.

Advancement to candidacy should involve either:

- passing the qualifying (major or preliminary) examination
- completing of all required coursework as listed on the approved program of study
- presenting or defending a dissertation prospectus or proposal
- or some combination of these milestones.

Students are not eligible to register for 699 or 799 credit hours until they have been advanced to candidacy. The Department Chair or Department Director of Graduate Studies, or their designee, shall submit the Admission to Candidacy for the Doctoral Degree form to the Graduate School during the semester that the student meets the program's candidacy requirements.

## Continuous Doctoral Research Hours Registration

Once a student meets their program's requirement for admission to candidacy and the designated Department administrator submits the Application for Admission to Candidacy form to the Graduate School, the student may enroll in 699 (dissertation/document research) or 799 (document/project research).

Once initiated, the student must pursue completion of the dissertation/document/project without interruption by enrolling in 699/799 each fall and spring semester of the academic year.

The only time summer registration is required for dissertation/document/project research is when a doctoral student is graduating in August or defending the dissertation/document/project during the summer semester.

Ph.D. students must complete a minimum of 18 hours of dissertation research credits (699). Ph.D. students must register for a minimum of 3 dissertation research credits each semester until reaching their program's minimum. Thereafter, they must register for a minimum of 1 dissertation hour each semester, maintaining continuous enrollment in 699 until degree completion.

Ed.D. students must complete a minimum of 12 dissertation research credits (699). Ed.D. students must register for a minimum of 3 dissertation research credits each semester until reaching their program's minimum. Thereafter, they must register for a minimum of 1 dissertation hour each semester, maintaining continuous enrollment in 699 until degree completion.

DMA students must complete a minimum of 4 hours of document research (MUS 699). DMA students must register for a minimum of 1 document/project research hour each semester, maintaining continuous enrollment in MUS 699 until degree completion.

DNP Students must complete project research hours in NUR 795-798. DNP students must maintain continuous enrollment for a minimum of 1 hour in a department-specified course until degree completion.

DSW Students must complete a minimum of 9 hours of project research (SW 799). DSW students must register for a minimum of 1 document/project research hour each semester, maintaining continuous enrollment in SW 799 until degree completion.

The amount of dissertation/document/project research for which a student enrolls in any given semester should be commensurate with the progress a student is expected to make on the dissertation, as well as reflective of the extent to which University facilities and faculty time are invested in the proposed activities.

## Dissertation Committee

The dissertation committee may be formed early in the dissertation research process, or shortly before the dissertation proposal is approved. It is expected that the committee will be formed and approved before significant progress is made on the dissertation. The committee must be formally established via a process initiated by the student and requiring the consent of each committee member, followed by Graduate School review for compliance with the regulations outlined below. Click here for instructions on the process of establishing the committee.

The committee must consist of at least five members. It may have additional (voting or nonvoting) members if deemed appropriate. At least one of the committee members must be from outside the student's major department. These external members may be from another academic department at UA, from other universities, or from industry or the professional field. In all cases, these members external to the department/program must be appointed to UA's Graduate Faculty by the dean of the Graduate School, and must have significant professional qualifications that directly contribute to the depth and rigor of the dissertation.

All members of the dissertation committee must hold Graduate Faculty status at The University of Alabama. The chair of the committee must hold Full Graduate Faculty status; others may be Full, Associate, or Affiliate members of the Graduate Faculty. A majority of the Dissertation Committee members must be full-time regular University of Alabama faculty (that is, full-time instructor, assistant professor, associate professor, or professor).

## Dissertation Proposal

The dissertation proposal aims to show the appropriateness, manageability, and significance of the projected research. The student formally presents the written proposal to the dissertation committee and defends it in a meeting with the committee. The proposal normally includes an introduction that provides an overview and states the significance of the proposed research, review of the literature, and methodology. Departments determine the details of the dissertation proposal's format with respect to specifics such as the length of the introduction and level of detail of the literature review. Once the student and dissertation chair have developed a proposal, and the graduate dean has approved the dissertation committee, the student schedules the dissertation proposal meeting that includes all committee members. The student cannot propose a dissertation and have its final defense in the same semester.

## Dissertation

A dissertation showing the ability to conduct independent research and skill in organization, writing, and presentation must be prepared on a topic in the major field. It must constitute an original contribution to knowledge. The dissertation must be based upon research completed while the student is enrolled at The University of Alabama.

The subject of the dissertation must be approved by the student's dissertation committee and by the dean of the Graduate School. The final dissertation may take the form of a traditional, chapter-based document or a series of full-length publication-ready manuscripts which are part of a larger, cohesive body of work. The format (traditional vs. article-style) must be approved by the committee in accordance with the standards for the program and the discipline.

For article-style dissertations, the document must contain a minimum of three articles, in addition to introductory and concluding materials. A single abstract must accompany the document. In addition to an introduction presenting the unifying framework that supports the research, the document must include a concluding section that summarizes the importance of the work, integrates the major findings, and discusses the implications for the overall body of work.

Individual departments may have policies or guidelines related to whether sections of the dissertation may be included if they have been previously published elsewhere. Copyright issues also may arise if sections of the dissertation have been previously published. Therefore, students who are considering the submission of dissertation chapters/articles for publication prior to their dissertation defense should consult with their advisor, and also with potential publication outlets, before submitting any dissertation-related manuscript for publication.

All parts of the dissertation must conform to the provisions set forth in A Student Guide to Preparing Electronic Theses and Dissertations, except when the circumstances of a specific project or discipline's style manual require deviation. Students should email [gradschool@ua.edu](mailto:gradschool@ua.edu) before beginning their work if they have questions concerning specific problems or deviations from traditional procedure.

The Dean of the Graduate School must approve the dissertation before the student can be cleared for graduation. See "Final Dissertation Submission and Approval" for details.

## Virtual Participation in Committee-Based Exams/Defenses

All members of a student's graduate committee are expected to attend and participate, usually in person, in any oral examination as part of the student's graduate (Master's or Doctoral) degree program. Traditionally, oral examinations are conducted with the student meeting their committee while gathered in one physical location on campus. However, the need occasionally arises for virtual participation in the oral examination.

If a department or program chooses to allow virtual participation in oral examinations, they must ensure adherence to the following technical requirements. Departments or programs may enforce stricter guidelines than those outlined, including an on-campus-only policy if deemed necessary and appropriate.

### Technical Requirements

In cases where departments or programs allow any level of virtual participation, from one virtual member to a fully virtual event, they must adhere to the following requirements:

1. Prior to any oral exam, the student and Committee Chair coordinate with other committee members regarding the protocol for the exam.
2. All participants must join using university-adopted videoconferencing tools that allow for **fully interactive** audio and video communications along with screen-sharing capabilities, which must be maintained throughout the examination and any related discussion.
3. The use of audio-only communications is not permitted.
4. Participation merely by viewing a recording of the oral examination is specifically prohibited.
5. All members of the committee, on- or off-site, must participate in the final evaluation of the examination or defense; provisions must be made to record their votes and collect their signatures as necessary using the digital signature system approved by the Graduate School.
6. The Committee Chair, or another non-student designee, shall be the host of the virtual meeting. A co-host may be assigned so that the event will not be interrupted by technical difficulties. The host should mute all participants (or ask participants to mute themselves) and ask the student to share their screen, if a presentation is involved, in order to make the presentation visible to all attendees. The host must also ensure that appropriate security precautions are taken to prevent the interruption of the event.
7. Following the public portion of the defense, the host shall ask all non-committee members to leave the meeting, or the host may manually remove them. In programs where the defense has both a public and a private portion, the committee may then continue the event as outlined in their program protocols.
8. Once the committee has completed the examination of the student, the host shall place the student into the waiting room (or have the committee members use a breakout room) so the committee can conduct their deliberations in private.

The committee chair must have a secondary videoconferencing system available as a back-up in the case of technical difficulties. Cancellation of the examination should only occur in the case where both the primary and secondary back-up systems fail. If an examination must be rescheduled, it will be done without prejudice to the student. Since committee deliberations are an essential aspect of the examination, completing the examination and final discussion via email or other non-audiovisual means is not an option. If the student or any committee member(s) have a disability that will be impacted by virtual participation, accommodations for participation must be provided.

## Final-Semester Minimum Doctoral Research Hours Registration

The Catalog section on Continuous Dissertation Registration for Doctoral Students states that once a student qualifies for doctoral candidacy, the student must enroll each semester for at least 3 hours of dissertation (699) research until reaching their department's minimum requirement, and at least 1 hour for each semester thereafter until degree completion and graduation. If certain conditions are met for the student's final semester, the student may qualify to enroll for fewer hours of 699 dissertation research. A zero-hour or one-hour 699 registration is permitted only in the final semester#. This exception applies only to students who registered for at least 1-3 hours of dissertation (699) research in the preceding semester and only under the conditions described in the table below:

When was the *completed electronic dissertation submitted to ProQuest/the Graduate School?	Minimum hours of 699 registration required in the final semester
By 11:59pm on the Final Grade Entry Day for the student's penultimate semester (date published in the University Academic Calendar#)	0
After the Final Grade Entry Day for the student's penultimate semester (date published in the University Academic Calendar#)	1

\*"Completed" means submitted to ProQuest after being successfully defended and carefully edited following the defense meeting. The dissertation chair or department designee must submit the Committee Acceptance Form (CAF) through the UA DocuSign system. The CAF must be signed by all committee members, department chairperson, and graduate dean. The CAF is submitted by the department through the UA DocuSign system in myBama. At the time of ProQuest submission, the student also must submit the Survey of Earned Doctorates through the NORC website.

#### Footnotes

<sup>1</sup> International students on F-1 or J-1 student visas are not permitted to use the zero-credit hour exception above as the basis of maintaining minimum enrollment requirements as active students. Please see "USCIS" section under "Minimum Hours—Other Policies and Regulatory Bodies" on page 3 of this policy.

<sup>2</sup> The University Calendar is available at the Academics tab of the website of the University Registrar.

## Protection of Human Subjects for Research

Scientific research involving human subjects has produced substantial benefits for society, but it also has significant ethical questions. The mission of the University's Institutional Review Board (IRB) for Protection of Human Subjects is to ensure that research involving human subjects is conducted ethically. University and federal policies require that review and approval to use human subjects in research precede the research, no matter how great or small the involvement of the human subjects. In the case of dissertation research that involves the use of human subjects, the principal investigator is responsible for contacting the college Human Research Review Committee to obtain approval for the planned research. The University's IRB approval form is available at the IRB website.

## Dissertation Defense

The dissertation defense is the culminating experience in the doctoral program. The Dissertation Chair and the student will coordinate with all committee members to choose a time, date, and location for the dissertation defense. All doctoral candidates must give members of the dissertation committee a minimum of two weeks to read the dissertation before the defense date. The dissertation must comply with the regulations in A Student Guide to Preparing Electronic Theses and Dissertations.

The dissertation defense is comprised of four parts.

**1. Public Advance Notice.** A minimum of two weeks prior to the scheduled defense date, the candidate must submit the *Public Notice of a Dissertation Defense* form. This form includes the name of the candidate, the department or program, the title of the dissertation, an abstract of 200 words or less, and the date, time, and location of the dissertation defense. The candidate should consult with the Dissertation Chair prior to

initiating this form. The form will be initiated by the candidate and signed by the Dissertation Chair, Graduate Program Director, and the Graduate School. Upon receipt of the completed form, the Graduate Program Director will ensure the scheduled defense is disseminated within the department. The Graduate School will post the scheduled defense on the Graduate School website.

**2. Oral Presentation.** An oral presentation of the dissertation is required and shall be public. The content and duration of the oral presentation are at the discretion of the Dissertation Chair, in consultation with the Committee, based on departmental norms, disciplinary standards, and traditions.

**3. Oral Defense.** This examination phase of the dissertation defense is required and may be public or private. Each department or program shall establish a policy for whether the oral defense is public, private, or both (i.e., has a public portion and a private portion).

**4. Committee Deliberation.** Committee deliberation is required and shall be private. Upon completion of the oral defense, everyone other than the committee members shall leave the defense location while the committee discusses, deliberates, and votes. For a defense to be successful, the majority of the committee must approve the dissertation and the defense.

The results of the dissertation defense must be reported to the Office of the Graduate School by submitting the Committee Acceptance Form at least six weeks before the Fall/Spring commencement, or five weeks before the Summer commencement, at which the degree is to be conferred. The Committee Acceptance Form, submitted by the department through the UA DocuSign system and found in myBama, confirms that a majority of the dissertation committee has approved the written dissertation and oral defense.

Any changes made to the manuscript after the defense must be approved by the Dissertation Chair. The student must submit the final dissertation to the Graduate School, and the Dean of the Graduate School must approve the dissertation, before the student can be cleared for graduation. See "Final Dissertation Submission and Approval" for details.

## Final Dissertation Submission and Approval

Following a successful dissertation defense (see "Dissertation Defense" for details), any edits agreed upon during the defense must be incorporated into the manuscript, and the Dissertation Chair must approve the final manuscript. After a careful review to ensure that the manuscript adheres to the Graduate School's formatting guidelines, the candidate must submit the approved manuscript to the Graduate School for final approval, address any remaining edits, and initiate the upload process for archiving the manuscript in the national dissertation repository, ProQuest.

The dissertation, in its final form, must be received in the Graduate School within 60 days of the dissertation defense. If this deadline is not met, the Dissertation Chair may require the candidate to schedule a second dissertation defense. Note that this 60-day deadline is separate from the deadlines for degree conferral and participation in Commencement ceremonies.

Graduate School deadlines for each semester, including deadlines for submitting the final manuscript to the Graduate School to graduate at the end of the semester, are available on the Graduate School's homepage. Consult the Graduate School's dissertation site for additional details of the electronic submission process, including information on exactly what needs to be submitted to the Graduate School. At the stage of the Graduate School review of the manuscript, additional revisions may be required, to ensure that the final manuscript conforms to all formatting

and editing standards. The graduate dean must approve the dissertation before the student can be cleared for graduation.

### **Application for Graduation**

Each candidate for a doctoral degree must submit an Application for Degree via myBama no later than the last day to register or add a course for the semester (or first term of the summer semester) in which requirements for the degree are to be completed. That specific date is published each semester at the Graduate School's website under Current Students/Deadlines for Graduate Students.

### **Withholding or Withdrawing an Advanced Degree**

The University of Alabama reserves the right to withhold or withdraw an advanced degree on the recommendation of the graduate faculty.