

# INTERDISCIPLINARY STUDIES, PH.D.

The Interdisciplinary Studies Ph.D. program is designed for highly motivated students whose goals for research and classwork do not fit into one of The University of Alabama department-based Ph.D. programs. There is no such thing as a "typical" IDS Ph.D. student. Students have ranged in age from 22 to 85. Although many Interdisciplinary Studies Ph.D. students pursue their studies full time, others are working professionals who balance their studies with full time employment. As a pre-requisite to admission, IDS Ph.D. students work with the Graduate School to identify faculty members who can help guide the proposed research. The Graduate School also works with prospective students to make sure that we can support your research goals with classes that are offered at The University of Alabama.

To ensure that The University of Alabama can help students achieve research, classwork and career goals, all prospective students must meet with the Graduate School Associate Dean for Admissions, Recruitment, and Fellowships (amg@ua.edu) prior to starting an application for the Interdisciplinary Studies, PhD. The Associate Dean will help prospective students identify a home department, advisor and advisory committee members (a prerequisite for admission).

To be eligible for consideration, prospective candidates must meet the following criteria:

1. A completed master's degree (at the time of admission) or its equivalent from an accredited university.
2. GPA of 3.3 or higher (on a 4.0 scale) or equivalent. If the GPA is less than a 3.3, there must be other areas of strength that demonstrate excellence.

Note: The Interdisciplinary Studies, PhD program is not available to students who have been unsuccessful in previous graduate work.

## Admissions

Prospective Interdisciplinary Studies (IDS) Ph.D. students are required to meet with the Graduate School Associate Dean for Admissions, Recruitment and Fellowships to discuss program fit. During this meeting, ideally held prior to application submission, the research, classwork, and career goals of the prospective student are discussed. If the program goals are a good fit with the IDS Ph.D. program, potential advisory committee members will be considered for additional meetings.

In addition to the initial meeting with the Graduate School Associate Dean for Admissions, Recruitment and Fellowships, required application materials include:

1. Transcripts showing a completed master's degree (at the time of admission) or equivalent from an accredited university. GPA of 3.3 or higher (on a 4.0 scale) or equivalent. Admission with Permission to Continue is not permitted for the IDS Ph.D. program.
2. The email addresses of three recommenders.
3. A CV/resumé.
4. Language scores (for non-native English speakers; conditional language admission is not permitted).
5. Statement of purpose. The Statement of Purpose is where the applicant will discuss professional/academic preparation, the reason for choosing The University of Alabama, research goals and intended future career path.
6. A complete IDS Ph.D. form. This will be circulated among the committee members, home department Chair, and prospective

student by the Graduate School Associate Dean for Admissions, Recruitment and Fellowships). This form will include:

- a. A statement of proposed research. This one to two-page document must include:
  - i. The research question that will be addressed
  - ii. The significance of the research
  - iii. A brief literature review describing the present state of the research question
  - iv. The objectives of the research
  - v. The methods that will be used
  - vi. A description of how the proposed research will build on the existing literature, including the gap in the field that will be filled by this research.
  - vii. A clear indication of a minimum of two distinct fields that will be incorporated into the research.
- b. The names and emails addresses of five Advisory Committee members, including an Advisor/Chair. All committee members must be members of the Graduate Faculty at The University of Alabama. The applicant's Advisory Committee chair is expected to have competence in the proposed major area(s) of study and be willing to devote time to being an academic mentor for the student throughout the Ph.D. program. The Advisory Committee Chair and at least one additional committee member must have experience in directing and supervising doctoral-level research.
- c. The name of the home department. The home department or program will include the IDS Ph.D. student in the intellectual-social life of the unit, e.g., department mailing lists, colloquia, social functions, etc. The home department may also consider an IDS Ph.D. student for Graduate Teaching Assistant and Graduate Research Assistant appointments, and for office space.
- d. Proposed course list. In consultation with the Advisory Committee and Advisor/Chair, the prospective IDS Ph.D. student will create a preliminary plan of study. This must include transfer classes (up to half of the required coursework), classes to be taken at The University of Alabama, and dissertation research hours. The following is required:
  - i. A minimum of 36 hours of coursework (not including 18 hours of dissertation research)
  - ii. the majority of the courses must be at the doctoral level
  - iii. the courses should clearly reflect at least two different academic departments
  - iv. the coursework must include a minimum of 15 hours in research methods or research theory and design theory, and/or design courses
- e. Written explanation (prepared by the proposed Advisor in consultation with the Advisory Committee) explaining how the comprehensive examination requirement will be fulfilled. It is expected that the comprehensive examination for the IDS Ph.D. will be as rigorous and use the same general procedures as the home department. The specifics of the examination (including where the exam will be taken, the number of questions, the number of evaluators, the grading process, the process for reporting results to the student, etc.) will be detailed.

The application materials, once submitted, will be reviewed by the proposed Advisory Committee members.

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

## Curricular Requirements

| Code and Title                                 | Hours     |
|--|-----------|
| Elective Courses                               | 21        |
| Research Methods or Research Theory and Design | 15        |
| IDGR 699 Dissertation Research                 | 18        |
| <b>Total Hours</b>                             | <b>54</b> |

The University of Alabama Graduate School requires that IDS Ph.D. students complete a minimum of 36 hours of coursework reflecting two or more distinct academic areas. The coursework should include a minimum of 15 hours in research methods or research theory and design. The majority of this coursework should be at the 600 level. In addition, 18 hours of dissertation research must be completed. All students are encouraged to take AHE 591 Seminar Higher Education if the course is offered during the first 4 semesters of coursework.

## Advanced Drug Delivery Concentration

| Advanced Drug Delivery Coursework   | Hours     |
|---|-----------|
| <b>Required Courses for the Concentration</b>   |           |
| TSM 660 Drug Delivery   | 4         |
| TSM 661 Imaginary Logic to DD   | 1         |
| BSC 530 Introduction to Pharmacology  | 3         |
| BSC 535 Immunology  | 4         |
| Note: With advisor's approval, listed BSC courses may be replaced with other courses based on previous academic/professional experience and current course offerings. |           |
| <b>Research Methods Courses (required for the concentration)</b>  |           |
| POPH 522 Biostatistics  | 3         |
| TSM 662 Formulations Science Lab  | 3         |
| TSM 663 Formulations Testing Lab  | 3         |
| Additional research method courses based on individual research interests   | 6         |
| <b>Interdisciplinary Elective Courses</b>   | <b>12</b> |
| <b>Biological Sciences Elective Courses</b>   |           |
| BSC 521 Pers Gen Med  |           |
| BSC 522 Biology of Cancer   |           |
| BSC 524 Human Physiology  |           |
| BSC 525 Human Physiology Lab  |           |
| BSC 526 Computational Biology Lab   |           |
| BSC 539 Bch/Molecular Biology Lab   |           |
| BSC 541 Developmental Biology   |           |
| BSC 542 Integrated Genomics   |           |
| BSC 549 Endocrinology   |           |
| BSC 550 Fundamentals of Biochemistry  |           |
| BSC 551 Bch/Molecular Biology II  |           |
| BSC 553 Biochemistry Lab  |           |
| BSC 558 Drug Discovery Laboratory   |           |
| BSC 594 Signal Transduction Neuroby   |           |
| BSC 604 Sci Writing and Presentation  |           |
| BSC 656 Microscopical Techniques  |           |
| BSC 657 Adv. Tech. Microscopy   |           |
| BSC 666 Disease Models and Mechanisms   |           |
| <b>Chemistry Elective Courses</b>   |           |

|   |                                |
|---|--------------------------------|
| CH 505  | Medicinal Chemistry            |
| CH 626  | Surface Analytical Techniques  |
| CH 627  | Mass Spectrometry              |
| CH 637  | Spectroscopic Techniqua        |
| Chemical and Biological Engineering Elective Courses  |                                |
| CHE 512   | Polymer Materials Engineering  |
| CHE 516   | Stem Cell Bioengineering       |
| CHE 518   | Tissue Engineering             |
| CHE 545   | Intro to Biochemical Engr      |
| Population Health Elective Courses  |                                |
| POPH 523  | Basic Epidemiology             |
| POPH 623  | Advanced Epidemiology          |
| Nutrition Elective Courses  |                                |
| NHM 558   | Nutr Prev Trtmt Chron Disease  |
| NHM 561   | Adv. Vitamins and Minerals     |
| NHM 562   | Metabolism of Energy Nutrients |
| NHM 601   | Contemp Research Nutrition Sci |
| NHM 611   | Nutritional Neuroscience       |
| Management Elective Courses   |                                |
| MGT 582   | New Venture Development        |
| MGT 633   | Entrepreneurship Research      |
| Higher Education Elective Courses   |                                |
| AHE 505   | Grant/Project/Res in HigherED  |
| AHE 591   | Seminar Higher Education       |
| AHE 601   | Professional Sem High Ed       |
| Nursing Elective Courses  |                                |
| NUS 766   | Epidemiology                   |
| Physics Elective Courses  |                                |
| PH 511  | Biophysics                     |
| Psychology Elective Courses   |                                |
| PY 608  | Introduction To Ethics         |
| PY 629  | Biological Bases of Behavior   |
| PY 630  | Affective Neurophysiology      |
| PY 648  | Cognitive Development          |
| PY 694  | Behavioral Medicine            |
| Math Elective Courses   |                                |
| MATH 538  | Topics in Mathematics          |
| Note: Choose a minimum of 12 credit hours of interdisciplinary electives based on individual research interests, and advisor's approval |                                |
| <b>Dissertation Research</b>  |                                |
| IDGR 699  | Dissertation Research          |
| <b>Total Hours</b>  | <b>57</b>                      |

As stated above, the Interdisciplinary Studies PhD program requires all students to have (a) coursework from two or more distinct academic areas, (b) at least 18 hours of dissertation research, (c) a minimum of 15 hours in research methods or research theory and design, and (d) a majority of courses at the 600 level (<https://catalog.ua.edu/graduate/interdisciplinary-program/interdisciplinary-studies/phd/#requirementstext>).

The proposed list of coursework for the Advanced Drug Delivery concentration meets these requirements. Coursework is from multiple academic areas across campus. Required courses are from the

College of Community Health Sciences and Biological Sciences. The research methods coursework requires 9 hours of classes from the College of Community Health Sciences and 6 additional hours from Biological Sciences, Chemistry, Engineering, or other disciplines. The interdisciplinary electives are from eleven programs across campus. The interdisciplinary nature of this concentration is also reinforced through its participating faculty (listed below) and support from multiple departments across campus (see attached letters of support).

#### Participating Faculty

##### College of Community Health Sciences

Arora, Meenakshi  
Ganugula, Raghu  
Kumar, M. N. V. Ravi

##### Department of Biological Sciences

Caldwell, Guy  
Caldwell, Kimberly  
Chtarbanova-Rudloff, Stanislava  
Ciesla, Lukasz  
Kim, Brandon

##### Department of Chemical & Biological Engineering

Bao, Yuping  
Kim, John  
Rao, Shreyas  
Zhao, Chao

##### Department of Computer Science

Gong, Jiaqi (Jackey)

##### Department of Chemistry and Biochemistry

Ghosh, Ayanjeet

##### Department of Human Nutrition and Hospitality Management

Crowe-White, Kristi  
Park, Han-A

##### Department of Civil, Construction and Environmental Engineering

Clement, Prabhakar  
Jiang, Daqian

## Transfer Credit

Up to half of the required graduate, coursework hours may be transferred from other institutions with the approval of the Advisory Committee.

## Doctoral Plan of Study

For IDS Ph.D. students, an initial Plan of Study was established during the admission process in consultation with the Advisory Committee and Advisor/Chair. Any changes to the Plan of Study require the approval of the Advisory Committee and Advisor/Chair.

See the Graduate School Policy on Doctoral Plan of Study.

## Comprehensive Exam

The content and administration of the comprehensive exam are the responsibility of the Advisor and Advisory Committee and are determined

at the time of admission. The comprehensive examination is taken just before the completion of all coursework. The comprehensive examination can be retaken once. The Advisory Committee Chair must inform the Graduate School Associate Dean for Admissions, Recruitment, and Fellowships of the results of the comprehensive exam and submit the completed IDS Comprehensive Examination Rubric.

## Admission to Candidacy Requirements

When the Advisory Committee, using the Admission to Candidacy form, certifies to the Graduate School that the comprehensive exam has been passed and all other requirements set out in the Plan of Study (except the completion of dissertation research hours) have been satisfactorily completed, the Graduate School admits the student to candidacy.

## Continuous Enrollment Policy

Graduate School information on Continuous Enrollment.

## Dissertation Requirements

**Human Subjects:** If human subjects are involved, the student and his/her Advisor/Chair are responsible for complying with the Institutional Review Board requirements before beginning research.

**Committee:** The Advisory Committee formed on admission to the program continues to serve for the duration of the program.

**Dissertation Proposal:** The purpose of the dissertation proposal defense is to evaluate the potential of the student to complete the dissertation research project. It comprises an oral presentation of a written dissertation proposal, focusing on areas relevant to the dissertation research. The dissertation proposal defense may be retaken once. All Advisory Committee members must be in attendance for the duration of the defense. The Advisory Committee Chair must inform the Graduate School Associate Dean for Admissions, Recruitment, and Fellowships of the results of the dissertation proposal.

**Dissertation Research Hours:** Interdisciplinary PhD students are not permitted to enroll in dissertation research hours (IDGR 699) prior to admission to candidacy. The required 18 credit hours must be taken as IDGR 699. Any IDGR 699 hours taken must be accompanied by a syllabus that includes: 1) specific learning outcomes for the semester; and 2) how the learning outcome must be satisfied to earn a passing grade. The instructor of record (normally the Advisor) must upload the syllabus to The University of Alabama Simple Syllabus site.

**Final Oral Examination:** The final oral exam for the Ph.D. is administered and evaluated by the Advisory Committee. The Graduate School must be notified of the date of the oral examination at least one month in advance. Final oral examinations are open to the University community. The examination must be scheduled such that a representative from the Graduate School can attend. The Committee Advisor/Chair should inform the Associate Dean of the Graduate School of the results of the final oral exam using the Doctoral Final Defense form and submit a completed IDS Final Oral Examination Rubric.

**Submission of Dissertation:** An outcome of the final oral examination is almost always additional edits to the dissertation. It is at this stage that Interdisciplinary Ph.D. students are encouraged to use a copy editor to ensure that the final dissertation meets the requirements of the Graduate School. Approval of the final version of the dissertation by the committee is indicated by the completion of the Committee Acceptance Form by the advisor. The student must upload a PDF-formatted version of the final dissertation to ProQuest. Should additional edits be required, the Graduate School will contact the student.

## Time Limits for Degree Completion Requirements

Graduate School information on Time Limits.

## Student Progress Requirement

**Degree Progression:** Interdisciplinary Studies Ph.D. students must ensure that coursework is completed in a timely manner and that satisfactory progress is made towards completing all degree requirements (coursework, comprehensive exam, admission to candidacy, dissertation proposal, dissertation research, and final oral examination). All requirements must be completed within the time limits specified in the Graduate Catalog at the time of admission.

**Candidacy:** It is expected that full-time students will have advanced to candidacy by the beginning of the third year in the program. Failure to advance to candidacy before the end of the fourth year in the program is grounds for dismissal.

**Dissertation Proposal:** The dissertation proposal requirement must be fulfilled no later than one year after advancement to candidacy. Failure to complete this requirement within one year of advancement to candidacy is grounds for dismissal.

**Advisory Committee Meetings:** During each year of the program, there must be at least one meeting between the student and the Advisory Committee to review progress. The student is responsible for scheduling this meeting such that all members can be in attendance either in person or virtually (e.g. via Zoom). Individual meetings or communications via email cannot be used as a substitute for this meeting.

**Annual Report:** Each Interdisciplinary Studies PhD student will, in collaboration with their Advisor, prepare an annual written summary of progress towards degree requirements. This report will be due to the Associate Dean for Admissions, Recruitment and Fellowships (amg@ua.edu) on the Monday following finals week each year.

**Annual Meeting:** Following submission of the progress report, the student will schedule a 60 minute meeting (to be attended by the student, Advisor, and Associate Dean for Admissions, Recruitment and Fellowships (amg@ua.edu)). This meeting must be completed by the end of May each year.

## Academic Misconduct Information

Graduate School information on Academic Misconduct.

## Withdrawals and Leave of Absence Information

Graduate School information on Withdrawals and Leave of Absence.

## Academic Grievances Information

Graduate School information on Academic Grievances.

## Grades and Academic Standing

Graduate School information on Grades and Academic Standing.

## Graduate School Deadlines Information

Information on Graduate School Deadlines.

## Application for Graduation Information

Information on the Application for Graduation.