

CREATIVE TECHNOLOGY AND DESIGN - DOCTOR OF PHILOSOPHY (PHD)

The ATLAS Institute's Creative Technology and Design (CTD) PhD program emphasizes out-of-the-box invention and radical inquiry, and is suited to students whose interests transcend traditional disciplinary boundaries. Degrees are granted by the College of Engineering and Applied Science.

ATLAS is a thriving community of engineers, designers, makers, artists and all-of-the-aboves who believe in the power of a multidisciplinary approach to addressing complex problems.

Each ATLAS lab serves as a hub for leading research in human-computer interaction, neuroscience, nanotech, biomaterials, textiles, AR/VR/MR, fabrication, robotics, music, art, performance and more. Together the labs comprise a larger force for unconventional lines of inquiry, radical creative investigation and spontaneous collaboration. PhD students embed in an ATLAS lab or seek an advisor elsewhere on campus to pursue their research focus.

Structurally, CTD is a research-based doctoral program: a student forms an advisory committee, takes courses, completes a qualifying examination, proposes a dissertation, performs research, then writes and defends a dissertation.

Due to its inherently interdisciplinary nature, CTD has a small number of required courses. Each student then crafts their remaining curriculum individually, working with their advisory committee to identify the expertise needed in their focus area.

Interested in joining our vibrant community? Visit the ATLAS Institute's Graduate Programs webpages (<https://www.colorado.edu/atlas/academics/>) to learn more.

Course code for this program is ATLS.

Requirements

Course Requirements

- A minimum of 30 credit hours of courses numbered 5000 or above where students earn a minimum of 3.00 GPA.
- A minimum of 30 credit hours of dissertation credit are required for the degree.
- Students must complete the following two courses: Research Methods and PhD Research Professional Seminar, and attend the ATLAS Colloquium three semesters over the span of their time in the PhD program.

Program Proposal

To maintain good standing in the program, all students must complete their academic program plan/program proposal by the end of the second semester. In general, ATLAS academic plan/program proposals include general research area and the courses to be taken and other research/disciplinarily appropriate activities planned.

Preliminary Examination

Each student will work with their advisor during their first two semesters to design a customized plan of study that addresses that student's

interests and provides the breadth and depth of knowledge needed for their dissertation research. To maintain good standing in the program, all students must complete and submit the plan of study by the end of their second semester. Students should refer to the ATLAS PhD handbook for details.

Comprehensive Examination

To maintain good standing in the program, all students must complete their comprehensive exam by the end of the second semester of their fourth year in the program. The comprehensive examination will outline the student's completed research and proposed research agenda. This includes both an oral and written exam delivered to their dissertation committee and open to the larger community.

PhD Dissertation

Students must write a dissertation based on original research conducted under the supervision of a graduate faculty member. The dissertation must fulfill all CU Boulder Graduate School requirements. After the dissertation is completed, an oral final examination on the dissertation and related topics is conducted by the student's doctoral committee.

Plan(s) of Study

Due to the highly interdisciplinary nature of the program, each student's plan of study is developed in consultation with their advisor to address their unique research goals.

Learning Outcomes

By the completion of the program, students will be able to:

- Demonstrate expertise in and knowledge of their interdisciplinary focus as directed by their advisory committee.
- Demonstrate the ability to effectively communicate, both orally and in written forms, a deep understanding in their area of study.
- Design, conduct and contribute high quality intellectual research in their focus area.
- Make intellectual contributions to the academic community through professional and academic conferences.
- Work across diverse research domains and contribute to interdisciplinary intellectual projects.