Biological Design, PhD

Program Description

Degree Awarded: PHD Biological Design

The PhD program in biological design seeks to develop a new type of scientist by training students in core disciplines related to biomedicine and biotechnology while simultaneously preparing them to participate successfully in the interdisciplinary research teams of the future.

The research emphasis is on projects that are use-inspired, contributing directly to solutions for important societal challenges. This is a highly mentored program of personalized study that provides significant interaction with the large and vibrant local research community. Students are expected to complete the program in four to five years.

There are four key distinguishing features of the curriculum:

- a personalized plan of study that allows students to explore the disciplinary and interdisciplinary areas of greatest interest
- encouragement to choose dissertation research projects that are use-focused, contribute to solving a large-scale challenge and promise rich transdisciplinary experiences
- opportunities to participate in a proseminar format to encourage broad research interactions and discuss problems and challenges in biological design research
- three 10-week laboratory rotations during the first year of study

Rotations can be in any ASU laboratory that is centered largely on biological research.

At a Glance

- **College/School:** Ira A. Fulton Schools of Engineering
- **Location:** Tempe campus

Degree Requirements
84 credit hours, a written comprehensive exam, an oral comprehensive exam, a prospectus and a dissertation

**Required Core (20 credit hours)**
BDE 701 Fundamentals of Biological Design I (9)  
BDE 702 Fundamentals of Biological Design II (3)  
BDE 721 Integrative Research (3)  
BDE 722 Research Design (3)  
BDE 751 Teaching in Science (2)

**Other Requirements**
BDE 791 Seminar (must have 4 credit hours minimum)  
BDE 792 Research (1 credit hour minimum every semester)  
Specialized disciplinary courses (must have 6 credit hours minimum)

**Culminating Experience (12 credit hours)**
BDE 799 Dissertation (12)

**Admission Requirements**

Applicants must fulfill the requirements of both the Graduate College and the Ira A. Fulton Schools of Engineering.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree from a regionally accredited institution.

Applicants must have a minimum of a 3.00 cumulative GPA (scale is 4.00 = "A") in the last 60 hours of a student's first bachelor's degree program, or applicants must have a minimum of a 3.00 cumulative GPA (scale is 4.00 = "A") in an applicable master's degree program.

All applicants must submit:

1. graduate admission application and application fee  
2. official transcripts  
3. GRE scores  
4. three letters of recommendation  
5. personal statement  
6. resume  
7. proof of English proficiency
**Additional Application Information**

An applicant whose native language is not English (regardless of current residency) must provide proof of English proficiency.

For GRE test scores, the institution code for ASU is 4007 and the departmental code is 0000. Subject test scores are also recommended but not required.

Three letters of recommendation relative to the candidate's academic career are required. The personal statement should reflect the candidate's career and educational goals and should explain why the candidate is interested in pursuing this degree. The resume should include prior research and employment experience, honors, awards, memberships held, publications, etc.

For additional admission requirements, including transcripts, fees and international application requirements, students should see the Graduate Admission Services website.

**Application Deadlines**

**Fall**

**Spring**

**Contact Information**

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