Neural Engineering (Graduate Certificate)

ASU is not currently accepting applications for this program.

Program Description

Degree Awarded: Certificate Neural Engineering (Certificate)

Technologies for ameliorating neural disorders, ranging from epilepsy and stroke to paralysis, are developing rapidly. Understanding and deploying these technologies will require specialized skills in neurophysiology, bioelectricity and neural-electronic interfaces. The certificate program in neural engineering prepares clinical, industrial and academic practitioners with those skills through courses in areas of knowledge in neurophysiology, neuroanatomy and neuropathology. Students will then go on to learn of the state-of-the-art neurotechnologies applied to current neural disorders as well as the biophysics which these devices exploit.

At a Glance

• College/School: Ira A. Fulton Schools of Engineering
• Location: online

Degree Requirements

15 credit hours

Required Core (6 credit hours)
BME 526 Introduction to Neural Engineering (3)
BME 561 Clinical Neuroscience (3)

Electives (9 credit hours)

Additional Curriculum Information
For electives, students should see the academic unit for the approved course list.
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 in biomedical engineering (a BS or BSE degree), or have earned BS or BSE in engineering and have advanced (postbaccalaureate) training in medicine, physiology or related fields, or if they have earned a BS in a science discipline, plus have additional background work in thermodynamics, fluids, transport and additional work in medicine, physiology or related fields, from a regionally accredited institution. Specifically, applicants will need to demonstrate equivalent proficiency in at least four of the following six areas:

- biomaterials
- electrical networks or circuits
- engineering mechanics
- fluid mechanics or engineering transport
- signals and systems or control systems
- thermodynamics or physical chemistry

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. 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. The English proficiency requirement for international applicants is equivalent to the ASU Graduate College policy: TOEFL of at least 550 (PBT) or 80 (iBT), or IELTS overall band score of 6.5.

Contact Information

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