

# Agricultural and Biosystems Engineering

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## Department Information

- **Department Chair:**  
Leon Schumacher, Ph.D.
- **Graduate Coordinator:**  
Igathinathane Cannayen, Ph.D.
- **Department Location:**  
Agricultural and Biosystems Engineering Building
- **Department Phone:**  
(701) 231-7261
- **Department Web Site:**  
[www.ndsu.edu/aben/](http://www.ndsu.edu/aben/) (<http://www.ndsu.edu/aben/>)
- **Application Deadline:**  
International applications are due May 1st for fall and October 1 for spring. Domestic applications must be received at least one month prior to the start of the semester.
- **Credential Offered:**  
Ph.D., M.S.
- **English Proficiency Requirements:**  
TOEFL ibt 79; IELTS 6.5; Duolingo 105

The ABEN graduate program is open to all qualified graduates of universities and colleges of recognized standing. To receive full standing admission to the program, the applicant must meet the Graduate College's admission requirements and have a baccalaureate degree in engineering or have taken the equivalent of the basic undergraduate engineering courses.

The following fundamental courses (or their equivalent) must be taken prior to receiving a M.S. or Ph.D. degree from the North Dakota State University (NDSU) ABEN department. If the courses (or their equivalent) were not taken prior to matriculating at NDSU, they should be taken in addition to other coursework required for the graduate degree. Note that students are responsible for paying the tuition for undergraduate courses.

- Mathematics through Differential Equations (NDSU: MATH 266 Introduction to Differential Equations)
- Statics (NDSU: ME 221 Engineering Mechanics I) and Dynamics (NDSU: ME 222 Engineering Mechanics II); these two may be substituted by a calculus-based Physics I class
- Thermodynamics (NDSU: ME 350 Thermodynamics and Heat Transfer); may be substituted with ABEN 644 Transport Processes, which may also count toward graduate degree
- Fluid Mechanics (NDSU: CE 309 Fluid Mechanics or ME 352 Fluid Dynamics)
- Physics II/Electricity and Magnetism (NDSU: PHYS 252 University Physics II)

The major adviser may appeal to the ABEN graduate committee (not the student's supervisory committee) for substitutions or waivers of these requirements.

## Financial Assistance

Research assistantships are available and dependent on the grant funding of faculty research programs. Applicants are considered based on scholarship and potential to undertake advanced study and research. Students are eligible for an assistantship when accepted into the Graduate College.