

# BIOLOGICAL SYSTEMS ENGINEERING, B.S.

## WISCONSIN EXPERIENCE

### STUDENT ORGANIZATIONS

The American Society of Agricultural and Biological Engineers (ASABE) Pre-professionals Club (<https://asabe.bse.wisc.edu/>) connects students to professional development opportunities.

UW–Madison offers many other student groups to encourage networking and development of leadership skills. Some cater to agricultural interests, others focus on engineering and biosciences. Many food and bioprocess engineering students are active in the Food Science Club. Other options include Minorities in Agriculture, Natural Resources and Related Sciences (<https://win.wisc.edu/organization/manrrs/>), Engineers for a Sustainable World (UW–Madison Chapter) (<https://win.wisc.edu/organization/esw-uwmadison/>), and more. Many student organizations exist to support engineering students who identify as Native American, Black, Latinx, or part of the LGBTQIA+ community in professional development and academic success.

Find more student organizations (<https://win.wisc.edu/organizations/>).

### COMPETITIVE TEAMS

The BSE department is the home of several engineering design teams that compete in one of several National Student Design Competitions through the American Society of Agricultural and Biological Engineers (ASABE). The Quarter-Scale Tractor Team (<https://badgerpulling.bse.wisc.edu/>) designs and builds a small-scale tractor judged by industry experts and put to the test in performance events against other national and international university teams. The Robotics Student Design Competition allows students to develop skills in robotic systems, electronics, and sensing technologies by simulating a fully autonomous robotic solution to a common agricultural process.

Many BSE students participate in or hold leadership positions in other engineering design competition teams, such as: Formula SAE (<https://vehicles.wisc.edu/formula/formulaabout.html>), SAE Clean Snowmobile (<https://vehicles.wisc.edu/SNOWMOBILE/SNOWMOBILEabout.html>), ASCE Concrete Canoe (<https://win.wisc.edu/organization/canoe/>), Human Powered Vehicle Challenge (<https://hpvc.slc.engr.wisc.edu/new/>), Collegiate Wind Power Competition, (<https://energy.wisc.edu/news/uw-madison-team-compete-2022-collegiate-wind-competition/>) Baja Team (<https://vehicles.wisc.edu/BAJA/BAJAabout.html>), and UW Hybrid (<https://vehicle.slc.engr.wisc.edu/>)

### INTERNSHIPS

Internships are an excellent way for students to ground what they have learned in practical applications. Students also participate in co-operative (co-op) education programs where they earn full-time salaries while working for a company. The program supports students in finding co-ops and internships and provides flexibility in class plans for opportunities that occur during fall or spring semesters. Students learn of pre-professional internships through on-campus career fairs—primarily by those hosted by the CoE and CALS—and through regular email announcements. Students also have opportunities to intern with professors performing research over

the summer. Although not a program requirement, school credit may be earned for internships.

### RESEARCH EXPERIENCE

Many professors in BSE and across campus provide opportunities for students to gain hands-on experience in research labs. Undergraduate researchers learn how knowledge is constructed, gain independence, and increase their self-confidence. These benefits are an advantage in any career path. BSE students are sought out by research groups across campus and governmental agencies because of their unique research experiences.

### GLOBAL ENGAGEMENT

The program supports study abroad and international experiences with flexible scheduling. In addition to study abroad programs and internships, students can volunteer with student organizations like Engineers Without Borders (<http://ewbuwmadison.weebly.com/>). Students can choose to fulfill their International Studies requirement with an appropriate study abroad course.

### COMMUNITY ENGAGEMENT AND VOLUNTEERING

BSE students participate in campus-wide volunteer programs like Badger Volunteers, offering their expertise in education, sustainability, and public health to support community organizations. In addition, BSE students volunteer through student organizations to work on special projects related to engineering. Past projects included the fabrication of bioreactors for communities in Uganda or Habitat for Humanity projects in Madison, WI.