

IRRIGATION AND AGRICULTURAL WATER MANAGEMENT GRADUATE PROGRAMS

BIOLOGICAL SYSTEMS ENGINEERING DEPARTMENT AT THE UNIVERSITY OF NEBRASKA-LINCOLN · BSE.UNL.EDU

MS Degree

Masters students interested in irrigation typically receive a Master of Science degree with a major in Agricultural and Biological Systems Engineering or Mechanized Systems Management. The degree presents options to write a research thesis or complete an applied project. Typical career paths for students with an MS in irrigation include government, consulting, industry, research, teaching, extension, and international development.



PhD Degree

Doctoral students interested in irrigation typically receive a Doctor of Philosophy degree with a major in Biological Engineering. PhD students perform cutting-edge research and advance the science as well as develop new technologies. Earning a PhD requires students to think deeply and prepares them to be leaders in the irrigation profession. Typical career paths for irrigation PhD students include research, teaching, extension, and consulting.

Graduate Courses

- » MYSM 852 Irrigation Systems Management - fall semesters
- » AGEN 853 Irrigation and Drainage Systems Engineering - fall semesters
- » AGEN/MSYM 854 Irrigation Laboratory and Field Course - summer of even years
- » MSYM 855 Advanced Irrigation Management - spring of odd years
- » AGEN 953 Advanced Irrigation and Drainage Systems Engineering - spring of even years

Specialization option

At the completion of the IAWM specialization, students will be able to 1) describe qualitatively and quantitatively sprinkler, micro, and surface irrigation systems; 2) perform an irrigation system evaluation, including water application uniformity and application efficiency; 3) apply various irrigation scheduling techniques utilizing current technology and sensing systems for irrigation; and 4) describe the impacts of irrigation in general and consumptive use in particular on water resources and ecosystems.

Students enrolled in the specialization will be required to take three specific courses: AGEN/MSYM 854 Irrigation Laboratory and Field Course, MSYM 855 Advanced Irrigation Management, and AGEN 953 Advanced Irrigation Systems Engineering. Students will also take one elective course on agricultural water management from the following list: AGEN 841 Animal Waste Management, AGEN 954 Watershed Modeling, BSEN 855 Nonpoint Source Pollution Control Engineering, or BSEN 879 Hydroclimatology.

For more information

To learn more, visit <https://bse.unl.edu/irrigation> or email Derek Heeren at derek.heeren@unl.edu.