

Contact: Diana Gonzalez

**REQUEST FOR A NAME CHANGE AT IOWA STATE UNIVERSITY:
FROM MASTER OF SCIENCE AND Ph.D. PROGRAMS IN AGRICULTURAL ENGINEERING
TO MASTER OF SCIENCE AND Ph.D. PROGRAMS IN
AGRICULTURAL AND BIOSYSTEMS ENGINEERING**

Action Requested: Consider recommending approval of the request by Iowa State University to change the name of the Master of Science and Ph.D. Programs in Agricultural Engineering to the Master of Science and Ph.D. Programs in Agricultural and Biosystems Engineering in the Department of Agricultural and Biosystems Engineering of the College of Engineering.

Executive Summary: The proposed name change will align the name of the current graduate programs with the name of the department. This request has been reviewed by the Board Office and the Council of Provosts and is recommended for approval. This request addresses the Board of Regents Strategic Plan priority to pursue “educational excellence and impact” and Goal #8 – “Iowa’s public universities and special schools shall be increasingly efficient and effective.”

Background:

◇ **Description of programs.** The graduate programs in agricultural engineering provide knowledge and skills in the biological, physical, and engineering and technical sciences to solve problems for the world’s largest industry – the agriculture and food system. ISU established the nation’s first agricultural engineering program in the 20th century. Now, in the 21st century, ISU continues to extend the frontiers of knowledge through a strong graduate program which supports fundamental and applied research. Within the agricultural engineering major, students may specialize in the following areas:

- ⇒ Advanced machinery engineering (agricultural safety and health, sensors and artificial intelligence, controls and automation, precision agriculture, and biorenewables);
- ⇒ Animal and plant production engineering (air emissions measurement and abatement, animal welfare, environmental control in animal housing, manure treatment, crop modeling, plant stress physiology, precision agriculture, and decision support systems);
- ⇒ Environmental stewardship engineering (erosion control, drainage/waste management, pollutant fate and transport, nutrients management, wetland, vegetated filter/buffer strips, hydrological/water quality/crop modeling, geographic information science (GIS);
- ⇒ Remote sensing, water quality, and watershed management; or
- ⇒ Process engineering for food safety and value addition (processing technologies and systems for adding value, quality management systems, agricultural product, marketing practices and standards, instrumentation for grain, seed, and food quality enhancement).

For the master of science program, at least 30 credits must be completed with a minimum of 22 credits of course work; corresponding numbers for the master of engineering program are 32 and 37. For the Ph.D. program, at least 72 credits must be completed with a minimum of 42 credits of course work. All Ph.D. students must complete a teaching/extension experience prior to graduation.

- ◇ Description of department/college. The Department of Agricultural and Biosystems Engineering administers four undergraduate degree programs and two graduate degree programs. In the College of Agriculture and Life Sciences, there are two undergraduate programs (Agricultural Systems Technology; Industrial Technology) and one graduate program (Industrial and Agricultural Technology). In the College of Engineering, there are two undergraduate programs (Agricultural Engineering; Biosystems Engineering) and one graduate program (Agricultural Engineering). The proposed name change involves only the graduate program in Agricultural Engineering.
- ◇ Reason for proposed name change. The proposed name change will make the current graduate programs more inclusive of the increasing number of bio-focused graduate students in the department that are aligned with faculty whose research areas are in the more biological focused areas of the discipline. The proposed name has greater alignment with the name of the professional organization (American Society of Agricultural and Biological Engineers) and the name of the department. In June 2008, the Board of Regents approved a Bachelor of Science Program in Biological Systems Engineering in the College of Engineering at ISU (Agenda Item 1n). The proposed name will more accurately reflect the scope of the graduate programs in concert with the new undergraduate program which is likely to be a feeder program, particularly at the master's level.
- ◇ Comparable name at other institutions. A number of peer institutions and programs have a similar program name, including Purdue University (Agricultural and Biological Engineering); University of Illinois (Agricultural and Biological Engineering); Texas A & M University (Biological and Agricultural Engineering); Ohio State University (Food, Agricultural, and Biological Engineering); and Cornell University (Biological and Environmental Engineering).
- ◇ Consistency with accreditation requirements. The proposed name is in alignment with the professional organization, American Society of Agricultural and Biological Engineers. The proposed name change will have no impact on accreditation because ABET accreditation is only at the undergraduate level.
- ◇ Effect on program configuration. The department expects no program configuration changes as a result of the proposed name change.
- ◇ Effect on students. Current students or those already admitted will have the option of maintaining their existing degree title (Agricultural Engineering) or switching to the new title. All students admitted after August 2013 will be admitted to an Agricultural and Biosystems Engineering graduate program (M.S. or Ph.D.).
- ◇ Effect on resources. The department expects no new costs as a result of implementing the proposed name change.
- ◇ Date of implementation. The proposed name change will become effective upon approval by the Board of Regents and will be included in the University's General Catalog. The anticipated implementation date is August 2013.