# Engineering: Biological Systems

Purpose: The collection in Biological Systems Engineering supports teaching and research at the undergraduate and graduate level. Concern for this field is primarily centered in the Department of Biological Systems Engineering. However, specific areas will be of interest to faculty and students in other programs, schools and departments, including but not limited to Basic Medical Sciences (WWAMI); Biochemistry and Biophysics, Bioengineering; Chemical Engineering; Civil and Environmental Engineering; Crop and Soil Sciences; Electrical Engineering and Computer Science; Food Science and Human Nutrition; Mechanical and Materials Engineering; Neuroscience; and Veterinary and Comparative Anatomy, Pharmacology and Physiology.

Degree programs supported are:

Bachelor of Science in Agriculture with emphasis in:

General Agriculture

Agricultural Communications

Agricultural Education (Vocational Agriculture) (Library materials in Brain Education Library)

Bachelor of Science in Agricultural Technology & Management

Bachelor of Science in Biological Systems Engineering

Master of Science in Agriculture

Master of Science in Engineering in Food Engineering or Water-Soil-Environmental Engineering

Doctorate of Engineering Science in Food Engineering or Water-Soil-Environmental Engineering

## General Collection Guidelines:

Languages: English is the primary language of the collection. Works originally in other languages are purchased only in English translation.

Chronological Guidelines: Primarily the last 100 years.

Geographical Guidelines: Not applicable.

Treatment of the Subject: Undergraduate textbooks are not ordinarily purchased. Advanced level textbooks and popular works are purchased selectively.

Types of Material: Most materials acquired, whether print or electronic, are in the form of monographs and periodicals. Included are reference works; proceedings/transactions of congresses, societies and symposia; and selected government documents.

Date of Publication: Primarily the past five years, though earlier publications may be sought. In the case of non-current publications there is ordinarily no preference given to original printings or editions.

## Observations and Qualifications by Subject with Collection Level:

Agricultural safety: C(2)

Agricultural technology and management: C(2)

Bioengineering, biomedical science: C(1) / B

Biomechanics, biomaterials, bioprocessing, biomedical engineering, biomedical imaging, biosensors and bioinstrumentation, bioremediation, biomass processing, biofilms, biofilters.

Food processing engineering: C(1) / B

Post-harvest storage and processing, physical properties of foods, degree of ripening and impact sensitivity, temperature and pressure measurement, non-conventional methods, non thermal processing (such as microwave and radio frequency), dehydration and powders, machine design.

See also:

Food Science and Human Nutrition

Food processing and technology: C(1)

Mechanization, machinery, drainage, irrigation, soil conservation, harvesting, crop production, food packaging.

Food Safety: C(1) / B

Safety, security, bio-defense, traceability.

See also:

Food Science and Human Nutrition

Veterinary Medicine/Veterinary Science

Soil, water, and environment: C(1) / B

Soil conservation, irrigation, hydraulics, hydrology, aquaculture engineering, water quality, waste and wastewater treatment.

See also:

Soil Sciences;

Engineering: Civil and Environmental

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Spring 2004