12-16-2009

Engineering Mechanics Collection Development Policy

Virginia A. Baldwin
University of Nebraska-Lincoln, vbaldwin2@unl.edu

Follow this and additional works at: http://digitalcommons.unl.edu/librarycolldev

Part of the Library and Information Science Commons

http://digitalcommons.unl.edu/librarycolldev/28

This Article is brought to you for free and open access by the Libraries at University of Nebraska-Lincoln at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Collection Development Policies -- UNL Libraries by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.
Engineering Mechanics Collection Development Policy
University Libraries, University of Nebraska-Lincoln
Virginia Baldwin, December, 2009
Approved: CDC, December 16, 2009

I. GENERAL ACADEMIC PROGRAM INFORMATION

The Department of Engineering Mechanics offers an M.S. degree and participates in the "Mechanics and Energetics Field" option of the Unified Ph.D. Program of the College of Engineering. At the undergraduate level, the Department provides required courses such as engineering graphics, mechanics of rigid and non-rigid bodies, materials science and numerical methods for the various departments of the colleges of Engineering and Architecture. At the graduate level courses are offered in advanced dynamics, advanced mechanics of materials, experimental stress analysis, dimensional analysis, theory of models, finite element techniques, vibrations, digital and analog computer techniques, continuum mechanics, theory of plates and shells, stability, elasticity, plasticity, fracture mechanics, and composite materials.

The major research emphasis is in areas such as structural dynamics, acoustics, theoretical and experimental stress analysis, composite materials, wind turbine design, cardiovascular system modeling, and robotics.

Overlapping subject matter interests for the Department include the following:

Agricultural Engineering Fluid Mechanics, Structures

Biological Systems Engineering Bioengineering

Chemical and Biomolecular Engineering Bioengineering

Civil Engineering Materials of Construction, Structures

Construction Management Materials of Construction

Mechanical Engineering Engineering Graphics, Fluid Mechanics, Fluid Dynamics, Vibrations

Mathematics Nomography, Descriptive Geometry, Analytical Mechanics, Statics, Kinematics, Dynamics, Vibrations, Fluid Mechanics, Numerical Methods

Physics Dynamics, Fluid Mechanics, Properties of Matter Rheology Elasticity

Off-campus, the Department serves on a consultant basis to industry. An example is its work with the Brunswick Corporation on composite pressure vessel technology.

The accreditation body for the Department is the Accrediting Board for Engineering and Technology. One of its library collection criteria states, "The library collection should reflect the existence of an active acquisition policy, which policy should include specific acquisitions on the request and recommendation of the faculty of the engineering unit."

II. GEOGRAPHICAL COVERAGE
Materials limited to a specific country or region are not acquired.
III. CHRONOLOGICAL COVERAGE
Materials limited to the historical treatment of the subject matter are not acquired unless specifically requested by the Department. This restriction applies to all levels of intensity.

IV. IMPRINT DATE
Only materials published in the current year are to be acquired unless specifically requested by the Department.

V. FORMAT/TYPE AND LEVEL OF MATERIALS
Emphasis is on periodicals, serials, and monographs. A research level collection is maintained.

VI. LANGUAGES
Only English language publications are acquired at all levels of intensity. Translations for journal literature and technical reports in German, Russian, and French are purchased.

VII. SPECIAL FACTORS
Engineering Mechanics materials are located in the Engineering Library. Timeliness is a critical factor in the acquisition of many conference publications because publication is usually limited to a small number of copies. This is especially true in the case of societies and university departmental publishers. The only society for which all current publications are acquired is the American Society for Testing and Materials (limited to their standards). Otherwise the publications of all other societies and presses are acquired on a selective basis. These societies include:

- American Concrete Institute
- American Society for Metals
- American Society of Civil Engineers
- American Society of Mechanical Engineers
- Institute of Fracture Mechanics (Lehigh University)
- Institute of Physics
- Institution of Mechanical Engineers
- International Union of Pure and Applied Physics
- International Union of Theoretical and Applied Mechanics
- Japanese Society for Strength and Fracture of Materials
- Joint British Committee for Stress Analysis
- Metallurgical Society of AIME
- Metals Society
- National Aeronautics and Space Administration
- National Bureau of Standards
RILEM (Reunion internationale des laboratoires d'essais et de recherches sur les matériaux et les constructions) Society for Experimental Stress Analyses
Society for Industrial and Applied Mathematics
Society for the Advancement of Material and Process Engineering
Society of Plastics Engineers
Society of the Plastics Industry
U.S. Association of Computational Mechanics
Welding Institute.

The Superintendent of Documents, Government Printing Office, collection, in hardcopy or microformat, covers in part or wholly, the following U.S. Government Departments or Agencies:

U.S. Atomic Energy Commission
U.S. Department of Energy
U.S. Environmental Protection Agency
U.S. Federal Energy Administration
U.S. National Institute for Occupational Safety and Health
U.S. National Aeronautics and Space Administration
U.S. Nuclear Regulatory Commission

Where coverage is not complete, the balance of publications for a federal government agency or department is located, in most cases, at Love Library.

The Engineering Library is a U.S. Patent and Trademark and Depository Library Program Library and the publications of the U.S. Patent and Trademark Office are included in the Engineering Library collection. All patent search aids that are provided by the U.S. Patent and Trademark Depository Library Program are retained.

Collections of federal standards and specifications are maintained as well as those of voluntary organizations such as the American National Standards Institute.

**VIII. CLASSIFICATION AND INTENSITY LEVEL**
(The following are listed by LC Class, Subject, and then by Intensity Level)

QA 808.2 Continuum Mechanics RESEARCH
QA 821 Statics RESEARCH
QA 841 Kinematics RESEARCH
QA 842-871 Dynamics RESEARCH
QA 901-930 Mechanics of Deformable Bodies RESEARCH
QA 931-939 Elasticity, Plasticity RESEARCH

QC 120-168.85 Descriptive and Experimental Mechanics RESEARCH

QC 189.5 Rheology RESEARCH

QC 221-246 Acoustics. Sound RESEARCH

QC 251-338.5 Heat RESEARCH

T 57 Applied Mathematics RESEARCH

T 351-385 Engineering Graphics RESEARCH

TA 164 Bioengineering RESEARCH

TA 329-348 Engineering Mathematics. Engineering Analysis RESEARCH


TA 365-367 Acoustics in Engineering. Acoustical Engineering RESEARCH


TA 495 Disasters and Engineering RESEARCH

TA 630-695 Structural Engineering (General) RESEARCH