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Industrial and Management Systems Engineering

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Industrial and Management Systems Engineering
University Libraries, University of Nebraska-Lincoln
Virginia Baldwin, December, 2009
Approved: CDC, December 16, 2009

I. GENERAL ACADEMIC PROGRAM INFORMATION

The Department of Industrial and Management Systems Engineering offers a B.S. degree in Industrial Engineering. It also offers an M.S. degree and participates in the "Electrical and Systems Engineering" option of the college-wide Ph.D. Program in Engineering. The Department offers coursework in manufacturing, operations research, ergonomics, engineering management, decision modeling, occupational safety and health, quality control, inventory control, facility planning and design, automation, biomechanics, queueing theory, non-linear programming, robotics.

The major research emphases in the Department are in ergonomics, dealing with the human being in the industrial workplace, and in applied operations research where energy, government and industrial problems are modeled and analyzed through a variety of computer techniques. Graduate courses are offered to support the research being carried out in the departmental areas of emphasis. Additional research interests include biomedical and human factors, communications and computers, energy, food production and processing, transportation and water resources.

Overlapping subject matter interests for the Department include the following:

**Biological Systems Engineering:** safety, ergonomics

**Civil Engineering:** Safety, engineering economy, Simulation

**Computer Science:** Cybernetics, simulation

**Construction Management:** Work measurement, contracts and specifications, engineering economy

**Mechanical Engineering:** Safety, engineering economy

**Mathematics:** Combinatorics, linear algebra, statistics, mathematical optimization, systems analysis

**Electrical Engineering:** Engineering economy

Industrial Engineering is active in its outreach program, with an M.S. program in Columbus, Nebraska for local industry, and a night M.S. program for the Lincoln/Omaha area. The Department also provides numerous short courses and seminars for Nebraska firms.

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
Primary geographical coverage includes the United States, Europe, and Asia.

III. CHRONOLOGICAL COVERAGE
Materials dealing with the historical treatment of the subject are acquired at all levels of intensity.

IV. IMPRINT DATE
Only materials published in the current year are acquired unless the item is a "classic." Complete backfiles of periodicals from 1970 to the present are acquired in microformat when possible.

V. FORMAT/TYRE
Most materials are acquired in the form of periodicals, serials and monographs. A research level collection is maintained.

VI. SPECIAL FACTORS
Timeliness is a critical factor in the acquisition of many conference publications. This is especially true of society and university publishers.
Society publications are acquired on a selective basis. These societies include:
American Association of Cost Engineers
American Industrial Hygiene Association
American Institute of Industrial Engineers
American Society for Quality Control
American Society of Mechanical Engineers
American Society of Safety Engineers
American National Standards Institute
American Society for Testing and Materials
Human Factors Society
Institution of Mechanical Engineers
International Ergonomics Society
International Institute for Robotics
National Safety Council
Numerical Control Society
Operations Research Society of America
Robot Institute of America
Society for Industrial and Applied Mathematics
Society of American Value Engineers
Society of Manufacturing Engineers.

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. Hardcopy is preferred.

VII. CLASSIFICATION AND INTENSITY LISTING
The following are listed by LC Class, Subject, and then by Intensity Level)

HD 7260-7780 Industrial hygiene ,STUDY
QP 303 Biomechanics, RESEARCH
T 55 Industrial Safety, RESEARCH
T 55.4-60 Industrial Engineering, RESEARCH
TA 177.4-185 Engineering Economy ,RESEARCH
TJ 1125-1345 Machine Shops ,RESEARCH
TS 155-193 Production Management ,RESEARCH
TS 200-788 Metal Manufactures ,STUDY