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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 Boand 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/TYPE

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 wholely 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 Standands 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