

WRIGHT STATE UNIVERSITY LIBRARIES

Collection Development Policy Statement

SUBJECT: Biomedical Engineering, Industrial and Systems Engineering, Human Factors Engineering

SELECTOR: Phil Flynn
Phil.flynn@wright.edu
937.775.2533

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UNIVERSITY PROGRAMS

The Department of Biomedical, Industrial, and Human Factors Engineering offers programs leading to the Bachelor of Science in Biomedical Engineering, Bachelor of Science in Human Factors Engineering, Bachelor of Science in Industrial Science and Industrial Systems Engineering, Masters of Science Engineering, and the Ph.D in engineering (biomedical engineering or human factors focus) degrees.

The undergraduate biomedical engineering program includes a traditional track, a pre-med track, and an industrial and systems track. Graduate biomedical engineering program offers these tracks: biomechanics, biomedical instrumentation, medical imaging and signal processing, and orthopaedic engineering. The graduate human factors engineering program offers these tracks: human computer interaction and systems modeling, ergonomic engineering, supply chain and industrial systems, and systems modeling and operations research. The masters program in human factors engineering offers as a distance learning option.

The programs are ABET accredited.

Information regarding programs offered by the department can be found at http://www.cs.wright.edu/bie/academic_programs.htm .

History

Industrial systems, human factors, and ergonomics were major program focuses for the Industrial Engineering department at the University's founding in 1968. Systems and human factors became two separate track options for undergraduates during the 1974/1975 academic year. The Biomedical and human factors department became part of the newly developed College of Engineering and Computer Science in 1986. The Ph.D. in biomedical engineering became available in 1987. A graduate human factors degree did not become available until 1992. A renewed Industrial Systems focus began in 2006.

CLASSIFICATION OF LIBRARY MATERIALS

Three areas of the Library of Congress Classification System, R 856-857 (biomedical engineering), T 60.35 (industrial engineering), TA 166 to TA167 (human factors engineering), and

the National Library of Medicine class QT 36 (biomedical engineering) contain the most easily identifiable clusters of relevant books in these fields. Classifications in computer science, education, medicine, psychology, physiology and all areas of engineering also contain relevant material.

Library of Congress classification

Biomedical Engineering

BF 309-499	Cognitive science
QH 508	Biological control systems
QP	Physiology
QP 303	Human mechanics and kinesiology
R	Medicine
R 856-857	Biomedical engineering
R 858-859.7	Medical Informatics
RC 78.7 D53	Diagnostic imaging
RC 1050-1097	Aviation medicine
RC1120-1160	Space medicine
RD 130	Prosthetics design
RM 950	Rehabilitation technology
T	Engineering
TA 164	Bioengineering
TP 248.13-248.65	Biotechnology
...	More detailed analytics available upon request.

Human Factors Engineering

BF 231-299	Sensation and perception
BF 309-499	Cognitive science
QA 76.9 H85	Human computer interaction
TA 166-167	Human engineering
...	More detailed analytics available upon request.

Industrial Systems Engineering

QA 401	Systems modeling
HD30.213	Industrial management
T 55.4-60.8	Industrial engineering
TA 166-167	Human engineering
TA 169.7	Industrial safety
...	More detailed analytics available upon request.

NLM

Biomedical engineering

QT 34	Biophysics
QT 35	Biomedical mathematics
QT 36	Biomedical engineering
QT 37	Biomedical and biocompatible materials
QT	Environmental exposure. Physiological adaptation

QU	Biochemistry
WD 700-768	Aviation and space medicine
WE 312	Prosthetic joints
...	Classifications for independent commissions and congressional committees

Superintendent of Documents classification

C 13	NIST
C 21	Patents and Trademarks
C 51	NTIS
NAS	NASA
NS	National Science Foundation
Y3.2T 22/2	Technology Assessment Office
...	Classifications for independent commissions and congressional committees

SCOPE OF COLLECTION

Dates covered: intellectual content

The emphasis of the collection is on recent developments in the field. Materials on the history of biomedical engineering, industrial systems, and human factors engineering are collected selectively.

Dates covered: publication dates

Most of the items collected are current imprints. Retrospective purchases (e.g., backfiles of a journal) may be made on occasion.

Geographic coverage

There is no topical geographic collection emphasis or exclusion.

Language

Most material collected will be in English.

Types of materials

Monographic titles and serials are collected. Conferences and textbooks are collected selectively. Standards are rarely collected. Subscriptions to databases include those with citations to articles and those with full text. A list of databases relevant to Biomedical Engineering, Industrial and Systems Engineering, and Human Factors Engineering is available at <http://www.libraries.wright.edu/quicklinks/databases/subjects.php?id=8> .

Format

Materials are collected in print and electronic format. Relevant videotapes and DVDs are also collected. Selected websites are included in the online catalog and on the online Biomedical Engineering, Industrial and Systems Engineering, Human Factors Engineering: <http://www.libraries.wright.edu/services/researchguides/biohum/> .

Exclusions

Workbooks are generally not collected.

LOCATION OF MATERIALS

The collection is housed in the Paul Laurence Dunbar Library and the Fordham Health Sciences Library. Materials on industrial engineering, ergonomics, and human factors engineering are housed in the Paul Laurence Dunbar Library. Materials on aerospace medicine and biomedical engineering are housed in the Fordham Health Sciences Library. Older and infrequently-used materials are located in the Southwest Ohio Regional Depository.

INTERDISCIPLINARY RELATIONSHIPS

Selection of materials in Biomedical Engineering, Industrial and Systems Engineering, Human and Factors Engineering may overlap with computer science, education, electrical engineering, materials science, mathematics and statistics, mechanical engineering, medicine, psychology, and physiology. The three fields are highly interdisciplinary.

ADDITIONAL LIBRARY RESOURCES

The Ross A. McFarland collection, housed in the Fordham Health Sciences Library special collections department, contains research materials and papers associated with the father of human factors in aviation.

ON-CAMPUS RESOURCES

See the collection development policy for Engineering, this section, for research institutes.

LOCAL AND REGIONAL RESOURCES

Local and regional collections

The Dayton Area Graduate Studies Institute (DAGSI) provides shared access to the collections of University of Dayton and the Air Force Institute of Technology.

The Ohio State University Libraries collect material to support a masters and doctorate program in biomedical engineering, and Miami University in industrial systems engineering.

Cooperative loan arrangements

OhioLINK provides access to circulating materials collected by most academic libraries in Ohio.

OhioLINK membership also provides Wright State with membership in the Center for Research Libraries, which enables faculty, staff, and students to obtain Center materials through interlibrary loan.