Civil Engineering Collection Development Policy

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I. GENERAL ACADEMIC PROGRAM INFORMATION

The Department of Civil Engineering offers Bachelor of Science, Masters, and Doctoral degrees. As a professional discipline, civil engineering is closely related to the total human environment. Undergraduate students are required to take classes in each of the following subject areas, and can emphasize one or more areas during their course of study:

- Environmental engineering
- Geotechnical/Materials engineering
- Structural engineering
- Transportation engineering
- Water resources engineering

Course offerings cover environmental quality, pollution control, chemical and microbiological wastewater treatment, soil mechanics, foundation engineering, structural analysis, reinforced concrete, steel design, plastic analysis, finite element analysis, water resources development, hydraulic engineering, hydrology, groundwater engineering, transportation engineering, airport design, traffic engineering, mass transit system, pavement design, construction management, engineering economy, river engineering, legal aspects of water resources, waste treatment, sewage treatment, industrial waste treatment, water quality, thin shell structural design, bridge design, surveying, and engineering geology.

Research Centers:

The CE Department houses three centers of regional research and expertise:

- The Mid-America Transportation Center conducts research and educational activities aimed at improving the design and operation of transportation facilities to maximize mobility, safety, and efficiency and minimize negative environmental effects of transportation in Mid-America. See www.matc.unl.edu
- The Midwest Roadside Safety Facility conducts safety and performance evaluations of various roadside devices and develops innovative design concepts and technologies in the area of highway safety. Facility engineers are among the nation's leaders in developing and applying simulation models to design and analyze a wide variety of roadside safety features. See www.engr.unl.edu/~mwrsf/
- National Bridge Research Organization develops, collects, and disseminates the latest technologies for the advancement of bridge design, construction, retrofit and maintenance. This is accomplished through partnership with industry, government agencies and academia to advance research, education and technology transfer. See http://www.NaBRO.unl.edu
Senior Design Project and Honors: Senior Design Project (CIVE 489 and CIVE489H) have been designated as an ACE (Achievement-Centered Education) courses.

The Civil Engineering Program at the University of Nebraska-Lincoln is fully Accredited by the Accreditation Board for Engineering and Technology (ABET). The Civil Engineering Program is offered in Lincoln (Nebraska Hall) and Omaha (Peter Kiewit Institute). Faculty members are located on both campuses.

The major research interests of the Department include transportation engineering, structural engineering, geotechnical engineering, environmental engineering, and materials. Water related research interests include: numerical methods for groundwater modeling, simulation and numerical modeling, groundwater flow and remediation, contaminant transportation, biological monitoring, environmental implications of nanotechnology.

The following represents overlapping interests with other departments:

**Biological Systems Engineering** Surveying, hydraulics, soil mechanics, materials of construction, structures, dams, waterways, irrigation

**Chemical & Biomolecular Engineering** Water supply, water pollution

**Construction Management** Earthworks, foundations, contracts and specifications

**Electrical Engineering** Power distribution, hydropower

**Engineering Mechanics** Materials of construction, structures

**Industrial & Management Systems Engineering** Safety

**Mechanical Engineering** Pumps, cranes, hoists

**Mathematics** Differential equations

**Geology** Engineering geology, rock mechanics, earthworks, foundations

**II. GEOGRAPHICAL COVERAGE**

Geographical coverage includes the United States, Europe, Korea, Japan, China, and India. Emphasis is upon current material.

**III. IMPRINT DATE**

Emphasis is upon current imprints. Backfiles of all active periodicals and serials are completed after all current monographic requests have been filled.
IV. FORMAT/TYPE AND LEVEL OF MATERIALS
Most materials acquired are in the form of periodicals, serials, and monographs. A research level collection is maintained.

V. LANGUAGES
English language publications are preferred at all levels of intensity. Materials are also acquired in French, German, and Russian; materials in other languages are excluded.

VI. SPECIAL FACTORS
Civil Engineering materials are located in the Engineering Library.
Nearly complete coverage of current publications of the American Society for Testing and Materials is desired. The publications of other societies are acquired on a selective basis. These societies include:
American Chemical Society (Environment and water aspects)
American Concrete Institute, American Congress of Surveying and Mapping
American Geophysical Union
American Institute of Architects
American National Standards Institute
American Society for Non-destructive Testing
American Society of Civil Engineers
American Society of Photogrammetry
American Water Resources Association
American Water Works Association
American Welding Society
Association of Asphalt Paving Technologists
Association of Iron and Steel Engineers
Building Research Advisory Board
Building Research Institute
Cement and Concrete Association
Concrete Reinforcing Steel Institute
Institution of Civil Engineers
Institute of Environmental Sciences
Institute of Traffic Engineers
International Association for Shell Structures
International Centre for Mechanical Sciences (CISM)
International Union of Theoretical and Applied Mechanics
National Association of Corrosion Engineers
National Bureau of Standards
National Concrete Masonry Association
New England Water Parks Association
Noise Control Federation
Portland Cement Association
Prestressed Concrete Institute
(RILEM) Reunion Internationale des Laboratoires d'Essais et de Recherches sur les Materiaux et les Constructions
Society for the Advancement of Material and Process Engineering
Society of Nondestructive Testing
Society of Plastic Engineers
Water Pollution Control Federation
Welding Institute.

UNO library materials also adequately support all levels of programs offered at UNL.
The Superintendent of Documents, Government Printing Office, collection, in hardcopy or microform, 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. Department of Transportation
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)

GB 651-2598 Water. Hydrology RESEARCH
HE Transportation RESEARCH
QA 821 Statistics RESEARCH
QA 842-871 Dynamics RESEARCH
QA 901-930 Mechanics of Deformable Bodies RESEARCH
QA 931-939 Elasticity. Plasticity RESEARCH
QB 275-343 Geodesy STUDY
QC 120-131 Descriptive and Experimental Mechanics RESEARCH
TA 329-348 Engineering Analysis RESEARCH
TA 401-492 Materials RESEARCH
TA495 Disasters and engineering RESEARCH
TA 501-623 Surveying STUDY
TA 625-695 Structural Engineering RESEARCH
TA 715-787 Earthwork. Foundations RESEARCH
TA 800-820 Tunneling. Tunnels STUDY
TA 1001-1280 Transportation Engineering RESEARCH
TC Hydraulic Engineering RESEARCH
TD Environmental technology RESEARCH
TE Highway Engineering. Road and Pavements RESEARCH
TF Railroad Engineering RESEARCH
TG Bridge Engineering RESEARCH
TH 1061-1725 Systems of Building Construction RESEARCH
TH 2025-3000 Building Construction Details STUDY
TH 4021-4977 Buildings (various types) RESEARCH