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Civil Engineering Collection Development Policy

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University Libraries, University of Nebraska-Lincoln
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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 LEVELOF 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 Avisory 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 Laboratories 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 wholely, 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 701-713 Engineering Geology. Rock Mechanics. Soil Mechanics 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