# Engineering: Civil and Environmental

Purpose: The Civil and Environmental Engineering collection supports teaching and research through the doctoral level. Concern for these fields is centered in the Department of Civil and Environmental Engineering. However, specific areas will be of interest to faculty and students in other programs, schools, and departments such as Environmental Science.

## General Collection Guidelines:

Languages: English is the primary language of the collection. Works originally in other languages are purchased only in English translation.

Chronological Guidelines: Primarily the last 100 years.

Geographical Guidelines: Primarily the United States. While no area is specifically excluded, the subject mater would limit the areas of interest to those countries with a well-developed technology.

Treatment of the Subject: Biographies and histories are very selectively purchased. Undergraduate textbooks are not ordinarily purchased. Trade school manuals or juvenile treatments are excluded. Books on techniques such as engineering graphics, surveying and photogrammetry are purchased very selectively.

Types of Material: Most materials acquired are in the form of books and periodicals; this includes encyclopedias; dictionaries; proceedings/transactions of congresses, societies and symposia; selected government documents such as NASA and DOE depository items and U.S. Government Research Reports in any suitable format. Electronic resources are acquired. Engineering drawings are excluded.

Date of Publication: Primarily the past five years, though earlier publications may be sought. In the case of non-current publications there is ordinarily no preference given to original printings or editions.

## Observations and Qualifications by Subject with Collection Level:

Atmospheric Science: C(1) / B

Atmospheric turbulence, air pollution control, air pollution measurement, acid precipitation, global climate change, global warming, atmospheric chemistry and physics, meteorology.

Construction management:

See: Architecture

Dynamics, statics: C(1) / B

Engineering administration, law, and contracts: D / C(2)

Environmental Engineering: C(1) / B

Sanitary engineering; solid waste management and design; water supply and wastewater engineering and treatment; water pollution; hazardous waste and related treatment processes, in situ mediation, fate and transport modeling; bioremediation.

Geotechnical Engineering: C(1) / B

Earth dams, water wells, seepage, geohydrology, earthquake engineering, seismology, remote sensing, geotechnics, rock mechanics, soil/structure interaction, groundwater hydrology, foundation design.

Hydraulic Engineering: C(1) / B

Water development, water resources planning, hydrology, open channel and closed conduit flow, river engineering, fisheries engineering, engineering aspects of aquatic chemistry and biology, stream sanitation, hydropower, fluid mechanics with an emphasis in environmental pollutant fate and transport, epidemiological control in water distribution systems, storm water discharges, and ecological habitat control.

Structural Engineering: C(1) / B

Structural mechanics and dynamics, structural analysis and design with an emphasis on behavior and design of reinforced and prestressed concrete and masonry structures, behavior and design of wood materials and structures, design and manufacture of wood composite materials, foundations, structural failure, soil mechanics and dynamics, theory of plates and shells, theory of elastic stability, mechanics of materials.

Surveying, photogrammetry: D / C(2)

Transportation Engineering: C(1) / B

Pavement and highway design; pavement and materials; planning, design and operation of transportation systems; capacity and control of transport systems.

See also:

Environmental Science and Regional Planning

Geography

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