# Engineering: Chemical

Purpose: The collection in Chemical Engineering supports teaching and research in through the doctoral level. While concern for these fields is centered in the Department of Chemical Engineering, faculty and students in other schools and departments have interest in specific areas such as Biochemistry/Biophysics, Chemistry, Civil and Environmental Engineering, Environmental Science and Regional Planning, Geology, Medicine, Microbiology, and Physics.

## 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: Emphasis is on the present. Works of an historical nature may be selectively acquired.

Geographical Guidelines: Not applicable.

Treatment of the Subject: Lower division textbooks are not generally purchased. Upper division texts and popular works are purchased selectively. Books on techniques such as engineering graphics, surveying and photogrammetry are purchased very selectively. Emphasis is on graduate level texts and research material.

Types of Material: Acquisitions are primarily in the form of monographs and serials, but may include 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. Engineering drawings are excluded.

Date of Publication: Emphasis is on the acquisition of current imprints. Retrospective materials may be purchased either in the original, reprint, microform, or electronic version depending on availability and cost.

Observations and Qualifications by Subject with Collection Level:

Biochemical Engineering: C(1) / B

Includes fermentation processes, biochemical reactor design, transport phenomena in biological systems, biochemical technology, bioseparations, electrically enhanced separations, nanotechnology.

Chemical Kinetics and Dynamics: C(1) / B

Catalysis and catalysts; stochastic principles and processes; statistical mechanics; heat and mass transfer; ceramic membrane reactors, thermodynamics.

Electrochemistry: C(2) / C(1)

Kinetics and equilibria.

Environmental Chemistry: C(1) / B

Subsurface transport, in-situ remediation, bioremediation, bioaccumulation, hazardous wastes, atmospheric chemistry.

Extractive Metallurgy: C(2)

Industrial Chemistry: C(2)

For food technology, see: Food Science & Human Nutrition

For textile manufacture, see: Apparel, Merchandising, Design, and Textiles

Nuclear Engineering: C(2)

Polymer Science:

See: Engineering: Mechanical and Materials

Process Dynamics and Control: C(1) / B

Process design techniques; automatic process control and instrumentation for specific operations; plant, product and chemical reaction design; optimization techniques.

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