

Civil Engineering: A Pathfinder

The Learning Resources Center is a source of information on civil engineering. This pathfinder provides an overview of sources available to help you thoroughly research your topic. If you would like assistance using these resources, please ask a librarian for help.

Books and Audiovisual Materials

The online public access catalog (OPAC) provides a listing of all books and audiovisual materials owned by the BCC Learning Resources Center. You can search the OPAC from stations in the library, or from a remote location, such as a campus computer lab or your home computer via the BCC Library Web site www.sunybroome.edu/~library/. From your [BCC Today](#) home page, look under the “Web Tools” tab. To access BCC Library’s online catalogs select “Catalog” under “Search” on the BCC Library’s homepage. A few of the subjects relating to Civil Engineering Technology include:

Architectural design	Public works
AutoCAD	Strength of materials
Buildings	Structural design
Earthwork	Soil mechanics
	Transportation engineering

Reference Collection

The Reference Collection contains dictionaries, encyclopedias and specialized books related to many different subject areas. Reference books on Civil Engineering Technology are found primarily in the TA section of the Reference Collection located on the first floor of the Library. Reference books are for use in the Library only.

The following books are located in the Reference Collection:

Ref TA 151 .C57 1995	Chen, W. F., ed. <u>Civil Engineering Handbook</u> . Boca Raton, FL: CRC Press, 1995. An important tool for the practicing civil engineer. Provides extensive coverage of the major areas of civil engineering. Includes many formulas and tables that give immediate answers to practical problems.
Ref TA 633 .H36 1997	Chen, W. F., ed. <u>Handbook of Structural Engineering</u> . Boca Raton, FL: CRC Press, 1997. Includes essential topics on strength of materials, earthquake engineering, fatigue and computer-aided analysis.

- Ref
NA
9
.A27
2002
- Cramer, James P. and Jennifer Evans, eds. Almanac of Architecture & Design. 3rd ed. Norcross, GA: Greenway, 2002.
Includes speeches and essays, awards and honors, organizations, museums, noted individuals, records, rankings, and achievements, design and historic preservation, design education, design econometrics, registration laws, bookstores, journals and magazines, and obituaries.
- Ref
TA
418.9
.C6
H3
- Lubin, George, ed. Handbook of Composites. New York: Van Nostrand, 1982.
A source for information on materials, processes, design and analysis, and typical applications.
- Ref
NA
40
.I48
- Van Vynckt, Randall J., ed. International Dictionary of Architects and Architecture. Detroit: St. James, 1993.
Features hundreds of architects, buildings and sites that are important to Western architectural history.

Book Collection

Many general books on civil engineering technology are located in the T – TA section of the Circulating Collection located on the second floor of the library. You may want to browse these books to become more familiar with your topic. Books on specific aspects of civil engineering are located with information on that subject. For example, books on building materials for construction in civil engineering are located in the TA401-492 section of the collection.

Here are some call number areas you may find useful:

- T11 Technical writing
- TA190 Management of engineering works
- TA630 - 695 Structural engineering
- TC1 – 978 Hydraulic engineering
- TA549 - 625 Surveying handbooks, manuals
- TA710 Soil Mechanics
- TA715 – 772 Earthworks

These books may be checked out of the library with a BCC ID.

E-Book Collection

Reference books and handbooks on Civil Engineering are available from our NetLibrary Collection, an online book service. To access BCC Library's eBook catalog select "Electronic Books" under "Search" on the [BCC Library's homepage](#). You can search for books by title or keyword, or even search the contents of the eBooks for specific information. Since you can access NetLibrary from any internet-abled computer, this is an excellent resource for finding reference materials whenever you need them. Once you have selected an eBook to read, click on

the “Browse this eBook online” link to open the book. Here are some eBooks you may find useful:

- Blischke, W. R., and D. N. P. Murthy. Case Studies in Reliability and Maintenance. Hoboken, NJ: Wiley, 2003.
- Ganíc, Ejup N., Tyler Gregory Hicks, and Michael Predko. McGraw-Hill's Engineering Companion. NY: McGraw-Hill, 2003.
- Hicks, Tyler Gregory. Civil Engineering Formulas. New York: McGraw-Hill, 2002.
- Kranakis, Eda. Constructing a Bridge: An Exploration of Engineering Culture, Design, and Research in Nineteenth-century France and America. Cambridge, MA: MIT, 1997.

Databases and Periodicals

The library subscribes to many databases with periodical literature for engineering, much of it in full text format. To access the databases, select “Articles” under “Search” on the [BCC Library's homepage](#), then select from a listing of the BCC Library's online databases. Here are some full text database sources related to your subject area:

- **EBSCO** – Select *Academic Search Elite* and *General Science* for full text access to the following journals:

Civil Engineering
Earth Island Journal
ENR: Engineering News Record
Journal of Materials in Civil Engineering
Journal of Structural Engineering
Journal of Transportation Engineering
Science

- **InfoTrac OneFile** - This database contains the following full text journals related to civil engineering:

Advanced Materials & Composites News
Concrete Products
Public Works
What's New in Building

- **ScienceDirect** – This database contains full text articles from over 700 science, technology, and medical journals. Some of the journals for civil engineering are:

Advances in Water Research
Applied Acoustics
Cement and Concrete Research
Journal of Constructional Steel Research
Structural Safety
Transportation Research Part C: Emerging Technologies

If the article you need is not full text, look for the “SFX” link on your citation page. “SFX” is a linking technology that will search other databases for a full text version, or create an Interlibrary Loan form for you. Interlibrary Loans usually take three to five days to deliver an article.

All of these electronic resources are available remotely.

To access services off campus, simply go to the BCC homepage, www.sunybroome.edu and look for the link into the Library under “About BCC”. Or, go directly to the BCC Library homepage www.sunybroome.edu/~library/. Once at the [BCC Library’s homepage](#), click “Articles” under “Search” and select the database of your choice. A dialog box will appear requesting the following:

Username = First part of your BCC email address
Last name, first initial and possibly a number. (ex. goldmanf3)
Password = [xxxxxx]
Use your password for the BCC Intranet (BCC Today).

Periodicals in Print

A complete listing of the magazines and journals received in print is available in the reference area. Magazines are kept in the Periodicals room, shelved alphabetically by title. Some journals of interests for Civil Engineering are:

ENR
Professional Surveyor
Roads & Bridges

Professional Associations *Organizations of experts, policy makers, and researchers.*

American Concrete Institute (ACI)

www.aci-int.org

American Society of Civil Engineers (ASCE)

www.asce.org

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

www.ashrae.org

Civil Engineering Research Foundation (CERF)

www.cerf.org/indexjs.htm

The Construction Innovation Forum (CIF)

www.cif.org

Institution of Civil Engineers (ICE)

www.ice.org.uk

Portland Cement Association (PCA)

www.portcement.org/index.asp

Selected Internet Sites

Advanced Buildings: Technologies and Practices www.advancedbuildings.org/

A building professional's guide to more than 90 environmentally-appropriate technologies and practices.

Building and Fire Research Laboratory: Fire on the Web www.fire.nist.gov

A collection of resources from the Building and Fire Research Laboratory's Fire Research Division at the National Institute of Standards and Technology (NIST). These Web pages provide links to fire related software, experimental fire data and mpeg/quick time movies of fire tests that can be downloaded and/or viewed with a Web browser.

Civil Engineering Virtual Library www.ce.gatech.edu/WWW-CE/

A comprehensive portal site hosted by Georgia Tech, with organized links for civil engineering, including conferences, universities, journals, organizations and government agencies.

Dictionary of Units www.ex.ac.uk/cimt/dictunit/dictunit.htm

This dictionary provides units of measurement, which include definitions, standards and conversion factors.

Edinburgh Engineering Virtual Library www.eevl.ac.uk

EVL provides quick and reliable access to the best engineering, mathematics, and computing information. Resources include e-journals, databases, training materials, professional societies, university and college departments, research projects, bibliographic databases, and software.

Energy Portal www.osti.gov

The Department of Energy's (DOE) Office of Scientific and Technical Information (OSTI) provides access to a wealth of energy, science, and technology research information from the Manhattan Project to the present.

Galaxy - Civil and Construction Engineering

<http://galaxy.einet.net/galaxy/Engineering-and-Technology/Civil-and-Construction-Engineering.html>

A directory site with subject categories and links to dozens of civil engineering web pages, including many university sites.

GrayLIT <http://graylit.osti.gov/>

The DOE's Office of Scientific and Technical Information developed this site as a portal for technical report literature generated through federally funded research and development projects.

ICivilEngineer.com www.icivilengineer.com/

A site for civil engineers, with links to current industry news, jobs and important projects. “Failure Watch” is an interesting link to news about engineering disasters.

INFOMINE <http://infomine.ucr.edu/>

A virtual library of Internet resources relevant to faculty, students, and researchers. Select “Physical Sciences, Engineering, CS, Math” from the subject menu to reach databases, electronic journals, electronic books, bulletin boards, mailing lists, online library card catalogs, articles, directories of researchers, and much more.

MIT OpenCourseWare – Civil and Environmental Engineering.

<http://ocw.mit.edu/OcwWeb/Civil-and-Environmental-Engineering/index.htm>

MIT’s goal is to make all its course lectures and materials available on line, free to anyone. Link into any civil engineering course, and check out the tools and resources available.

National Academies <http://www.nationalacademies.org/>

Access to current US government research, policies, statistics and thousands of free online books and reports from the National Academy of Sciences, National Academy of Engineering, Institute of Medicine and the National Research Council.

National Institute of Standards and Technology www.nist.gov

NIST’s mission is to develop and promote measurement, standards, and technology to enhance productivity, facilitate trade, and improve the quality of life. Their web site is a portal to a treasure trove of databases, research centers, reports and tools.

National Transportation Library <http://ntl.bts.gov/index.cfm>

An excellent resource for transportation research. Use the Digital Collection, Reference Tools or Ask-A-Librarian to access documents and reference tools online, submit questions, or link to organizations, agencies and research, find statistics by state, and link to the USDOT Library.

Science.Gov www.science.gov

This a gateway to authoritative selective science information provided by US government agencies. You can search by keywords, or select from a list of web sites organized by subject.

Sweet’s Building Products Information <http://sweets.construction.com/>

Provides access to specs, CAD Libraries, and manufacturers in building trade industries.

Ultimate Civil Engineering Directory www.tenlinks.com/engineering/civil/index.htm

Information for engineering professionals. Links to the “Top Ten” civil engineering web sites, selected web sites for bridges, tall buildings, building codes, and hydrology.