

Assessment of Library Collections

Florida International University

Civil and Environmental Engineering

College of Engineering and Computing

B.S., M.S., PhD Programs in Civil Engineering

B.S. and M.S. Programs in Environmental Engineering

M.S. in Environmental and Urban Systems (will close in 2010)

April 6, 2009

This report was prepared by Tony Schwartz, Associate Director for Collection Management, and Patricia Pereira-Pujol, Sciences Librarian.

Conference Proceedings

For the College of Engineering and Computing, FIU has access to the following online series that include full-text conference proceedings: Association for Computing Machinery Digital Library; IEEE/IET Electronic Library; and Springer *Lecture Notes in Computer Science*, which includes subseries *Lecture Notes in Artificial Intelligence* and *Lecture Notes in Bioinformatics*.

Journals

Library subscriptions by general count

FIU has 4,129 online journals in engineering and computer science, of which 259 are in civil engineering and 88 in environmental engineering ([Table 1](#)).

The numbers of print-journal subscriptions for Engineering and Computing is nearly zero as the library has shifted such subscriptions to online access.

The online-journal packages of importance to Engineering and Computing include Academic Press, ACM Digital Library, American Chemical Society, American Institute of Physics, American Physical Society, American Society of Civil Engineers, American Society of Mechanical Engineers, American Statistical Association, Annual Reviews Complete, Berkeley Electronic Press, Blackwell-Synergy, Cambridge STM, EDP Sciences, Elsevier ScienceDirect, IEEE/IET Electronic Library, Institute of Physics, JSTOR Arts and Sciences Collections I-IV, MD Consult Core Collection, Nature, Oxford, Royal Society of Chemistry, SAGE Premier, SpringerLink, and Wiley InterScience.

Citation-ranked literatures

Civil Engineering: FIU has 46 (73%) of the 63 titles, including 20 of the top 22 ([Table 2](#)). In 2003, FIU had 36 (57%); 10 titles have been added.

Environmental Engineering: FIU has 31 (82%) of the 38 titles, including the top 12 ([Table 3](#)). In 2005, FIU had 21 (55%); 10 titles have been added.

Main Databases for Civil and Environmental Engineering

- Compendex (Engineering Index) (includes conference proceedings)
- Engineering Research Database (contains ASCE Civil Engineering Abstracts and Environmental Engineering Abstracts; includes conference proceedings)
- Environmental Sciences and Pollution Management (includes conference proceedings)

Other Databases for Civil and Environmental Engineering

- ABI Inform
- AGRICOLA (includes conference proceedings)
- ASFA: Aquatic Sciences and Fisheries Abstracts (includes conference proceedings)
- Biological Abstracts (BIOSIS)
- Biological & Agricultural Index Plus (includes conference proceedings)
- Biological Sciences (includes conference proceedings)
- Biotechnology and Bioengineering Abstracts
- Chemical Abstracts (SciFinder Scholar) (includes conference proceedings)
- Computer and Information Systems Abstracts
- Conference Papers Index (conference proceedings, etc.)
- Current Index to Statistics (includes conference proceedings)
- Dissertations & Theses
- EIS: Digests of Environmental Impact Statements
- Electronics and Communications Abstracts (includes conference proceedings)
- Engineering Village
- GeoBase
- GeoRef
- GreenFILE
- History of Science, Technology, and Medicine
- INSPEC (includes conference proceedings)
- Materials Research Database with METADEX (includes conference proceedings)
- MathSciNet (includes conference proceedings)
- Mechanical Engineering Abstracts (includes conference proceedings)
- MEDLINE
- MicroPatent Materials Patents
- NTIS (National Technical Information Service)
- Oceanic Abstracts
- PapersFirst (conference proceedings, etc.)
- Proceedings (conference proceedings, etc.)
- Plant Science
- PsycINFO
- Safety Science and Risk
- Science Citation Index

- Solid State and Superconductivity Abstracts (includes conference proceedings)
- SPORTDiscus
- TOXLINE

Online Series

- CRC Handbook of Chemistry & Physics
- CRC EngNetBase

Undergraduate-Level Databases: Academic OneFile, Applied Science and Technology Full Text (includes conference proceedings), Biology Digest, General Science Full Text (includes conference proceedings), and OmniFile Full Text Mega (includes conference proceedings).

Books

The book approval plan has a broad subject parameter to receive all titles on *contemporary social or public policy aspects of science, engineering, and technology*, and all engineering handbooks.

For the PhD and the management programs of the College of Engineering and Computing the library receives through the approval plan advanced academic-level books with notification slips for professional-level books. Such programs include mechanical engineering, general technology, biomedical engineering, civil engineering, electrical engineering, electronics, and nuclear engineering.

The library relies on notification slips for direct orders for the following (non-PhD) programs: hydraulic engineering, environmental technology, highway engineering, railroad engineering, bridge engineering, motor vehicles, building construction, aeronautics, mining engineering, and chemical technology.

Of the library's approximately 60,000 NetLibrary e-books, eight are on *civil engineering*; 28 on *environmental engineering*; 438 on *engineering* generally; and 322 on *computer science* generally.

Both campus libraries have expansive budgets for faculty orders of library materials.

Faculty-Library Relations

The College of Engineering and Computing has a Library Committee with 13 members: eight faculty, two associate library directors, the engineering librarian, and the head of access services. It meets at least once a semester, more often when college-wide oversight would be useful for certain projects. For example, the Committee met often in 2008 for a journal review of the PhD program in Material Science, a journal review for Computer Science, and to compile supporting documents for the library's acquisition of the IEEE Electronic Library. In 2009 the Committee completed the review of all other print journals, converting some to online and canceling other titles that were deemed non-essential.

Engineering Library Services at the Engineering Center provides access to many dictionaries, encyclopedias, handbooks and other reference materials relevant to Civil and Environmental Engineering, including: current R. S. Means cost data series (in print with planned conversion to online); 2007 *Annual Book of ASTM Standards*; *ASHRAE Handbook* (CD) and *ASHRAE GreenGuide*; *Standard Handbook for Civil Engineers*; *Civil Engineering Handbook* (also available online through EngNetBase); *Dictionary of Environmental and Civil Engineering*; *Handbook of Civil Engineering Calculations*; *Handbook of Environmental Engineering Calculations*; *Hazardous Chemicals Desk Reference*; and *Environmental Engineers' Handbook*.

Table 1: FIU Online-journal Counts for Engineering and Applied Sciences

- Applied Mathematics (60)
- Applied Physics (88)
- Chemical & Materials Engineering
 - Chemical Engineering (299)
 - Materials Science (130)
- Civil & Environmental Engineering
 - Civil Engineering (259)
 - Environmental Engineering (88)
 - Ocean Engineering (4)
 - Operations Research (58)
 - Transportation Engineering (68)
- Computer Science (747)
- Electrical & Computer Engineering
 - Electrical Engineering (693)
 - Information Technology (61)
 - Telecommunications (255)
- Engineering - General (167)
- Mechanical Engineering
 - Aeronautics Engineering & Astronautics (99)
 - Automotive Engineering (60)
 - Bioengineering (81)
 - Hydraulic Engineering (15)
 - Industrial & Management Engineering (279)
 - Mechanical Engineering - General (193)
 - Metallurgy & Mineralogy (120)
 - Mining Engineering (62)
 - Nuclear Engineering (34)
- Technology - General (209)

Table 2: Citation-ranked Literature of Civil Engineering

FIU holdings against the citation-ranked journal literature of ENGINEERING, CIVIL			
April 2009			
TITLE	IMPACT FACTOR	FIU (blank = yes)	Citation Ranking of Titles Missing in FIU Collection
JOURNAL OF HYDROLOGY	1.301		
JOURNAL AMERICAN WATER WORKS ASSOCIATION	0.789		
JOURNAL OF STRUCTURAL ENGINEERING-ASCE	0.732		
COLD REGIONS SCIENCE AND TECHNOLOGY	0.731	NO	Ranked 4 of 63 in Engineering, Civil, 8 of 38 in Engineering, Environmental, and 65 of 117 Geosciences, Multidisciplinary
IEEE JOURNAL OF OCEANIC ENGINEERING	0.727		
JOURNAL OF HYDRAULIC ENGINEERING-ASCE	0.690		
JOURNAL OF ENVIRONMENTAL ENGINEERING-ASCE	0.681		
COASTAL ENGINEERING	0.660		
JOURNAL OF COMPUTING IN CIVIL ENGINEERING	0.627		
TRANSPORTATION RESEARCH PART B-METHODOLOGICAL	0.627		
JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT-ASCE	0.619		
STRUCTURAL SAFETY	0.606		
FIRE SAFETY JOURNAL	0.548		
JOURNAL OF WATERWAY PORT COASTAL AND OCEAN ENGINEERING-ASCE	0.519		
JOURNAL OF HAZARDOUS MATERIALS	0.497		
BUILDING AND ENVIRONMENT	0.492		
JOURNAL OF HYDRAULIC RESEARCH	0.458		
ACI STRUCTURAL JOURNAL	0.435		
MATERIALS AND STRUCTURES	0.432	NO	Ranked 19 of 63 in Engineering, Civil, 112 of 170 in Material Sciences, Multidisciplinary, and 10 of 27 of Construction & Building Technology
THIN-WALLED STRUCTURES	0.429		
COMPUTERS & STRUCTURES	0.418		
ENGINEERING STRUCTURES	0.415		

STOCHASTIC ENVIRONMENTAL RESEARCH AND RISK ASSESSMENT	0.412	NO	Ranked 23 of 63 in Engineering, Civil, 35 of 50 in Water Resources, 23 of 38 in Engineering, Environmental, 101 of 129 in Environmental Sciences, and 44 of 70 in Statistics & Probability
TRANSPORTATION	0.410		
PROCEEDINGS OF THE INSTITUTION OF CIVIL ENGINEERS-WATER MARITIME AND ENERGY	0.405	NO	Ranked 25 of 63 in Engineering, Civil, 36 of 50 in Water Resources, 6 of 14 in Engineering, Ocean, and 32 of 66 in Energy & Fuels
JOURNAL OF CONSTRUCTIONAL STEEL RESEARCH	0.388		
JOURNAL OF WIND ENGINEERING AND INDUSTRIAL AERODYNAMICS	0.358		
WATER INTERNATIONAL	0.358	NO	Ranked 27 of 63 in Engineering, Civil and 39 of 50 in Water Resources
ENERGY AND BUILDINGS	0.357		
JOURNAL OF IRRIGATION AND DRAINAGE ENGINEERING-ASCE	0.349		
JOURNAL OF MATERIALS IN CIVIL ENGINEERING	0.348		
TRANSPORTATION RESEARCH PART E-LOGISTICS AND TRANSPORTATION REVIEW	0.333		
JOURNAL OF SURVEYING ENGINEERING-ASCE	0.320		
JOURNAL OF COLD REGIONS ENGINEERING	0.310		
OCEAN ENGINEERING	0.307		
JOURNAL OF AEROSPACE ENGINEERING	0.263		
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART F-JOURNAL OF RAIL AND RAPID TRANSIT	0.262	NO	Ranked 37 of 63 in Engineering, Civil, 7 of 17 in Transportation Science & Technology, and 73 of 102 in Engineering, Mechanical
JOURNAL OF CONSTRUCTION ENGINEERING AND MANAGEMENT-ASCE	0.254		
GEFAHRSTOFFE REINHALTUNG DER LUFT	0.250		
JOURNAL OF SHIP RESEARCH	0.250	NO	Ranked 39 of 63 in Engineering, Civil and 1 of 3 in Engineering, Marine
CANADIAN JOURNAL OF CIVIL ENGINEERING	0.247	NO	Ranked 41 of 63 in Engineering, Civil

JOURNAL OF ENERGY ENGINEERING-ASCE	0.235		
WATER RESOURCES MANAGEMENT	0.226		
JOURNAL OF TRANSPORTATION ENGINEERING-ASCE	0.222		
STRUCTURAL DESIGN OF TALL BUILDINGS	0.211		
CHINA OCEAN ENGINEERING	0.206	NO	Ranked 46 of 63 in Engineering, Civil, 44 of 50 in Water Resources, 80 of 102 in Engineering, Mechanical, and 10 of 14 in Engineering, Ocean
ENGINEERING JOURNAL-AMERICAN INSTITUTE OF STEEL CONSTRUCTION INC	0.185		
PROCEEDINGS OF THE INSTITUTION OF CIVIL ENGINEERS-STRUCTURES AND BUILDINGS	0.179	NO	Ranked 48 of 63 in Engineering, Civil and 22 of 27 in Construction & Building Technology
STRUCTURAL ENGINEERING AND MECHANICS	0.162	NO	Ranked 49 of 63 in Engineering, Civil and 85 of 102 in Engineering, Mechanical
JOURNAL OF MANAGEMENT IN ENGINEERING	0.144		
TUNNELLING AND UNDERGROUND SPACE TECHNOLOGY	0.124		
ITE JOURNAL-INSTITUTE OF TRANSPORTATION ENGINEERS	0.117		
JOURNAL OF WATER SUPPLY RESEARCH AND TECHNOLOGY-AQUA	0.115	NO	Ranked 53 of 63 in Engineering, Civil and 46 of 50 in Water Resources
CIVIL ENGINEERING AND ENVIRONMENTAL SYSTEMS	0.094	NO	Ranked 54 of 63 in Engineering, Civil
INGENIERIA HIDRAULICA EN MEXICO	0.093	NO	Ranked 55 of 63 in Engineering, Civil and 47 of 50 in Water Resources
JOURNAL OF URBAN PLANNING AND DEVELOPMENT-ASCE	0.080		
CIVIL ENGINEERING	0.059		
JOURNAL OF ADVANCED TRANSPORTATION	0.053	aggregator	
TRANSPORTATION RESEARCH RECORD	0.038		
PROCEEDINGS OF THE INSTITUTION OF CIVIL ENGINEERS-CIVIL ENGINEERING	0.036	NO	Ranked 60 of 63 in Engineering, Civil

PROCEEDINGS OF THE INSTITUTION OF CIVIL ENGINEERS- MUNICIPAL ENGINEER	0.031	NO	Ranked 61 of 63 in Engineering, Civil
NAVAL ARCHITECT	0.015	NO	Ranked 62 of 63 in Engineering, Civil and 3 of 3 in Engineering, Marine
PROCEEDINGS OF THE INSTITUTION OF CIVIL ENGINEERS- TRANSPORT	0.000		
		0.73015873	
FIU has 46 (73%) of the 63 titles			

Table 3: Citation-ranked Literature of Environmental Engineering

FIU holdings against the citation-ranked literature of ENGINEERING, ENVIRONMENTAL			
April 2009			
Citation-Ranked Titles	Impact Factor	FIU	Citation Ranking of Titles Missing in FIU Collection
APPLIED CATALYSIS B-ENVIRONMENTAL	3.643		
ENVIRONMENTAL SCIENCE & TECHNOLOGY	2.707		
AMBIO	1.449		
INDOOR AIR-INTERNATIONAL JOURNAL OF INDOOR AIR QUALITY AND CLIMATE	1.385		
WATER RESEARCH	1.376		
ANNUAL REVIEW OF ENERGY AND THE ENVIRONMENT	1.244		
JOURNAL OF THE AIR & WASTE MANAGEMENT ASSOCIATION	1.080		
COLD REGIONS SCIENCE AND TECHNOLOGY	0.731		
ENVIRONMENTAL ENGINEERING SCIENCE	0.718		
JOURNAL OF ENVIRONMENTAL ENGINEERING-ASCE	0.681		
ADVANCES IN ENVIRONMENTAL RESEARCH	0.647	NO	Ranked 11 of 38 in ENGINEERING, ENVIRONMENTAL, ranked 50 of 123 in ENGINEERING, CHEMICAL
WATER ENVIRONMENT RESEARCH	0.643		
WASTE MANAGEMENT	0.642		
JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION	0.620		
WATER SCIENCE AND TECHNOLOGY	0.605		
ECOLOGICAL ENGINEERING	0.601		
ENVIRONMENTAL MODELLING & SOFTWARE	0.556		
ENVIRONMENTAL GEOCHEMISTRY AND HEALTH	0.520	NO	Ranked 72 of 88 in PUBLIC, ENVIRONMENTAL & OCCUPATIONAL HEALTH, 18 of 38 in ENGINEERING, ENVIRONMENTAL, 93 of 129 in ENVIRONMENTAL SCIENCES, and 29 of 50 in WATER RESOURCES
JOURNAL OF HAZARDOUS MATERIALS	0.497		
BUILDING AND ENVIRONMENT	0.492		
ENVIRONMENTAL PROGRESS	0.438		
RESOURCES CONSERVATION AND RECYCLING	0.430		

STOCHASTIC ENVIRONMENTAL RESEARCH AND RISK ASSESSMENT	0.412	NO	Ranked 23 of 38 in ENGINEERING, ENVIRONMENTAL, 23 of 63 in ENGINEERING, CIVIL, 35 of 50 in WATER RESOURCES, 101 of 129 in ENVIRONMENTAL SCIENCES, and 44 of 70 in STATISTICS & PROBABILITY
JOURNAL OF ENVIRONMENTAL SCIENCE AND HEALTH PART A-TOXIC/HAZARDOUS SUBSTANCES ENGINEERING	0.376	NO	Ranked 24 of 38 in ENGINEERING, ENVIRONMENTAL and 107 of 129 in ENVIRONMENTAL SCIENCES
JOURNAL OF ENVIRONMENTAL POLYMER DEGRADATION	0.375	NO	Ranked 25 of 38 in ENGINEERING, ENVIRONMENTAL and 55 of 73 in POLYMER SCIENCE
INDOOR AND BUILT ENVIRONMENT	0.355		
WASTE MANAGEMENT & RESEARCH	0.342		
JOURNAL OF COLD REGIONS ENGINEERING	0.310		
PROCESS SAFETY AND ENVIRONMENTAL PROTECTION	0.259	NO	Ranked 29 of 38 in ENGINEERING, ENVIRONMENTAL and 87 of 123 in ENGINEERING, CHEMICAL
ENVIRONMENTAL & ENGINEERING GEOSCIENCE	0.250		
GEFAHRSTOFFE REINHALTUNG DER LUFT	0.250		
SPILL SCIENCE & TECHNOLOGY BULLETIN	0.193		
JOURNAL OF POLYMERS AND THE ENVIRONMENT	0.158	NO	Ranked 33 of 38 in ENGINEERING, ENVIRONMENTAL and 70 of 73 in POLYMER SCIENCE
JOURNAL OF TERRAMECHANICS	0.148		
JOURNAL OF THE IEST	0.125		
POLLUTION ENGINEERING	0.043	aggregator	
HAZARDOUS WASTE CONSULTANT	0.008	aggregator	
WATER-ENGINEERING & MANAGEMENT	0.008		
FIU has 31 (82%) of the 38 titles			