

Assessment of Library Collections

Florida International University

Biomedical Engineering

BS, MS, PhD Programs

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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 81 online journals in bioengineering and an additional 4,048 in other Engineering and Computer Science fields (see [Table 1](#) below).

The numbers of print-journal subscriptions for Engineering and Computing is small (about 30) and declining; the library is shifting print journals to online access as feasible. The biomedical engineering program has no print journals.

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

In the citation-ranked journal literature of Biomedical Engineering FIU has 21 (54%) of the 39 titles (see [Table 2](#) below)—including 14 of the top-ranked 18.

Main Databases for Biomedical Engineering

- *Biotechnology and Bioengineering Abstracts*
- *ANTE: Abstracts in New Technologies and Engineering*
- *IEEE/IET Electronic Library*

Other Databases for Biomedical Engineering

- *ABI Inform*
- *AGRICOLA (includes conference proceedings)*
- *AIDS and Cancer Research Abstracts*
- *ASFA: Aquatic Sciences and Fisheries Abstracts (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)*
- *Chemical Abstracts (SciFinder Scholar) (includes conference proceedings)*
- *Compendex (Engineering Index) (includes conference proceedings)*
- *Computer and Information Systems Abstracts (includes conference proceedings)*
- *Conference Papers Index (conference proceedings, etc.)*
- *Current Index to Statistics (includes conference proceedings)*
- *Dissertations & Theses*
- *Electronics and Communications Abstracts (includes conference proceedings)*
- *Engineering Research Database (includes conference proceedings)*
- *Engineering Village*
- *Environmental Sciences and Pollution Management (includes conference proceedings)*
- *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.)
- *Plant Science*
- *PsycINFO*
- *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 approval plan covers advanced academic-level books. For professional-level books the library receives notification slips for title selections. Such programs include general technology, biomedical engineering, civil engineering, mechanical 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 collection of 59,984 NetLibrary e-books, 11 are by subject heading in biomedical engineering; 411 are in engineering, and 304 are in computer science.

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.

The Engineering Library Services at the Engineering Center houses most of the reference materials in engineering. For example, these six are specifically for biomedical engineering: *Biomedical Engineering Handbook* (also available online through EngNetBase), *Handbook of Biomedical Instrumentation*, *Standard Handbook of Biomedical Engineering and Design*, *Encyclopedia of Biomaterials and Biomedical Engineering*, *Handbook of Materials for Medical Devices*, and *Multilingual Glossary of Biotechnological Terms*.

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: FIU Holdings of the Citation-ranked Literature of Biomedical Engineering

FIU has 21 of the 39 (54%) titles, including 14 of the top-ranked 18.

Citation-Ranked Journals in ENGINEERING, BIOMEDICAL	Impact Factor	FIU Holding	Ranking of Titles Not in FIU Collections
IEEE TRANSACTIONS ON MEDICAL IMAGING	3.142		
BIOMATERIALS	2.489		
JOURNAL OF BIOMEDICAL MATERIALS RESEARCH	2.105		
PHYSICS IN MEDICINE AND BIOLOGY	2.040	NO	Ranked 4 of 39 in Engineering, Biomedical, Ranked 23 of 81 in Radiology, Nuclear Medicine & Medical Imaging
JOURNAL OF BIOMECHANICS	1.856		
IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING	1.525		
ARTIFICIAL INTELLIGENCE IN MEDICINE	1.474		
JOURNAL OF BIOMECHANICAL ENGINEERING-TRANSACTIONS OF THE ASME	1.462		
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART H- JOURNAL OF ENGINEERING IN MEDICINE	1.434	NO	Ranked 9 of 39 in Engineering, Biomedical, Ranked 5 of 102 in Engineering, Mechanical
ANNALS OF BIOMEDICAL ENGINEERING	1.316		
ULTRASONIC IMAGING	1.312		
CLINICAL BIOMECHANICS	1.257		
JOURNAL OF BIOMATERIALS SCIENCE- POLYMER EDITION	1.234	NO	Ranked 13 of 39 in Engineering, Biomedical, Ranked 4 of 11 Material Science, Biomaterials, ranked 13 of 73 in Polymer Science
ASAIO JOURNAL	1.232	NO	Ranked 14 of 39 in Engineering, Biomedical, Ranked 11 of 16 in Transplantation
CLINICAL ORAL IMPLANTS RESEARCH	1.205		
PACE-PACING AND CLINICAL ELECTROPHYSIOLOGY	1.197		
MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING	1.172		
JOURNAL OF MATERIALS SCIENCE- MATERIALS IN MEDICINE	1.144		

INTERNATIONAL JOURNAL OF ARTIFICIAL ORGANS	1.072	NO	Ranked 19 of 39 in Engineering, Biomedical, Ranked 13 of 16 in Transplantation
BIORHEOLOGY	1.016		
PHYSIOLOGICAL MEASUREMENT	0.989	NO	Ranked 21 of 39 in Engineering, Biomedical, Ranked 52 of 63 in Biophysics, Ranked 59 of 74 in Physiology
ARTIFICIAL ORGANS	0.919		
COMPUTERS IN BIOLOGY AND MEDICINE	0.784		
CLINICAL ELECTROENCEPHALOGRAPHY	0.779	NO	Ranked 24 of 39 in Engineering, Biomedical, Ranked 95 of 136 in Clinical Neurology
ANNUAL REVIEW OF BIOMEDICAL ENGINEERING	0.714		
JOURNAL OF BIOMATERIALS APPLICATIONS	0.697		
JOURNAL OF CLINICAL LASER MEDICINE & SURGERY	0.639	NO	Ranked 27 of 39 in Engineering, Biomedical, Ranked 88 of 139 in Surgery
ARTIFICIAL CELLS BLOOD SUBSTITUTES AND IMMOBILIZATION BIOTECHNOLOGY	0.636	NO	Ranked 28 of 39 in Engineering, Biomedical, Ranked 7 of 11 in Material Science, Biomaterials
IEEE ENGINEERING IN MEDICINE AND BIOLOGY MAGAZINE	0.614		
LASERS IN MEDICAL SCIENCE	0.608	NO	Ranked 30 of 39 in Engineering, Biomedical, Ranked 93 of 139 in Surgery
MEDICAL ENGINEERING & PHYSICS	0.604		
COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE	0.559		
BIO-MEDICAL MATERIALS AND ENGINEERING	0.537	NO	Ranked 33 of 39 in Engineering, Biomedical, Ranked 9 of 11 in Material Science, Biomaterials
PDA JOURNAL OF PHARMACEUTICAL SCIENCE AND TECHNOLOGY	0.534	NO	Ranked 34 of 39 in Engineering, Biomedical

JOURNAL OF MEDICAL ENGINEERING & TECHNOLOGY	0.527	NO	Ranked 35 of 39 in Engineering, Biomedical, Ranked 16 of 18 in Medical Informatics
BIOMEDIZINISCHE TECHNIK	0.431	NO	Ranked 36 of 39 in Engineering, Biomedical, Ranked 17 of 19 in Medical Informatics
DIALYSIS & TRANSPLANTATION	0.383	NO	Ranked 37 of 39 in Engineering, Biomedical, Ranked 15 of 16 in Transplantation, Ranked 40 of 44 in Urology & Nephrology
CRITICAL REVIEWS IN BIOMEDICAL ENGINEERING	0.292	NO	Ranked 38 of 39 in Engineering, Biomedical
ISOKINETICS AND EXERCISE SCIENCE	0.200	NO	Ranked 39 of 39 in Engineering, Biomedical, Ranked 39 of 42 in Orthopedics, Ranked 59 of 68 in Sports Sciences