Clemson University Libraries

College of Engineering, Computing, and Applied Sciences (CECAS)
Information Access Policy

Engineering Librarian:        Written by J. Comfort 2/2017
Jan Comfort

STEM Librarian (Graduate Programs):
Nashieli Marcano

Introduction
This Information Access Policy is a statement of goals for building the library’s collection in the general subject areas of Engineering, Computing, and Applied Sciences. It should serve as a guide for library personnel in making collection development decisions, and should inform users, in general, how library materials are selected. More detailed policies for each individual discipline are being developed.

Purpose of the Collection
The Collection supports the teaching, research, and information needs at the undergraduate and graduate level in the College of Engineering, Computing, and Applied Sciences (CECAS).

See Appendix 1 for a complete listing of CECAS Degree Programs.

Primary Users:
- Undergraduates pursuing the BA or BS degree (Jan Comfort)
- Students pursuing the combined BS/MS degree (Jan Comfort and Nashieli Marcano)
- Graduate students pursuing the MEngr, MS, or PhD degree (Nashieli Marcano)
- Graduate students pursuing the Advanced Power Systems Engineering Certificate, the Engineering Education Certificate, or the Technology Entrepreneurship Certificate (Nashieli Marcano)
- CECAS faculty (Jan Comfort)

Secondary Users:
- Students and faculty of departments whose subjects overlap with the interests of CECAS
- Faculty and staff at Clemson University Centers and Institutes (See Appendix 2 for details)
- Clemson Computing and Information Technology staff
- Researchers and Engineers employed by South Carolina companies
- Students at other colleges and universities across the state
- Member of the community at large (as a state-supported school, we function as a public library for all South Carolina residents.)

NOTE: R.M. Cooper Library is a Patent and Trademark Resource Center (PTRC), participating in a program administered by the United States Patent and Trademark Office (USPTO). We offer patent and trademark resources and services free of charge, and we are committed to promoting these services.
General Collection Guidelines

The bulk of the collection is housed in Cooper Library, with the exception of some older books and print journal volumes and some more recent journal volumes duplicated in a stable online format (such as ScienceDirect) which are available in Offsite Storage.

Scope of the Collection - Materials will be selected in electronic formats when available

- Reference Books, including handbooks, dictionaries, and encyclopedias. Electronic versions of important reference works are included in Knovel.
- Monographs – print and electronic – will be selected to support the research and coursework of undergraduate and graduate students as well as the research and teaching needs of the faculty. Books will be chosen very selectively, primarily in response to requests from faculty and students.
- Textbooks used in Clemson classes will not be purchased in print, unless they are deemed useful for other reasons. Nor will Clemson textbooks be supplied via Interlibrary Loan. However, eBook versions of textbooks may be purchased.
- Industry standards play an important role in the research process. Therefore, we will maintain a subscription to ASTM standards, and bibliographic access to additional standards through ANSI. Standards will be purchased on an as-needed basis, through InterLibrary Loan.
- Journals /serials / periodicals will be selected for two primary purposes: to support undergraduate research and coursework, and to support graduate and faculty research. No effort will be made to collect trade publications and general interest titles, although these titles might be included in Aggregators (databases such as Academic Search Complete, Lexis / Nexis.) See Appendix 5 for a list of titles of journals important to ECE.
- Several journal packages are vital to this collection, including Elsevier (ScienceDirect), Springer, and Wiley-Blackwell.

Languages
Unless otherwise requested by a faculty member, all material will be written in English.

Date of Publication
Most materials purchased will have been published within the preceding two years. Older works will be purchased at the request of a faculty member, to replace heavily used volumes that have been lost, or for which demand has been shown through Interlibrary Loan borrowing.

Geographical Guidelines
I recognize the global nature of research, and the importance of representing a wide variety of points of view and international perspectives. However, due to serious budget constraints, materials originating/published in the United States will be the primary focus.

Format
Wherever possible, reference works, indexes, and journals will be purchased in electronic formats and made available from the Libraries' Web site for access by students and faculty, on and off campus. Print materials will also be selected, when electronic is inappropriate. Materials in CD-ROM, microfilm/microfiche will be purchased only by request, and/or when it is the only format available. Materials on DVD will be purchased when requested by a faculty member.
LibGuides
A Library Guide for each major in Engineering is linked on the Library’s Research and Course Guides page http://clemson.libguides.com/ as well as the Research page http://libraries.clemson.edu/research/
Additional LibGuides are available for Patents and Trademarks, and for individual key topics and class sessions as appropriate

Access to Information Not Available at Clemson

Interlibrary Loan
The primary means of access to materials not owned or accessible by the library is Interlibrary Loan, a service available free to Clemson University students, faculty, and staff.

PASCAL Delivers
Books available from other research institutions in South Carolina can be supplied by Pascal Delivers, also free to Clemson University students, faculty and staff.

Selection, Evaluation, and Assessment Tools

- Faculty requests and recommendations
- Faculty requests forwarded from ILL as books currently in print and good candidates for the collection
- Approval notifications from YBP identified as titles that fit the needs of the library’s collection
- Vendor databases (such as YBP GOBI, and ScienceDirect)
- Review sources, e.g. Choice, Books for College Libraries, and Magazines for Libraries
- Indexes, bibliographies, and series lists
- Review of the teaching and research interests of the Electrical and Computer Engineering faculty
- Interlibrary loan and circulation activity
- Publishers’ catalogs
- Usage statistics for databases, e-journals and e-books

Weeding Guidelines
Books will be weeded from the collection if they are in poor condition and cannot be repaired. A replacement copy will be purchased, if available, for important titles. Duplicate copies of books that have not circulated, and material that is clearly outdated and not of historical interest will also be considered for weeding.
LIBRARY OF CONGRESS CLASSIFICATION CALL NUMBERS / COLLECTING LEVELS

CLASS Q – SCIENCE

Subclass QC
QC221-246  Acoustics. very selective (Nashieli Marcano)
QC310.15-319  Thermodynamics
QC350-467  Optics. Light. Spectroscopy
QC501-766  Electricity and magnetism
QC501-(721)  Electricity
QC750-766  Magnetism
QC770-798  Nuclear and particle physics. Atomic energy. Radioactivity

Subclass QE – QH - QP
QE1-996.5  Geology undergraduate/graduate/research
QE1-350.62  General, Including geographical divisions
QE351-399.2  Mineralogy
QE420-499  Petrology
QE500-639.5  Dynamic and structural geology
QE521-545  Volcanoes and earthquakes
QE601-613.5  Structural geology
QE640-699  Stratigraphy
QH426-470  Genetics very selective (Nashieli Marcano)
QH573-671  Cytology research
QP1-(981)  Physiology undergraduate

CLASS R - MEDICINE

Subclass R - RS
R855-855.5  Medical technology undergraduate/graduate/research
R856-857  Biomedical engineering. Electronics. Instrumentation undergraduate/graduate/research
R858-864  Computer applications to medicine. Medical informatics. undergraduate/graduate/research
RC633-647.5  Diseases of the blood and blood-forming organs graduate/research
RC648-665  Diseases of the endocrine glands. Clinical endocrinology graduate/research
RC666-701  Diseases of the circulatory (Cardiovascular) system graduate/research
RC705-779  Diseases of the respiratory system graduate/research
RC799-869  Diseases of the digestive system. Gastroenterology graduate/research
RC870-923  Diseases of the genitourinary system. Urology graduate/research
RC924-924.5  Diseases of the connective tissues graduate/research
RC925-935  Diseases of the musculoskeletal system graduate/research
RD92-97.8  Emergency surgery. Wounds and injuries undergraduate/graduate/research
RD120.6-129.8  Transplantation of organs, tissues, etc. undergraduate/graduate/research
RD130  Prosthesis. Artificial organs undergraduate/graduate/research
RD520-599.5  Surgery by region, system, or organ undergraduate/graduate/research
RD651-678  Neoplasms. Tumors. Oncology undergraduate/graduate/research
RD680-688  Diseases of the locomotor system (Surgical treatment) undergraduate/graduate/research
RD701-811  Orthopedic surgery undergraduate/graduate/research
RK641-667  Prosthetic dentistry.  Prosthodontics  graduate/research
RM147-180  Administration of drugs and other therapeutic agents  graduate/research
RS192-199  Pharmaceutical technology  graduate/research
RS200-201  Pharmaceutical dosage forms  graduate/research

CLASS T - TECHNOLOGY

Subclass T
T1-995  Technology (General)  popular
T55.4-60.8  Industrial engineering.  Management engineering  undergraduate/graduate/research
T57-57.97  Applied mathematics.  Quantitative methods
T57.6-57.97  Operations research.  Systems analysis
T58.4  Managerial control systems
T58.5-58.64  Information technology
T58.6-58.62  Management information systems
T58.7-58.8  Production capacity.  Manufacturing capacity
T59-59.2  Standardization
T59.5  Automation
T59.7-59.77  Human engineering in industry.  Man-machine systems
T60-60.8  Work measurement.  Methods engineering
T173.2-174.5  Technological change  popular/undergraduate
T175-178  Industrial research.  Research and development  selective
T201-342  Patents.  Trademarks  popular/undergraduate/graduate
T351-385  Mechanical drawing.  Engineering graphics  undergraduate

Subclass TA
TA1-2040  Engineering (General), Civil engineering (General)  undergraduate/graduate/research
TA164  Bioengineering
TA165  Engineering instruments, Industrial instrumentation
TA166-167  Human engineering
TA168  Systems engineering
TA170-171  Environmental engineering
TA174  Engineering design
TA177.4-185  Engineering economy
TA190-194  Management of engineering works
TA197-198  Engineering meteorology
TA213-215  Engineering machinery, tools, and implements
TA329-348  Engineering mathematics.  Engineering analysis
TA349-359  Mechanics of engineering.  Applied mechanics
TA365-367  Acoustics in engineering.  Acoustical engineering
TA401-492  Materials of engineering and construction.  Mechanics of materials
TA495  Disasters and engineering
TA501-625  Surveying
TA630-695  Structural engineering (General)
TA715-787  Earthwork.  Foundations
Subclass TC - TD
TC1-978  Hydraulic engineering  undergraduate/graduate/research
TC1501-1800  Ocean engineering  selective
TD1-1066  Environmental technology. Sanitary engineering undergraduate/graduate/research
TD159-168  Municipal engineering
TD169-171.8  Environmental protection
TD172-193.5  Environmental pollution
TD194-195  Environmental effects of industries and plants
TD201-500  Water supply for domestic and industrial purposes
TD419-428  Water pollution
TD429.5-480.7  Water purification. Water treatment and conditioning. Saline water conversion
TD481-493  Water distribution systems
TD511-780  Sewage collection and disposal systems. Sewerage
TD783-812.5  Municipal refuse. Solid wastes
TD813-870  Street cleaning. Litter and its removal
TD878-894  Special types of environment, Including soil pollution, air pollution, noise pollution
TD895-899  Industrial and factory sanitation
TD896-899  Industrial and factory wastes
TD920-934  Rural and farm sanitary engineering
TD940-949  Low temperature sanitary engineering
TD1020-1066  Hazardous substances and their disposal

Subclass TE – TF - TH
TE1-450  Highway engineering. Roads and pavements undergraduate/graduate/research
TE175-176.5  Highway design. Interchanges and intersections
TE177-178.8  Roadside development. Landscaping
TE200-205  Materials for roadmaking
TE206-209.5  Location engineering
TE210-228.3  Construction details, including foundations, maintenance, equipment
TE250-278.8  Pavements and paved roads
TE279  Streets
TE279.5-298  Pedestrian facilities
TE280-295  Sidewalks. Footpaths. Flagging
TE298  Curbs. Curbstones
TF1-1620  Railroad engineering and operation  selective
TG1-470  Bridge engineering undergraduate/graduate/research
TH1-9745  Building construction (Kathy Edwards)
Subclass TJ
TJ1-1570 Mechanical engineering and machinery undergraduate/graduate/research
TJ163.13-163.25 Power resources
TJ163.26-163.5 Energy conservation
TJ170-179 Mechanics applied to machinery. Dynamics
TJ181-210 Mechanical movements
TJ212-225 Control engineering systems. Automatic machinery (General)
TJ227-240 Machine design and drawing
TJ241-254.7 Machine construction (General)
TJ255-265 Heat engines
TJ266-267.5 Turbines. Turbomachines (General)
TJ751-805 Misc. motors and engines, incl. gas, gasoline, and diesel
TJ807-830 Renewable energy sources
TJ1480-1496 Agricultural machinery. Farm machinery (Megan Sheffield)

Subclass TK
TK1-9900 Electrical engineering. undergraduate/graduate/research
TK301-399 Electric meters
TK452-454.4 Electric apparatus and materials. Electric circuits. Electric networks
TK1001-1841 Production of electric energy or power. Powerplants. Central stations
TK2000-2891 Dynamoelectric machinery and auxiliaries, Including generators, motors, transformers
TK2896-2985 Production of electricity by direct energy conversion
TK3001-3521 Distribution or transmission of electric power
TK4001-4102 Applications of electric power
TK4125-4399 Electric lighting
TK4601-4661 Electric heating
TK5101-6720 Telecommunication, including telegraphy, telephone, radio, radar, tv
TK7800-8360 Electronics
TK7885-7895 Computer engineering. Computer hardware
TK8300-8360 Photoelectronic devices (General)
TK9001-9401 Nuclear engineering. Atomic power
TK9900-9971 Electricity for amateurs. Amateur constructors' manuals selective

Subclass TL
TL1-484 Motor vehicles. (Nashieli Marcano, graduate/research)
TL500-4050 Aeronautics. Aeronautical engineering selective

Subclass TN - TX
TN1-997 Mining engineering. Metallurgy undergraduate/graduate
TP1-1185 Chemical technology undergraduate/graduate/research
TR1-1050 Photography (Kathy Edwards)
TS1-2301 Manufactures popular/undergraduate
TS1300-1865 Textile industries undergraduate/graduate/research
TT1-999 Handicrafts. Arts and crafts (Kathy Edwards)
TX1-1110 Home economics (Megan Sheffield)
# Key Engineering Databases

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<th>ACM Digital Library</th>
<th>Materials Science &amp; Engineering Database</th>
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<tr>
<td>Agricultural &amp; Environmental Science Database</td>
<td>MathSciNet</td>
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<tr>
<td>Annual Reviews</td>
<td>MEDLINE with Full Text</td>
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<tr>
<td>arXiv.org ePrint Archive</td>
<td>National Technical Reports Library (Public NTRL)</td>
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<tr>
<td>ASABE Standards</td>
<td>Perry's Chemical Engineers' Handbook</td>
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<tr>
<td>ASCE Library</td>
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<td>ASME Digital Library</td>
<td>Polymer Library</td>
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<td>ASTM Standards &amp; Digital Library</td>
<td>PsycINFO</td>
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<td>BioMed Central</td>
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<td>BuildingGreen Suite</td>
<td>SAE Mobilus</td>
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<tr>
<td>Computer Source</td>
<td>Science Reference Center</td>
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<td>Computing Research Repository (CoRR)</td>
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<td>Conference Proceedings Citation Index</td>
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<td>Engineering Village</td>
<td>Smithsonian Physical Tables</td>
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<td>Faulkner’s Advisory on Computer and Communications Technology</td>
<td>SPIE Digital Library</td>
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<tr>
<td>General Science Full Text</td>
<td>Springer eReference Works</td>
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<td>GeoRef</td>
<td>SpringerMaterials</td>
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<tr>
<td>GreenFILE</td>
<td>Synthesis Digital Library of Engineering &amp; Computer Science</td>
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<tr>
<td>Guide to Computing Literature</td>
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<tr>
<td>IEEE Xplore</td>
<td>TAPPi Standards</td>
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<td>IET eBooks</td>
<td>TAPPi TIPs and UMs</td>
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<td>IET.TV</td>
<td>Technology Collection</td>
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<td>INSPEC</td>
<td>Textile Technology Index</td>
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<tr>
<td>Kirk-Othmer Encyclopedia of Chemical Technology</td>
<td>TRID</td>
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<tr>
<td>Knovel Critical Tables</td>
<td>Ullmann's Encyclopedia of Industrial Chemistry</td>
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<tr>
<td>Knovel Science and Technology Collection</td>
<td>Web of Science Core Collection</td>
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<tr>
<td>Machinery’s Handbook</td>
<td>Yaws' Handbook of Thermodynamic &amp; Physical Properties of Chemical Compounds</td>
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APPENDIX 1 - CECAS DEGREE PROGRAMS

Automotive Engineering MS, PhD

Bioengineering BS, BS/MS, MS, MEngr, PhD
  BS Biomaterials or Bioelectrical Concentration
  BS/MS Biological Sciences/Bioengineering or BS/MS Bioengineering/Bioengineering
  MEngr – Medical Device Recycling and Reprocessing Certificate (for all degree programs)

Environmental Engineering & Earth Science
  Biosystems Engineering BS, MS, PhD
  Environmental Engineering & Science BS, MS, PhD
  Environmental Health Physics - Environmental Engineering & Science MS
  Geology BA, BS
  Hydrogeology MS

Chemical and Biomolecular Engineering
  Chemical Engineering BS with one of 6 concentrations
    Applied Engineering, Mathematics, and Science
    Biomolecular Engineering and Science
    Business Management
    Energy Studies
    Environmental Engineering
    Polymeric Materials
  Chemical Engineering MS, PhD

Civil Engineering BS, MS, PhD
  Civil Engineering BS with one of 7 concentrations
    Water Resources
    Environmental
    Construction
    Geotechnical
  Civil Engineering MS, PhD with one of 6 concentrations
    Construction Engineering and Management
    Construction Materials
    Geotechnical Engineering
    Structural Engineering
    Transportation Systems
    Water Resources Engineering
School of Computing

- Computer Science BA, BS, BS/MS, MS, PhD
- Computer Information Systems BS
- Computer Science BS, MS, PhD
- Digital Production Arts MFA
- Human Centered Computing PhD

Electrical and Computer Engineering

- Electrical Engineering BS, BS/MS, MEng, MS, PhD
- Computer Engineering BS, BS/MS, MS, PhD
- Advanced Power Systems Engineering Certificate

Engineering & Science Education, PhD, Certificate

Industrial Engineering BS, BS/MS, MS, PhD

- Capital Projects Supply Chain - Industrial Engineering MEng

Materials Science and Engineering BS, MS, PhD

- Materials Science and Engineering BS
  - Inorganic Materials Concentration
  - Polymeric Materials Concentration
- Materials Science and Engineering MS, PhD
  - Metals/Ceramics Specialization
  - Polymers
  - Polymer & Fiber Science (once a degree, now a specialization)

Mechanical Engineering BS, MS, PhD

Interdisciplinary Undergraduate Certificates (most popular/relevant for CECAS)

- Six Sigma
- Sales
- Renewable Energy
- Public Health
- Leadership

Interdisciplinary Graduate Programs/Certificates

- Engineering Education Certificate
- Technology Entrepreneurship Certificate
- Photonics Science MS, PhD
Centers

- Advanced Engineering Fibers and Films
- Advanced Materials Center
- Animal Co-Products Research & Education
- Applied Electromagnetics
- Archbold Tropical Research and Education Center
- Automotive Research (CU-ICAR)
- Bioelectronics, Biosensors and Biochips (C3B)
- Center for Electronic and Digital Publishing (CEDP)
- Center for Improvement of Construction Management and Processes (CICMP)
- Center for Optical Materials Science and Engineering Technologies (COMSET)
- Center for Research and Collaborative Activities (CRCA)
- Clemson Light Imaging Facility
- Computer Communication Systems
- Conservation Communication Systems
- Electronic and Digital Publishing
- Eukaryotic Pathogens Innovation Center (EPIC)
- Flexible Packaging
- Historic Preservation, Graduate Center
- Image Processing and Artificial Intelligence Research
- Innovation in Mathematics and Science, Center of Excellence
- Multimedia Authoring and Teaching Research Facility
- National Brick Research Center
- Nuclear Environmental Engineering Sciences and Radioactive Waste Management
- Packaging Design and Graphics
- Risk Engineering and Analytics Center
- Semiconductor Device Reliability Research
- South Carolina COBRE Center of Biomaterials for Tissue Regeneration (SCBioCraft)

Institutes

- AP Summer Institute
- Biological Interfaces of Engineering (IBIOE)
- Brooks Institute for Motorsports
- Clemson Institute for Intelligent Materials, Systems and Environments
- Computational Ecology
- Global Road Safety and Security (CU-IGRSS)
- Human Factors Research Institute
- Inquiry in Motion
- Modeling and Simulation Applications
- Restoration Institute
- Sonoco Institute of Packaging Design and Graphics
- South Carolina's Coalition for Mathematics and Science
- South Carolina Institute for Energy Studies
- Wood Utilization + Design Institute