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, and will be published as they are ready.

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 MEng, 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 Information Access Policy for individual disciplines for lists of titles of journals important to that discipline.
- 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 be considered for weeding.
CLASS Q – SCIENCE

Subclass QA
QA 75-76.95 Calculating machines
QA75.5-76.95 Electronic Computers. Computer Science
QA76.75-76.765 Computer Software

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
<table>
<thead>
<tr>
<th>Code</th>
<th>Subclass and Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA501-625</td>
<td>Surveying</td>
</tr>
<tr>
<td>TA630-695</td>
<td>Structural engineering (General)</td>
</tr>
<tr>
<td>TA715-787</td>
<td>Earthwork. Foundations</td>
</tr>
<tr>
<td>TA800-820</td>
<td>Tunneling. Tunnels</td>
</tr>
<tr>
<td>TA1001-1280</td>
<td>Transportation engineering</td>
</tr>
<tr>
<td>TA1501-1820</td>
<td>Applied optics. Photonics</td>
</tr>
<tr>
<td>TA2001-2040</td>
<td>Plasma engineering. Applied plasma dynamics</td>
</tr>
</tbody>
</table>
| 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**

<table>
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<th>Code</th>
<th>Subclass and Description</th>
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</table>
| 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
TJ210.2-211.47 Mechanical devices and figures. Automata. Ingenious mechanisms. Robots (General)
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. Power plants. 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

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

This list includes databases and resources that are essential for accessing information in the field of engineering, covering a wide range of topics from databases to encyclopedias and reference works.
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
      Structural
      Transportation
      Materials
   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, MEngr, 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 MEngr

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
Appendix 2 CECAS Centers and Institutes

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 Center
- 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