A Primer in Science and Engineering Collection Development

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*University of California, Irvine*

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*Virginia Commonwealth University*

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*Cornell University*

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*Syracuse University*

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A Primer in Science and Engineering Collection Development

Julia Gelfand
Applied Sciences & Engineering Librarian, University of California, Irvine

Ibironke Lawal
Science & Engineering Collections Librarian, Virginia Commonwealth University

Jill Powell
Engineering Librarian, Cornell University

Anne Rauh
Collection Development and Analysis Librarian, Syracuse University Libraries
Academic Subject Background

Example - Wind power, Civil & Environmental Engineering

But Selectors may also cover:

- Applied & Engineering Physics
- Biomedical Engineering
- Chemical and Biomolecular Engineering
- Computer and Information Science
- Electrical engineering
- Earth and Atmospheric Sciences
- Materials Science
- Mechanical & Aerospace Engineering
- Operations Research and Information Engineering
- Systems Engineering

Learn about faculty research, reference books, primary publishers, engineering societies, student research projects; attend seminars, promote services.

Use Scopus or WOS to see where faculty publish and where they cite.

http://rodmartin.org/
Usage Statistics

Important to consult COUNTER stats

Look at critically

High use – one month or multiple; Current (JR1), Denials (JR2) and Archive (JR5)

Denials – for items you have – may mean discovery issue

Consult with individual faculty if department doesn’t respond

Don’t be afraid to cancel

Patrons have other options – many books published on the same topic, ILL
Technical Services

Learn as much as you can about technical services. Will help with discovery and access.

- GOBI, OASIS ordering systems
- Library management system
- Discovery layers
- How often records get loaded
- Proxy
- Updated IP ranges
- APIs
- Cataloging issues

May discover you don’t have access to what you’re paying for.... - can follow-up to get this resolved.

Jill Powell, jhp1@cornell.edu
Faculty and the Collection
Collections Philosophy

• Responsive research collection
• Decision making grounded in strategic choices
• Greatest good for greatest number
• Incorporates ethical considerations and values
• Incorporates guiding principles for various types of resources
Drivers that Influence Decisions

• Users
• Data
• Librarians
• Market
• Business
• Values
User Driven Decisions

• Research and teaching of institution
• Faculty grants and institutional focus
• Suggest a title
• Evidence-based buying models
• Interlibrary loan
• Buy not borrow
Subject Librarians
Explaining the Budget to Faculty

- Ratio of print/electronic: approximately 25/75
- Most of budget already committed at start of fiscal year
- 3-5% unplanned each year
- To increase the unplanned portion would require:
  - Cancelling subscriptions
  - Buying fewer books
  - Hobbling infrastructure
Important Factors

• Transparency
• Communication
• Relationships
Collecting Monographs Print & Electronic
Collection Librarian must have knowledge of:

- Mission Vision of Institution
- Curriculum/Research
- The Approval Plan Process
- Budget
- Collection Management Policies
- Acquisitions
- Weeding
Collection Development Policies for Print – Elements of

- Purpose
- Language
- Chronology
- Geography
- Publication Date
- Treatment of Subject
- Types of Materials and Formats
- Area Resources
- Subjects and Collecting Levels
Collection Development Policies for E-Books – Elements of

What matters when considering Collection Development Policies for title-by-title E-formats?

• Functionality of the platform
• Number of Simultaneous users
• Course Reserves
• E-Book exact content as print
• Images – are they sharp?
• Competitive Pricing
• Duplication of Formats
• Perpetual Access of purchased titles
• Access through Campus-wide IP
• Weeding - is it necessary?
Collection Building in a Variety of Ways

COLLECTIONS

Firm Orders
Print & Electronic

E-Book Packages

Approval Plan
Profile

Approval Plan

Collection Details:
- QA 76.47: Neural networks
- QA 76.38: Supercomputers, High-performance computing
- QA 76.49: Cyber-based computing
- QA 76.5: Other topics (e.g., security, client/servers, simulation, human-computer interaction)
- QA 77: Popular works. Elementary education
- QA 78: Algebra
- QA 154-157.2: Number theory.
- QA 151-155: Discrete mathematics. Set theory.
- QA 164-165: Foundations.
- QA 166-167: Matrices.
- QA 168-169: Number theory. Algebraic number theory.
- QA 20: Topology.
- QA 265: Machine theory.
- QA 268: Coding theory.
- QA 269: Cryptography. Switching theory.
- QA 269-272: Group theory.

Allow books on computer security, not just database security.

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- QA 151-155: Discrete mathematics. Set theory.
- QA 164-165: Foundations.
- QA 166-167: Matrices.
- QA 168-169: Number theory. Algebraic number theory.
- QA 20: Topology.
- QA 265: Machine theory.
- QA 268: Coding theory.
- QA 269: Cryptography. Switching theory.
- QA 269-272: Group theory.

Allow books on computer security, not just database security.
A Section of the Approval Plan Profile - VCU

<table>
<thead>
<tr>
<th>Action</th>
<th>LC Range</th>
<th>Description</th>
<th>Fund</th>
<th>Exceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>TJ</td>
<td>1-1570 Mechanical Engineering &amp; Machinery</td>
<td>Price ceiling exception - $175; Preferred</td>
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<tr>
<td>TJ</td>
<td>1-163</td>
<td>General History</td>
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<td>189-189</td>
<td>Power resources, Energy conservation</td>
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<td></td>
</tr>
<tr>
<td>TJ</td>
<td>190-211</td>
<td>Mechanics of machinery, Movements, Robotics</td>
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<tr>
<td>TJ</td>
<td>213-236</td>
<td>Control engineering</td>
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<tr>
<td>TJ</td>
<td>237-253</td>
<td>Machine design and construction</td>
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<tr>
<td>TJ</td>
<td>254-267</td>
<td>Combustion engineering, Heat engines, Turbines</td>
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<td>366-750</td>
<td>Steam engineering</td>
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<td>Hydraulic machinery</td>
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<td>840-1059</td>
<td>Vacuum technology, Pneumatics</td>
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<td>TJ</td>
<td>1040-1124</td>
<td>Machinery archives of prime movers, (Bridge, harbour, tributary, etc.)</td>
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<td>TJ</td>
<td>1125-1349 Machine shops</td>
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<td>1435-1479 Lifting and pressing machinery</td>
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<td>TJ</td>
<td>1480-1500 Agricultural machinery</td>
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<td>1520-1570 Other special machinery (e.g., cos operated machines)</td>
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How To Get a Book Into the Library – the Workflow

Approval Plan

Approval Plan Profile

GOBI, MATTHEWS
Books arrive every Two Weeks Shelf Ready

Sometimes Library gets Uncataloged books

Acquisitions

Receives Books & Pays

Books go to Cataloging to verify accuracy of Records or for original cataloging

To Marking

Physical books Processed for shelves

MARC RECORDS/POPULATE ILS

Librarian

Firm Order

Librarian Checks ILS, selects in Gobi, or from another source/Distributor or Requests From Online forms, Decides Print or Electronic, Assigns fund Codes

Populates the Select Cart or Order Cart in Gobi or submit print orders

Acquisitions picks up the selections does more checking and Places Orders

Questions and Answers Go both Ways

Places Orders

Receives Shipment

Pay Invoices

Electronic Batch Load of Records in ILS and Activates
Electronic Resources

E-Book Packages
Choosing a Vendor/Aggregator
- Reputation
- Customer Care
- Platform
- Communication turn around time
What to negotiate?
• DRM Free
• Ability to download Chapters
• Ability to loan chapters
• Interlibrary loan
• Consortium Access
• Course Reserves
• Regular Updates

• Databases
• Functionality
• Images - are they sharp enough?
• Do a trial before signing the license
• Consortium Access

What to consider in Selection?
• Curriculum
• Level
• Research
• Interdisciplinary
• Cost
• Print Vs Electronic
• Publication Date
How do you judge quality of your collection?

• Faculty Feedback from LibQual™

• Faculty and Graduate Students Focus Groups

• WorldCat Collection Evaluation – benchmarking against collections of peers and inspirational peers
It is all about negotiation...
Know what you want

• Do your homework – know options for formats, providers & local compatibilities - consequences if not added to collection

• Think how product is to be used – every title is potential Reference work & textbook

• Consider whether this is a local or consortia purchase

• Arrange for a trial before committing

• Price may determine needs
  • Cost per use

• Terms of license
  • What is critical?
  • What can you live without?
Varied resources are critical in STEM coverage

- Journals – key content from professional societies (Engineering/Computer Science) & commercial publishers
- Conference papers/proceedings – also important
- Standards & specifications – critical content from technical bodies (ASTM, societies, government agencies, international bodies)
- Books & book chapters – eBooks preferred
  - Packages/collections from publishers, aggregators & 3rd party providers (Knovel)
- Media – growing interest & many examples of multi-media
- Case Studies, Tech Reports – from academe, industry, government
- Images & models
Read license carefully

• Model license – terms can be negotiated for local needs (UC/CDL, CRL, NERL)

• Important issues
  • Perpetual access for what you pay
  • Usage statistics
  • Walk-in users
  • Repurposing
  • Downloading / copying rights
  • ILL access
  • Remote access

• Work with colleagues in Acquisitions or eResource team
• Institutional deal breakers – indemnification is major issue
Reaching a **WIN**

- Solutions may take time
- Learn relationships between publishing families
- Consider local processing procedures
  - Individual records – MARC
  - Frequency of new content being added
- Assessment exercises – time to renew
- User satisfaction
- Impact on collection
Options & Consequences

- Be prepared to walk away
- Don’t be pressured into anything
- Do your due diligence ahead of time
- Ask for other customers to contact about user experience
- Know competition in marketplace
Other Hints

• Develop personal licensing toolkit
• Become familiar with vendors / suppliers / distribution channels
• Acquisition models for both print & eBooks
  • Vocabulary
  • Acronyms
• Jurisdiction matters
• Tie in to Copyright, Fair Use practices