

**Executive Summary**  
**Mathematics Collection Assessment**  
 Submitted by Paula Barnett-Ellis  
 February 28, 2018

**INTRODUCTION**

The Mathematics collection is adequate to support the courses taught in the Bachelors and Masters programs. Complete conspectus sheets and checklists are available upon request for a more detailed examination of the collection.

**HOLDINGS**

The Mathematics collection contains **8,176** titles in the QA1-77 and QA77-939 call number ranges, including **268** e-books. Total monograph expenditures for Mathematics from 2010-2017 were **\$25,257.42** with **1,659** new titles added. These newer additions comprise 20% of the current Mathematics collection.

These numbers represent a snapshot of the collection, as titles are continually added and withdrawn for collection maintenance and growth. These numbers do not represent additional titles available through e-book databases.

<b>Classification</b>	<b>Subject Area</b>	<b>Library Holdings</b>
QA1-QA74	Mathematics	2,236
QA77-QA930	General Works, etc.	5,940
<b>Total</b>		<b>8,176</b>

**Monograph Expenditures for Mathematics**

<b>Fiscal Year</b>	<b>Amount</b>
2010-2011	\$4,018.03
2011-2012	\$4,336.40
2012-2013	\$5,370.00
2013-2014	\$3,949.81
2014-2015	\$2,240.76
2015-2016	\$2,569.43
2016-2017	\$2,772.99
<b>Total</b>	<b>\$25,257.42</b>

**PERIODICALS AND SERIALS**

The Library has access to full-text journals available through the Library's databases. There are over 800 journals in mathematics and related subjects available electronically through database subscriptions, which can be found in EBSCO's Publication Finder at

<http://bit.ly/2zO6DiD>. The Serials expenditures in Mathematics for both print and electronic subscriptions and standing orders average **\$2,327.38** from 2010-2017 (see table below.)

### **Serial Expenditures for Mathematics**

<b>FISCAL YEAR</b>	<b>Total</b>
2010-2011	\$2,057.43
2011-2012	\$2,253.55
2012-2013	\$2,308.28
2013-2014	\$2,394.74
2014-2015	\$2,477.90
2015-2016	\$2,514.83
2016-2017	\$2,284.95
<b>Total</b>	<b>\$16,291.68</b>

Expenditures for serials have migrated away from the individual subscription model to the aggregator database model. Dollar amounts spent on aggregator databases cannot be sub-divided into subject categories. For FY 2016/17 the amount spent on aggregated databases was \$205,145.15, which came from the general fund.

### **DEFINED ACCESS TO ELECTRONIC RESOURCES**

Defined access points users to resources through menu options on the Library's homepage by linking the user to quality, highly relevant, electronic resources. Because the Library provides access to electronic journals, documents, e-books, and video databases along with integrated quality websites that encompass the area of Mathematics, the Library's electronic collection in this subject is adequate to support the curriculum.

A complete list of all of the Library's databases can be found in the A to Z Database Listing at <http://libguides.jsu.edu/az.php>. The A to Z List also subdivides databases by subject, providing a list of all Mathematics related databases at <http://libguides.jsu.edu/az.php?s=26270>. Additionally, the Mathematics subject guide <http://libguides.jsu.edu/math>, maintained by the subject specialist, provides a list of and access to the resources specifically for this subject.

Complete details are available in the full assessment, which is available upon request or at <http://bit.ly/2fyeMMU>.

## Mathematics Collection Assessment

Submitted by Paula Barnett-Ellis

February 28, 2018

### INTRODUCTION

The Mathematics Collection is central to the University curriculum, since it supports study for degree programs in the Bachelors and Masters of Science, as well as the Minor in Mathematics, offered by the Department of Mathematical, Computing, & Information Sciences. Other degrees offered by the Department of Secondary Education are Bachelor's and Masters of Science in Education and Education Specialist. The Mathematics collection is adequate to support the courses taught in the Bachelors and Masters programs. Complete conspectus sheets and checklists are available upon request for a more detailed examination of the collection.

### HOLDINGS

The Mathematics collection contains **8,176** titles in the QA1-77 and QA77-939 call number ranges, including **268** e-books. Total monograph expenditures for Mathematics from 2010-2017 were **\$25,257.42** with **1,659** new titles added. These newer additions comprise 20% of the current Mathematics collection.

These numbers represent a snapshot of the collection, as titles are continually being added and withdrawn for collection maintenance and growth. These numbers do not represent additional titles available through e-book databases.

Classification	Subject Area	Library Holdings
QA1-QA74	Mathematics	2,236
QA77-QA930	General Works, etc.	5,940
<b>Total</b>		<b>8,176</b>

### Monograph Expenditures for Mathematics

Fiscal Year	Amount
2010-2011	\$4,018.03
2011-2012	\$4,336.40
2012-2013	\$5,370.00
2013-2014	\$3,949.81
2014-2015	\$2,240.76
2015-2016	\$2,569.43
2016-2017	\$2,772.99
<b>Total</b>	<b>\$25,257.42</b>

### **SUPPLEMENTAL SUPPORT**

Mathematics is an interdisciplinary subject that extends beyond the boundaries of the discipline. Supplemental support for research includes a wide range of subject areas, including the holdings in the related subject collections of Education, Physics, Engineering, and Technology, as well as our textbook and textbooks for adoption collections on the 5<sup>th</sup> floor.

### **TITLES ADDED/TITLES PUBLISHED**

Below is a comparison of the number of book titles added to the Houston Cole Library collection versus those made available for sale each fiscal year through GOBI. These figures contain a large number of mathematics and computer science books, some outside the scope of the Library of Congress classification for this assessment, and some are not collected in numbers as large as GOBI has listed.

#### **Monographs Added Versus Published Comparison**

<b>Fiscal Year</b>	<b>Added to Collections QA</b>	<b>GOBI New Titles Report<sup>1</sup></b>	<b>Percentage</b>
2010-2011	244	2,718	9%
2011-2012	299	2,779	11%
2012-2013	253	3,068	8%
2013-2014	160	2,956	5%
2014-2015	233	2,857	8%
2015-2016	227	2,894	8%
2016-2017	243	3,053	8%
<b>Total</b>	<b>1,659</b>	<b>20,325</b>	<b>8%</b>

### **CHECKLIST SUMMARIES**

Bibliographies including *Choice's Outstanding Academic Titles (OATs)* and *Resources for College Libraries* were used to measure the quality of the Library's collection. In checking the bibliographies against the Library's catalog, the following percentages were revealed in the subject area of Mathematics.

<b><i>Choice's Outstanding Academic Titles 2010-217</i></b>			
<b>Year</b>	<b>Held</b>	<b>Listed</b>	<b>Percent Held</b>
2010	2	5	40%
2011	8	8	100%

<sup>1</sup> GOBI New Titles Report  
([https://www.gobi3.com/StaticContent/GOBIContent/YBP/Private/Help/Pages/newtitlereport\\_us.html](https://www.gobi3.com/StaticContent/GOBIContent/YBP/Private/Help/Pages/newtitlereport_us.html))

2012	7	9	78%
2013	10	10	100%
2014	10	10	100%
2015	8	8	100%
2016	7	8	88%
2017	8	8	100%
<b>Total</b>	<b>60</b>	<b>66</b>	<b>91%</b>

<i>Resources for College Libraries 2010-2017</i>			
<b>LC CLASS</b>	<b>Held</b>	<b>Listed</b>	<b>Percentage Held</b>
QA	105	218	49%
<b>Total</b>	<b>105</b>	<b>218</b>	<b>49%</b>

### **WITHDRAWALS**

As currency of information is very important in the Mathematics collection, older books are withdrawn on a regular basis or as newer editions supersede them, and new books are ordered to fill gaps as curriculum requirements change. The table below shows withdrawals from the QA classifications.

<b>Fiscal Year</b>	<b>QA Titles Withdrawn</b>
2010-2011	156
2011-2012	93
2012-2013	46
2013-2014	23
2014-2015	114
2015-2016	44
2016-2017	59
<b>Total</b>	<b>535</b>

### **PERIODICALS AND SERIALS**

The Library has access to full-text journals available throughout the Library databases. There are over 800 journals in mathematics or related areas available electronically through database subscriptions. These can be found in EBSCO's Publication Finder at <http://bit.ly/2zO6DjD>. The Serials expenditures in Mathematics for both print and electronic subscriptions and standing orders average **\$2,327.38** from 2010-2017 (see table below.)

### Serial Expenditures for Mathematics

<b>FISCAL YEAR</b>	<b>Total</b>
2010-2011	\$2,057.43
2011-2012	\$2,253.55
2012-2013	\$2,308.28
2013-2014	\$2,394.74
2014-2015	\$2,477.90
2015-2016	\$2,514.83
2016-2017	\$2,284.95
<b>Total</b>	<b>\$16,291.68</b>

Expenditures for serials have migrated away from the individual subscription model to the aggregator database model. Dollar amounts spent on aggregator databases cannot be subdivided into subject categories. For 2016/17 the amount spent on aggregated databases was \$205,145.15, which came from the general fund.

The following indexes and bibliographies, when checked against the Library's holdings for serial titles pertaining to Mathematics, revealed the corresponding percentages:

<b>Titles</b>	<b>Held</b>	<b>Listed</b>	<b>Percent Held</b>
SCImago Journal Rank (SJR) Mathematics Categories: Algebra, Analysis, Applied Mathematics, Discrete Mathematics and Combinatorics, Geometry and Topology, Mathematics (Misc.), Numerical Analysis and Statistics and Probability	248	489	51%
MathSciNet Subscribed Journal Titles	794	1,624	49%
<b>Total</b>	<b>1,042</b>	<b>2,113</b>	<b>49%</b>

### DEFINED ACCESS TO ELECTRONIC RESOURCES

Defined access points users to resources through menu options on the Library's homepage by linking the user to quality, highly relevant, electronic resources. Because the Library provides access to electronic journals, documents, e-books, and video databases along with integrated quality websites that encompass the area of Mathematics the Library's electronic collection in this subject is adequate to support the curriculum.

A complete list of all of the Library's databases can be found in the A to Z Database Listing at <http://libguides.jsu.edu/az.php>. The A to Z List also subdivides databases by

subject. Of special note is the Library's subscription to the database MathSciNet, <http://libguides.jsu.edu/resources/mathscinet>. Additionally, the Mathematics guide (<http://libguides.jsu.edu/Math>), maintained by the subject specialist, provides a list of and access to the resources specifically for this subject.

Through partnerships, such as the one with the Alabama Virtual Library (AVL), the Library is able to obtain more content. Resources provided to the Library by the AVL are designated with the AVL icon.

## **SUMMARY**

### **Strengths:**

Total holdings, conspectus evaluation and checklist comparisons indicate the overall Mathematics collection is more than adequate to support the curriculum. Of particular note on the conspectus worksheet are the holdings in the subject areas of: Study and Teaching, Numeration, Arithmetic, Elementary Mathematics, and Mathematical Analysis.

A review of the journal holdings reveals that the Mathematics collection is adequate to support the curriculum.

### **Weaknesses:**

Total holdings, conspectus evaluations, and checklist comparisons indicate that the weakest areas of the Mathematics subject areas are: Dictionaries, Encyclopedias, and Numerical Analysis.

### **Recommendations:**

The growth rate of the Mathematics Collection should be maintained in order to provide support for the Bachelor of Science, Master of Science, and Minor in Mathematics. In the Department of Secondary Education, the collection supports the Bachelor of Science, Master of Science, and Education Specialist with a focus on Mathematics Education (6-12). The monograph collection should be generally increased, based on the Library budget. The periodical collection available via databases is substantial and should be maintained. The weak subject areas (noted above) should also be addressed in future additions to the collection.