

**Executive Summary**  
**Mathematics Collection Assessment**  
Submitted by Paula Barnett-Ellis  
November 20, 2024

**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 **7,873** titles in the QA1-74 and QA77-699 call number ranges, including **5,686** e-books. Total monograph expenditures for Mathematics from FY 2018-2024 were **\$14,720.30** with **282** new titles added. These newer additions comprise 3.6% 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These numbers represent a snapshot of the collection, as titles are continually added and withdrawn for collection maintenance and growth.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	2,153
QA1-QA74	Ebooks	943
QA77-QA699	General Works, etc.	5,720
QA77-QA699	Ebooks	4,743

**Monograph Expenditures for Mathematics**

<b>Fiscal Year</b>	<b>Amount</b>
2018-2019	\$4,635.73
2019-2020	\$2,117.82
2020-2021	\$2,376.42
2021-2022	\$1,229.32
2022-2023	\$2,100.52
2023-2024	\$2,260.49
<b>Total</b>	<b>\$14,720.30</b>

### **PERIODICALS AND SERIALS**

Access is provided to full-text journals through the Library's databases. There are more than 900 peer-reviewed journals in mathematics and related subjects available electronically through database subscriptions, which 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 **\$1,105.82** from FY 2018-2024 (see table below.)

<b><u>Serial Expenditures for Mathematics</u></b>	
<b>FISCAL YEAR</b>	<b>Total</b>
2018-2019	\$1,660.65
2019-2020	\$1,115.71
2020-2021	\$1,098.84
2021-2022	\$1,143.84
2022-2023	\$878.24
2023-2024	\$737.64
<b>Total</b>	<b>\$6,634.92</b>

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### **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.

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## Mathematics Collection Assessment

Submitted by Paula Barnett-Ellis

November 20, 2024

### **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 Bachelors and Masters of Science in Education and Education Specialist. Complete conspectus sheets and checklists are available upon request for a more detailed examination of the collection. The Mathematics collection is adequate to support the courses taught in the Bachelors (with concentrations in Data Science, General and Traditional Mathematics) and Master of Science program with a major in Mathematics.

### **HOLDINGS**

The Mathematics collection contains **7,873** titles in the QA1-74 and QA77-699 call number ranges, including **5,686** e-books. Total monograph expenditures for Mathematics from 2018-2024 were **\$14,720.30** with **282** new titles added. These newer additions comprise 3.6% of the current Mathematics collection.

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<b>Total</b>	<b>\$14,720.30</b>

### **SUPPLEMENTAL SUPPORT**

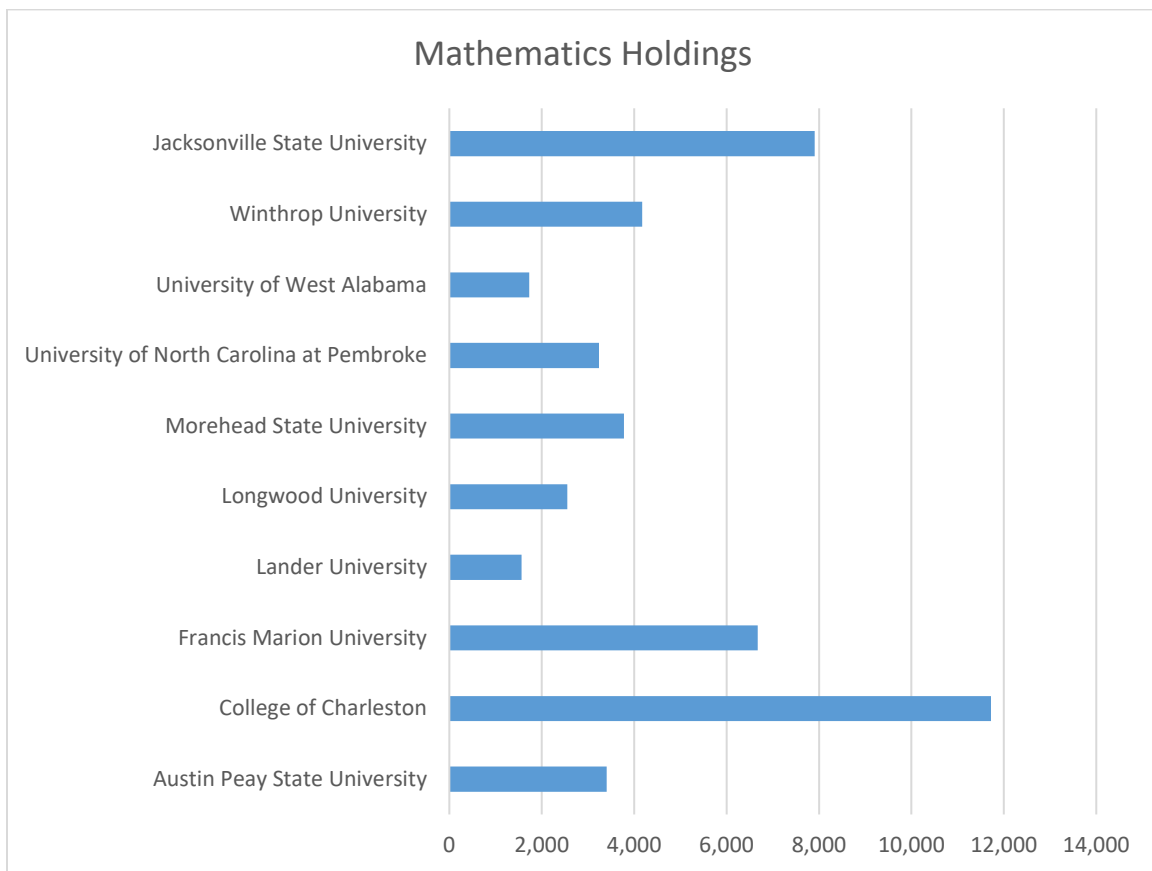
Mathematics is an interdisciplinary subject that extends beyond the boundaries of the discipline. Supplemental support for research includes a wide range of subject areas, including the holdings in the related subject collections of Education, Physics, Engineering, and Technology, as well as our textbook and textbooks for adoption collections on the 5<sup>th</sup> floor. These and other subject assessments can be found at <http://bit.ly/2fyeMMU>.

Classification	Subject Area	Library Holdings
QC1-QC999	Physics	5,348
LB5-LB3640	Theory and Practice of Education	24,027
TA1-2040	Engineering	1,754
T1-995	Technology	2,675

### **PEER INSTITUTION COMPARISON**

Jacksonville State University's collection compares favorably to this list of peer institutions. For this chart, Mathematical book collections were examined in the WorldCat database using the keyword "mathematics" at <https://libguides.jsu.edu/resources/oclcfirstsearchworldcat>. University peers were chosen using the Carnegie Classifications "Look Up" feature at <http://carnegieclassifications.iu.edu/lookup/lookup.php>. Those with the same "Basic," "Enrollment Profile," "Level," "Size and Setting," "Undergraduate Instruction Program," and "Undergraduate Profile" Carnegie Classifications were chosen. OCLC Code: from <http://www.oclc.org/contacts/libraries/>

OCLC Symbol	Name	Mathematics Holdings	City	State
AJB	Jacksonville State University	7,987	Jacksonville	AL
MLU	Alcorn State University	4,386	Alcorn State	MS
GCO	Columbus State University	9,885	Columbus	GA
VLC	Longwood University	21,680	Farmville	VA
MCK	Mississippi Valley State University	3,415	Itta Bena	MS
NCX	North Carolina Central University	13,327	Durham	NC
ADA	Troy University	16,864	Troy	AL
NPS	University of North Carolina at Pembroke	3,250	Pembroke	NC
SWW	Winthrop University	12,474	Rock Hill	SC



#### **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 those listed in GOBI.

**Monographs Added Versus Published Comparison**

<b>Fiscal Year</b>	<b>Added to Collections QA1-74</b>	<b>Added to Collections QA77-QA699</b>	<b>GOBI New Titles Report<sup>1</sup></b>	<b>Percentage</b>
2018-2019	29	50	2,851	3%
2019-2020	17	43	2,258	3%
2020-2021	12	24	2,846	1%
2021-2022	14	12	2,659	1%
2022-2023	15	31	2,718	2%
2023-2024	14	21	2804	1%
<b>Total</b>	<b>101</b>	<b>181</b>	<b>16,136</b>	<b>2%</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: Information &amp; Computer Science 2019-2024</i></b>			
<b>Year</b>	<b>Held</b>	<b>Listed</b>	<b>Percent Held</b>
2019	2	6	33%
2020	3	8	38%
2021	5	5	100%
2022	1	4	25%
2023	5	5	100%
<b>Total</b>	<b>16</b>	<b>28</b>	<b>57%</b>

<b><i>Resources for College Libraries 2019-2024 Mathematics</i></b>			
<b>Year</b>	<b>Held</b>	<b>Listed</b>	<b>Percentage Held</b>
2019	22	40	55%
2020	12	32	38%
2021	10	36	28%
2022	13	46	29%
2023	10	66	15%
2024	7	26	27%
<b>Total</b>	<b>74</b>	<b>246</b>	<b>30%</b>

<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))

### **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>
2018-2019	77
2019-2020	63
2020-2021	768
2021-2022	542
2022-2023	490
2023-2024	57
<b>Total</b>	<b>1,997</b>

### **PERIODICALS AND SERIALS**

The Library has access to full-text journals available throughout the Library databases. There are more than 900 peer-reviewed 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 averaged **\$1,105.82** from 2018-2024 (see table below.)

#### **Serial Expenditures for Mathematics**

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2018-2019	\$1,660.65
2019-2020	\$2,308.28
2020-2021	\$2,394.74
2021-2022	\$2,477.90
2022-2023	\$2,514.83
2023-2024	\$2,284.95
<b>Total</b>	<b>\$6,634.92</b>

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

<b>SCImago Journal Rank (SJR) Mathematics</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 (Top 200)	141	200	71%
<b>Total</b>	<b>141</b>	<b>200</b>	<b>71%</b>

<b>Magazines for Libraries 28<sup>th</sup> Edition Mathematics</b>	<b>Held</b>	<b>Listed</b>	<b>Percent Held</b>
Magazines for Libraries 28 <sup>th</sup> Edition: General	9	9	100
Magazines for Libraries 28 <sup>th</sup> Edition: Research Journals	16	17	94
<b>Total</b>	<b>25</b>	<b>26</b>	<b>96</b>

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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.

There is also a growing amount of content published via Open Access (OA) publishing and/or under the Creative Commons (CC) Attribution License. Anyone is allowed to download, use, reuse, distribute, or even modify the content as long as the original author and source are cited. More information can be found at <https://libguides.jsu.edu/oer>.

## **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 & Teaching (QA11-20); Numeration, Arithmetic, Elementary Mathematics (QA101-149); Algebra (QA150-272.5); Probabilities, Math. Stats., Interpolation, Numerical (QA273-299); Mathematical Analysis (General) (QA299.6-433); and Geometry, Topology (QA440-699).

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 Dictionaries, Encyclopedias (QA5) and Group Theory (QA174-183).

### **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. Weaker subject areas should also be addressed in future additions to the collection.