Executive Summary
Computer Science and Computer Information Systems Collection Assessment
Submitted by Paula Barnett-Ellis
February 25, 2025

<u>**INTRODUCTION**</u>

The Computer Science and Computer Information Systems collection is adequate to support the courses taught in the Bachelor's and Master's programs. Complete conspectus sheets and checklists are available upon request for a more detailed examination of the collection.

<u>**HOLDINGS**</u>

The Computer Science and Computer Information Systems collection contains **2,486** titles in the call number ranges QA 75.5-QA76.795 and QA267-QA268. (The 33% decrease from 3,713 titles in the last collection assessment was due to thorough weeding before books were shifted in the summer of 2024.) The table below also highlights other relevant areas. The count does not include **5,815** e-books in the QA 75.5-QA76.795 and QA267-QA268 call number range. * Total monograph expenditures for the Computer Science and Computer Information Systems Collection were **$113,896.15** with **645** new titles added. These newer additions comprise **26** percent of the current Computer Science and Computer Information Systems collection.

Classification	Subject Area	Library Holdings
QA75.5-QA76.95	Electronic Computers. Computer Science	2,431
QA267-268	Machine Theory	55
Total		**2,486**

*Note: the high number of e-books is due to catalog records for items available via Demand Driven Acquisitions (DDA), a method that allows our users to make purchases. DDA works without the patron's knowledge and has three triggers for purchase. For an e-book to be "triggered" for purchase, a patron must actively view the contents of one e-book for 10 consecutive minutes, view 10 unique pages of an e-book (not including the Table of Contents or Index), or print/copy one page of an e-book.

These numbers represent a snapshot of the collection, as titles are continually added and withdrawn for collection maintenance and growth.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.

Monograph Expenditures for Computer Science and Computer Information Systems

Fiscal Year	Amount
2017/18	$22,745.56
2018/19	$22,318.66
2019/20	$13,878.36
2020/21	$14,627.79
2021/22	$12,499.87
2022/23	$13,798.24
2023/24	$14,027.67
Total	**$113,896.15**

PERIODICALS AND SERIALS

The Library has access to full-text journals available through Library databases. There are around 990 journals in computer science 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 Computer Science and Computer Information Systems for both print and electronic subscriptions and standing orders average **$2,596.47** from fiscal years 2018-2024 (see table below.)

Serial Expenditures for Computer Science/Computer Information Systems

FISCAL YEAR	Amount
2017/18	$3,980.68
2018/19	$4,068.69
2019/20	$3,153.69
2020/21	$3,156.25
2021/22	$1,272.00
2022/23	$1,272.00
2023/24	$1,272.00
Total	**$18,175.31**

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. A more accurate reporting of Library subject support for serials is represented in the 'Browse by Discipline' listings in Publication Finder: http://bit.ly/3t6DOeH. The dollar amount spent for aggregated databases for 2023/24 was **$374,107.64.**

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 Computer Science and Computer Information Systems, 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 Computer Science and Computer Information Systems Collection relevant databases at http://libguides.jsu.edu/az.php?s=26250 and http://libguides.jsu.edu/az.php?s=26287.
 Additionally, the Computer Science and Computer Information Systems guide (http://libguides.jsu.edu/computerscience), 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://www.jsu.edu/library/information/collection_assessments.html.

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INTRODUCTION

The Computer Science and Computer Information Systems collection is adequate to support the courses taught in the Bachelor's and Master's programs. The Computer Science and Computer Information Systems Collection is central to the University curriculum, since it supports study for degree programs in the Bachelor and Master of Science, as well as the Minor in Computer Science and Computer Information Systems, offered by the Department of Mathematical, Computing, & Information Sciences. Other degrees offered by the Department of Secondary Education are Bachelor and Master 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 collection meets the guidelines set forth in Criterion MS7 of the 2023-2024 *Criteria for Accrediting Computing Programs* from the Accreditation Board for Engineering and Technology, (ABET, Inc.), which states, "The library services and the computing and information infrastructure must be adequate to support the scholarly and professional activities of the students and faculty."

ABET Computing Accreditation Commission, Criteria for Accrediting Computing Programs Effective for Reviews During the 2023-2024 Accrediting Cycle, p. 29
https://www.abet.org/accreditation/accreditation-criteria/criteria-for-accrediting-computing-programs-2023-2024/

HOLDINGS

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SUPPLEMENTAL SUPPORT

Computer Science and Computer Information Systems 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, Social Sciences, and Technology, as well as our textbook and textbooks for adoption collections on the 5th floor. Areas of interest in additional subjects are in the table below.

Number of titles held for support subdivisions outside the Computer & Information Science Classifications:

Classification	Category	Totals
GV1469.15-1469.62	Computer Games. Video games. Fantasy games	160
HF5548.37	Security measures (Computer security) Data Recovery. Disaster Recovery	13
HF5548.5	Computer Programming Languages	18
HV6772-6773	Computer crimes (cybercrime, cyber forensics, Investigation)	93
Q335	Artificial Intelligence	107

QA267-280	Mathematical statistics	1,007
T58.6	Management Information Systems	65
TK5105-TK5105.9	Computer networks	946
TK7885-7895	Computer Engineering	203
TK7805-7895	Computers and Computing	989

PEER INSTITUTION COMPARSON

Below is a table comparing library collections of ABET accredited universities in Alabama who offer baccalaureate degrees in the subject of Computer Science. Houston Cole Library's collection compares favorably with similar sized institutions.

OCLC Symbol*	Library Name**	Computer Science Collection***
MWT	Alabama A&M University	2111
ABC	University of Alabama at Birmingham	7096
MWR	The University of Alabama in Huntsville	2749
ALM	The University of Alabama	9003
MWW	Athens State University	468
AAA	Auburn University	12543
ABJ	Jacksonville State University	4626
ANO	University of North Alabama	832
ACM	University of South Alabama	2255
TUS	Tuskegee University	933

*OCLC Code from Directory of OCLC Members: https://www.oclc.org/en/contacts/libraries.html
**Library Name: ABET Accredited Undergraduate Programs, Program Search: Computer Science, Alabama
https://amspub.abet.org/aps/name-search?searchType=program
***Computer Science print book collections: from WorldCat with Keyword Search "computer science."

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 Computer Science and Computer Information Systems 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

Fiscal Year	Added to Collections QA*	GOBI New Titles Report[1] QA*	Percentage
2017/18	128	2,831	4%
2018/19	129	2,851	5%
2019/20	102	2,258	5%
2020/21	60	2,846	2%
2021/22	76	2,659	3%
2022/23	86	2,718	3%
2023/24	64	2,804	2%
Total	**645**	**18,967**	**3%**

*There is no further breakdown available in the QA call number range

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 Computer Science and Computer Information Systems.

Choice's Outstanding Academic Titles 2018-2024			
Subject	**Held**	**Listed**	**Percent Held**
Information & Computer Science: 2024	4	10	40%
Information & Computer Science: 2023	9	10	90%
Information & Computer Science: 2022	2	6	33%
Information & Computer Science: 2021	6	6	100%
Information & Computer Science: 2020	9	15	60%
Information & Computer Science: 2019	4	6	67%
Information & Computer Science: 2018	2	2	100%
Total	**36**	**55**	**65%**

Resources for College Libraries 2018-2024			
LC CLASS	Held	Listed	Percentage Held
QA75.5-76.95	25	91	27%
Total	**25**	**91**	**27%**

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

WITHDRAWALS

As currency of information is very important in the Computer Science and Computer Information Systems 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.

Fiscal Year	QA Titles Withdrawn
2018-2019	77
2019-2020	63
2020-2021	768
2021-2022	542
2022-2023	490
2023-2024	57
2024-2025*	17
Total	**2,014**

These stats are not broken down into specific call number ranges.
*2024/25 is not a complete year. Stats end with December

PERIODICALS AND SERIALS

The Library has access to full-text journals available throughout the Library databases. There are around 453 journals in Computer Science and Computer Information Systems 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 Computer Science for both print and electronic subscriptions and standing orders average **$2,596.47** from fiscal years 2018-2024 (see table below.)

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be subdivided into subject categories. A more accurate reporting of Library subject support for serials is represented in the 'Browse by Discipline' listings in Publication Finder: http://bit.ly/3t6DOeH. For FY 2023/24 the amount spent on aggregated databases was **$374,107.64**, which came from the general fund.

The following journal bibliographies, when checked against the Library's holdings for serial titles pertaining to Computer Science and Computer Information Systems, revealed the corresponding percentages:

Titles	Held	Listed	Percent Held
SCImago Journal Rank (SJR) Computer Science (Top 100)	53	100	53%
Magazines for Libraries (2019): Computers and Information Technology	30	32	94%

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 Additionally, the Computer Science/Computer Information Systems guide (http://libguides.jsu.edu/computerscience), 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 can 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:
The Computer Science and Computer Information Systems collection is sufficient to support most undergraduate work as well as the Master of Science in Computer Systems and Software Design. The areas of Computer Engineering, Computer Programming, Software Development, and Game Programming remain strong from the last assessment. Other strong areas are Special Topics in Computer Science, Database Management and Computer Software. The specific focus of the graduate degree in Computer Systems and Software Design is supported by our collection. A review of the journal holdings reveals that the Computer Science and Computer Information Systems collection is adequate to support the curriculum.

Weaknesses:
Total holdings, conspectus evaluations, and checklist comparisons indicate that the weakest areas of the Computer Science and Computer Information Systems subject areas are: Interactive Media, Interactive Computer Systems, Computer Literacy, and Databases.

Recommendations:
The growth rate of the Computer Science and Computer Information Systems Collection should be maintained in order to provide support for the Bachelor of Science, Master of Science, and Minor in Computer Science and Computer Information Systems. In the Department of Secondary Education, the collection supports the Bachelor of Science, Master of Science, and Education Specialist with a focus on Computer Science and Computer Information Systems 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.