



**Middle Tennessee State University
Board of Trustees
Academic Affairs, Student Life, and
Athletics Committee**

May 23, 2023
9:00 am

MEC Meeting Room – 2nd Floor
Miller Education Center
503 East Bell Street
Murfreesboro, Tennessee 37130



**Middle Tennessee State University
Board of Trustees**

Academic Affairs, Student Life, and Athletics Committee

May 23, 2023
9:00 am

AGENDA

Call to Order and Opening Remarks

Roll Call

Approval of Minutes (Action)[Tab 1](#)

Approval of Tenure and Promotion (Action)[Tab 2](#)

Approval of New Academic Program (Action).....[Tab 3](#)

 Bachelor of Science (B.S.) in Cybersecurity Management

Faculty Senate Presentation (Information)[Tab 4](#)

Student Trustee Presentation (Information).....[Tab 5](#)

Application and Admission Report (Information).....[Tab 6](#)

Athletics Report (Information).....[Tab 7](#)

Closing Remarks

Adjournment



**Middle Tennessee State University
Board of Trustees**

Academic Affairs, Student Life, and Athletics Committee

Action Item

DATE: May 23, 2023

SUBJECT: **Minutes of the March 14, 2023
Academic Affairs, Student Life, and
Athletics Committee Meeting**

PRESENTER: Pam Wright
Committee Chair

BACKGROUND INFORMATION:

The Academic Affairs, Student Life, and Athletics Committee met on March 14, 2023. Minutes from the meeting are provided for review and approval.

**MIDDLE TENNESSEE STATE UNIVERSITY
BOARD OF TRUSTEES**

**ACADEMIC AFFAIRS, STUDENT LIFE, AND ATHLETICS COMMITTEE
MINUTES**

The Academic Affairs, Student Life, and Athletics Committee met on Tuesday, March 14, 2023, in the Miller Education Center Meeting Room at Middle Tennessee State University.

Call to Order

Committee Chair Pam Wright called the meeting to order at 10:05 a.m.

Roll Call

Board Secretary James Floyd called the roll. The following Committee members were in attendance: J.B. Baker, Tom Boyd, Pete DeLay, Steve Smith, Pam Wright, Rick Cottle, Drew Carpenter, Keith Huber, and Chris Massaro. Trustee Chris Karbowiak participated in the meeting electronically. Per T.C.A. 8-44-108(c)(3), Trustee Karbowiak was asked and responded in the affirmative that she could hear clearly and confirmed there was no one else in the room with her. A quorum was declared.

President Sidney A. McPhee; Joe Bales, Vice President for University Advancement; Andrew Oppmann, Vice President for Marketing and Communications; Yvette Clark, Interim Vice President for Information Technology and Chief Information Officer; Deb Sells, Vice President for Student Affairs and Vice Provost for Enrollment and Academic Services; Alan Thomas, Vice President for Business and Finance; Diane Snodgrass, Interim Chief Audit Executive; James Floyd, University Counsel and Board Secretary; and Kim Edgar, Assistant to the President and Chief of Staff, were also in attendance.

Approval of Minutes - Action

The first agenda item was approval of the minutes from the November 15, 2022, Academic Affairs, Student Life, and Athletics Committee meeting. Trustee DeLay moved to approve the minutes from the November 15, 2022, meeting, and Trustee Boyd seconded the motion. A roll call vote was taken, and the motion was approved unanimously.

Approval of Degrees under Consideration - Action

Vice Provost Amy Aldridge Sanford told the Committee that a cohort of ten faculty was convened to expand the graduate degree portfolio. The existing master's degree portfolio is comprehensive, but there are opportunities to better serve current and future workforce needs. After reviewing five years of localized feasibility studies and national trends, the College of Graduate Studies Dean recommended several potential new graduate degrees and recommended that they be 30 credit hours and fully online to better serve the people who will be attracted to these programs. If approved, new academic program proposal development will continue with letters of notification to THEC.

Trustee Boyd moved to approve the consideration of five master's programs: an M.A. in Organizational and Professional Communication, an M.S. in Digital Media, an M.S. in Music Business, an M.S. in Project Management, and an M.S. in Tourism and Hospitality Management. Trustee DeLay seconded the motion.

Chairman Smith asked that the Committee receive a report on the annual progress of each new program. President McPhee confirmed annual benchmark reporting is required for new programs, and the report will be shared with the Committee. He also noted that these master's degree programs being considered are "ready-to-work" and will also support our Carnegie classification as a Doctoral University with high research activity.

A roll call vote was taken, and the motion to approve the consideration of the five master's programs passed unanimously.

Approval of Honorary Degree - Action

Associate Provost Mary Hoffschwelle presented the nomination of Mr. John Floyd to receive an honorary doctorate degree at the May 2023 Commencement Ceremonies.

Chairman Smith moved to approve awarding an honorary degree to Mr. John Floyd, and Trustee Delay seconded the motion. A roll call vote was taken, and the motion to approve the honorary degree passed unanimously.

Annual Report of Academic Program Actions - Information

Vice Provost Amy Aldridge Sanford presented the annual report on academic program actions and noted that each action listed was proposed by faculty and agreed upon by the campus community.

President McPhee added that the Tennessee Legislature recognized MTSU as one of the few universities that terminated degrees or concentrations due to irrelevance or productivity.

Application and Admission Report - Information

Vice President Deb Sells reported that freshmen applications were up 14% as of March 1, and freshmen admissions were up 5%. Transfer applications and admissions are also up.

Registration opens soon for the new student orientation program, CUSTOMS. Enrollment for Fall begins in May during the first CUSTOMS session.

Dr. Sells acknowledged the work of admissions staff, faculty, and advisors in welcoming students to campus or at True Blue Tours. MTSU has already exceeded the number of students attending our preview days and visiting campus from last year.

Athletics Report - Information Item

Athletics Director Chris Massaro shared the successes of the men's and women's basketball teams, noting that in addition to the women's championship win, their GPA has exceeded 3.5 in the last few semesters.

Build Blue Update: The tennis facility is coming along. Demolition for the Student-Athlete Performance Center will begin at the end of the semester.

Adjournment

Committee Chair Wright adjourned the meeting at 10:56 a.m.

Respectfully submitted,

Academic Affairs, Student Life, and Athletics Committee



**Middle Tennessee State University
Board of Trustees**

Academic Affairs, Student Life, and Athletics Committee

Action Item

DATE: May 23, 2023

SUBJECT: **Approval of Tenure and Promotion**

PRESENTER: Mark Byrnes
Provost

BACKGROUND INFORMATION:

The following faculty members have been reviewed for tenure and/or promotion by their department chair/school director, department/school committee, college committee, college dean, provost, and president, as stipulated by MTSU Policies 204 Tenure, 205 Promotion of Tenured and Tenurable Faculty, and their respective college and department policies. The president and provost recommend they be granted tenure and/or promotion effective August 1, 2023.

Faculty Tenure Recommendations for 2023-24

| | Name | Department |
|----|-----------------------|---|
| 1 | Arroyo, Fred | English |
| 2 | Avila, Jacob | Concrete and Construction Management |
| 3 | Bacon, Chris | Journalism and Strategic Media |
| 4 | Carter, John Lando | Educational Leadership |
| 5 | Chevrette, Roberta | Communication Studies |
| 6 | Cobb, Christina | University Studies |
| 7 | Combest, Christopher | Music |
| 8 | Conceison, Michelle | Recording Industry |
| 9 | Cone, Neporcha | Elementary and Special Education |
| 10 | Erskine, Michael | Information Systems and Analytics |
| 11 | Ertel, Pamela Kramer | Elementary and Special Ed |
| 12 | Garven, Sarah | Accounting |
| 13 | Goodwin, Katie | Theatre and Dance |
| 14 | Grubbs, Brandon | Health and Human Performance |
| 15 | Haruna, Samuel | Agriculture |
| 16 | Heames, Joyce | Management |
| 17 | Houston, James | Psychology |
| 18 | Hover, Ashlee | Educational Leadership |
| 19 | Jeong, Yangseung | Biology |
| 20 | Ku, Seockmo | Agriculture |
| 21 | Lambert, Frank | Educational Leadership |
| 22 | Lewis, Richard | Media Arts |
| 23 | McKinzie, Ashleigh | Sociology and Anthropology |
| 24 | Mims, Lashonda | History |
| 25 | Moake, Timothy | Management |
| 26 | Nicholas, Thomas | Concrete and Construction Management |
| 27 | Peasley, Michael | Marketing |
| 28 | Pence, Alicia | Elementary and Special Education |
| 29 | Smith, Elizabeth | Human Sciences |
| 30 | Suwanprasert, Wisarut | Economics and Finance |
| 31 | Vagner, Brandon | Accounting |
| 32 | Wilson, Tiffany | Educational Leadership |
| 33 | Woodward, Jennifer | Political Science and International Relations |
| 34 | Zaza, Ibtissam | Information Systems and Analytics |
| 35 | Zhang, Mengliang | Chemistry |

Faculty Promotion Recommendations for 2023-24

| | Name | Department | Proposed Rank |
|----|-------------------------|-----------------------------------|---------------------|
| 1 | Arroyo, Fred | English | Associate Professor |
| 2 | Asbury, Mary Beth | Communication Studies | Professor |
| 3 | Bacon, Chris | Journalism and Strategic Media | Associate Professor |
| 4 | Baran, Emily | History | Professor |
| 5 | Barry, Vaughn | Health and Human Performance | Professor |
| 6 | Bicker, Kevin | Chemistry | Professor |
| 7 | Carter, John Lando | Educational Leadership | Associate Professor |
| 8 | Chevrette, Roberta | Communication Studies | Associate Professor |
| 9 | Cobb, Christina | University Studies | Associate Professor |
| 10 | Combest, Christopher | Music | Associate Professor |
| 11 | Conceison, Michelle | Recording Industry | Associate Professor |
| 12 | Cooper, Cathy | Nursing | Professor |
| 13 | Cui, Song | Agriculture | Professor |
| 14 | Ding, Keying | Chemistry | Professor |
| 15 | Erskine, Michael | Information Systems and Analytics | Associate Professor |
| 16 | Ertel, Pamela Kramer | Elementary and Special Education | Professor |
| 17 | Flagg, Amanda | Nursing | Professor |
| 18 | Frisby, Derek | History | Master Instructor |
| 19 | Gardner, Grant | Biology | Professor |
| 20 | Garven, Sarah | Accounting | Associate Professor |
| 21 | Goodwin, Katie | Theatre and Dance | Associate Professor |
| 22 | Gray-Hildenbrand, Jenna | Philosophy and Religious Studies | Professor |
| 23 | Greer, Timothy | Information Systems and Analytics | Professor |
| 24 | Grubbs, Brandon | Health and Human Performance | Associate Professor |
| 25 | Han, Mei | Music | Professor |
| 26 | Haruna, Samuel | Agriculture | Associate Professor |
| 27 | Higgs, Meredith Anne | University Studies | Professor |
| 28 | Houston, James | Psychology | Associate Professor |
| 29 | Hover, Ashlee | Womack Educational Leadership | Associate Professor |
| 30 | Jeong, Yangseung | Biology | Associate Professor |
| 31 | King, Rebecca | Philosophy and Religious Studies | Professor |
| 32 | Ku, Seockmo | Agriculture | Associate Professor |
| 33 | Lambert, Frank | Womack Educational Leadership | Associate Professor |
| 34 | Levin, Darren | Theatre and Dance | Professor |
| 35 | Lewis, Richard | Media Arts | Associate Professor |
| 36 | Lischka, Alyson | Mathematical Sciences | Professor |
| 37 | Ly, Aliou | History | Professor |
| 38 | McIntyre, Rebecca | History | Research Professor |
| 39 | McKinzie, Ashleigh | Sociology and Anthropology | Associate Professor |
| 40 | Miller, Alissa | User Services | Professor |
| 41 | Mims, Lashonda | History | Associate Professor |
| 42 | Moake, Timothy | Management | Associate Professor |

| | Name | Department | Proposed Rank |
|----|-----------------------|---|------------------------------|
| 43 | Nogueira, Soraya | World Languages, Literatures, and Cultures | Professor |
| 44 | Paulauskas, Michael | History | Master Instructor |
| 45 | Peasley, Michael | Marketing | Associate Professor |
| 46 | Pence, Alicia | Elementary and Special Education | Associate Professor |
| 47 | Ramos, Angela | Health and Human Performance | Master Instructor |
| 48 | Reed, Karen | User Services | Professor |
| 49 | Riley Sousa, Mary | History | Professor |
| 50 | Roach, Michael | Economics and Finance | Professor |
| 51 | Saul, Tiffany | Sociology and Anthropology | Research Associate Professor |
| 52 | Sawyer, Benjamin | History | Master Instructor |
| 53 | Shi, Xiaowei | Communication Studies | Professor |
| 54 | Smith, Elizabeth | Human Sciences | Associate Professor |
| 55 | Stevens, Sherri | Nursing | Professor |
| 56 | Stickle, Benjamin | Criminal Justice | Professor |
| 57 | Sutherland, Suzanne | History | Professor |
| 58 | Suwanprasert, Wisarut | Economics and Finance | Associate Professor |
| 59 | Tipps, Angela | Music | Master Instructor |
| 60 | Vagner, Brandon | Accounting | Associate Professor |
| 61 | Wang, Zhen | Political Science and International Relations | Professor |
| 62 | Wilson, Tiffany | Educational Leadership | Associate Professor |
| 63 | Woodard, Jennifer | Journalism and Strategic Media | Professor |
| 64 | Woodward, Jennifer | Political Science and International Relations | Associate Professor |
| 65 | Zaza, Ibtissam | Information Systems and Analytics | Associate Professor |
| 66 | Zhang, Mengliang | Chemistry | Associate Professor |
| 67 | Zhao, Min | Economics and Finance | Professor |



**Middle Tennessee State University
Board of Trustees**

Academic Affairs, Student Life, and Athletics Committee

Action Item

DATE: May 23, 2023

SUBJECT: **Approval of New Academic Degree Program
B.S., Cybersecurity Management**

PRESENTER: Mark Byrnes
Provost

BACKGROUND INFORMATION:

University Policy 251, Approval of Academic Programs, Units, and Modifications, states all academic actions that require review and approval by THEC must be approved by the Board of Trustees.

A New Academic Program Proposal for a Bachelor of Science in Cybersecurity Management is attached for approval.



Expedited New Academic Program Proposal
B.S. Cybersecurity Management

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Expedited Letter of Notification (ELON)

(Revised: May 2023)

Policy A1.6 Expedited Academic Programs: Approval Process

| | |
|--------------------------------------|--|
| Institution: | Middle Tennessee State University |
| Proposed Academic Program: | Cybersecurity Management, Bachelor of Science (B.S.) |
| Proposed Implementation Date: | May 2024 |
| Proposed CIP Code: | 11.1003 – Computer and Information Systems Security |
| ELON Submission Date: | January 10, 2023 |
| Posted on the THEC Website: | January 18, 2023 |
| Public Comment Period: | January 18-28, 2023 |

Expedited Letter of Notification Checklist

[THEC Academic Policy A1.6](#) (Section 1.6.4A) Expedited Letter of Notification (ELON)

Requirements:

- ✓ Letter of Support from the President/Chancellor signifying institutional governing board or system office support for development;
- ✓ Institution name, proposed academic program, degree designation, proposed CIP code, and CIP code title;
- ✓ Academic Program Liaison (APL) name and contact information;
- ✓ Implementation timeline;
- ✓ Background narrative;
- ✓ Justification for consideration of expedited policy;
- ✓ Existing programs of study at the institution;
- ✓ Community and industry partnerships;
- ✓ Accreditation;
- ✓ Administrative structure;
- ✓ Enrollment and graduate projections;
- ✓ Alignment with State Master Plan and institutional mission profile;
- ✓ Student interest;
- ✓ Existing programs offered at public and private Tennessee universities; and
- ✓ Articulation and transfer.

Office of the President

Middle Tennessee State University
110 Cope Administration Building
Murfreesboro, TN 37132
o: 615-898-2622 • f: 615-898-2507



14 December 2022

Emily House, PhD
Executive Director
TN Higher Education Commission
312 Rosa L. Parks Ave., 9th Floor
Nashville, TN 37243

Dear Dr. House:

In accordance with Tennessee Higher Education Commission Policy A 1.6, Section 1.6.4A, I am submitting this request for consideration to utilize the Expedited Academic Approval Process for the development of a Bachelor of Science, Cybersecurity Management, at Middle Tennessee State University.

MTSU's proposed B.S. in Cybersecurity Management is aligned with the definition of programs subject to approval for an expedited review as identified in THEC Policy A 1.6, Section 1.6.2A. Cybersecurity is categorized as a STEM program defined by the federal CIP code category 11.1003 Computer and Information Systems Security. Furthermore, cybersecurity is a growing field and falls within the definition of a high-demand program.

The addition of B.S. in Cybersecurity Management in the Jennings A. Jones College of Business would greatly enhance MTSU's academic portfolio and align with state and local efforts to increase high-quality employable graduates. From mid-2021 through mid-2022, there were 651 unique job postings in cybersecurity in the Middle Tennessee area (Davidson County, Rutherford County, Williamson County). Current projections provided by the Bureau of Labor Statistics indicate that information security analysts are in great demand, growing at a rate of 35% through 2031, and providing median pay of \$102,600.

Thank you for your consideration of the request to submit the B.S. in Cybersecurity Management in an expedited manner. We look forward to your response.

Sincerely,

A handwritten signature in blue ink that reads "Sidney A. McPhee".

Sidney A. McPhee
President

CC: Dr. Julie Roberts, THEC Chief Academic Officer
Dr. Mark Byrnes, MTSU University Provost



EMILY HOUSE
Executive Director

BILL LEE
Governor

STATE OF TENNESSEE
HIGHER EDUCATION COMMISSION
STUDENT ASSISTANCE CORPORATION
312 ROSA L. PARKS AVENUE, 9TH FLOOR
NASHVILLE, TENNESSEE 37243
(615) 741-3605

December 20, 2022

Dr. Sidney McPhee
Middle Tennessee State University
1301 E. Main Street
Murfreesboro, TN 37132

Dear President McPhee:

Thank you for the submission of a formal request for consideration to utilize the Expedited Academic Approval Process for the proposed Cybersecurity Management, Bachelor of Science (BS) program at Middle Tennessee State University.

After reviewing your letter, I approve MTSU's request to move forward to the Expedited Letter of Notification (ELON) stage for the proposed program. Please ensure the ELON is in alignment with THEC Academic Policy A1.6 – Expedited Academic Programs: Approval Process.

Best of luck in the continued development of this program.

Sincerely,

A handwritten signature in black ink, appearing to read "Emily House", is written over a light grey circular stamp.

Emily House, PhD

cc: Mark Byrnes, University Provost
Amy Aldridge Sanford, Vice Provost of Academic Programs
Julie A. Roberts, THEC Chief Academic Officer
Anjelica Jones, THEC Director of Academic Affairs

Overview

Proposed Program Name

Cybersecurity Management

Proposed Degree Designation

Bachelor of Science (B.S.)

Proposed CIP Code

11.1003 – Computer and Information Systems Security

Definition: A program that prepares individuals to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems, and procedures. Includes instruction in computer architecture, programming, and systems analysis; networking; telecommunications; cryptography; security system design; applicable law and regulations; risk assessment and policy analysis; contingency planning; user access issues; investigation techniques; and troubleshooting.

Academic Program Liaison (APL) name and contact information

Dr. Amy Aldridge Sanford
Vice Provost for Academic Programs
Middle Tennessee State University
Cope Administration Building, Rm: 111
Murfreesboro, TN 37132
Office: 615-494-7611
Email: amy.aldridge.sanford@mtsu.edu

Implementation Timeline

Proposed dates for the external judgement site visit

July 2023

Estimated date of submission of the external review report to THEC and the institution (within 30 days following the site visit)

August 2023

Estimated date of institution's response to external review (within 30 days of receiving the external reviewer's report)

September 2023

Proposed date (month and year) of the institutional governing board's meeting to consider the proposed academic program for approval

June 2023

Proposed date (month and year) of the Tennessee Higher Education Commission meeting to consider the proposed academic program for approval

November 2023

Proposed implementation date (semester and year) when students will enroll in the proposed academic program

January 2024

Background and Overview

Background Narrative

Provide a short narrative, describing the circumstances that initiated the need and development of the proposed academic program.

The Information Systems and Analytics (ISA) Department at MTSU has offered a graduate-level concentration in information systems security since 2007. While the program has been successful in preparing graduate students for advanced positions in information systems security, there remains a gap in the workforce between available positions and skilled cybersecurity workers focused on managing, creating, and maintaining secure systems. Additionally, the workforce needs in cybersecurity continue to grow across the spectrum - locally to globally. To assist with fueling the supply pipeline for qualified and educated security professionals, the ISA Department is proposing an undergraduate program focused on cybersecurity management. The program will provide students the knowledge and skills to develop, maintain, and manage cybersecurity systems within a business context. Additionally, the degree will allow students to begin their careers in the field and to enter organizations with a focus on meeting their security needs. Additionally, the cybersecurity profession has a very strong potential to provide high salaries and growth opportunities for Tennesseans.

Provide a general overview of the program, including a description of the nature of the proposed program, total credit hours, and modalities of course delivery.

MTSU proposes a program of study leading to a Bachelor of Science degree in Cybersecurity

Management. The program will teach students the skills necessary to approach development and management of systems while maintaining a security emphasis. Students will learn key concepts related to development and programming for cybersecurity, cloud computing, digital forensics, infrastructure design and management, database design, and systems analysis and design all through a cybersecurity lens. Students will leave the program knowing how to design, manage, and apply appropriate tools and technologies to maintain security of data, systems, and infrastructure. A B.S. in Cybersecurity will provide students the foundational and focused knowledge needed to successfully begin and grow a career in cybersecurity. The curriculum will consider key frameworks provided by government and industry such as those provided by the National Institute of Standards and Technology to maintain currency¹. The program will also afford students the opportunity to select an area of interest. For example, students could choose to take courses in criminal justice among other related programs across MTSU's campus.

In total, the program will consist of 120 hours of coursework and will be offered with both on ground and online course options. Forty-one (41) hours will be dedicated to general education. Core requirements will consist of 46 hours, and students will take a business administration minor accounting for 18 hours, which leaves 15 hours of elective credit. The minor also provides the management context and business foundations to support the focus of the proposed B.S. degree. A summary of the structure is provided in the following table. Details on courses included in the program core will be provided in the Expedited New Academic Program Proposal (ENAPP).

| Degree Component | Hours |
|-------------------------------|--------------|
| General Education | 41 |
| Program Core | 46 |
| Business Administration Minor | 18 |
| Electives | 15 |
| Total | 120 |

Justification for Consideration of Expedited Policy

Provide clear evidence that the proposed program is in high demand in the region and in the state.

Cybersecurity is a growing field and falls within the definition of a high-demand program as provided by the Tennessee Higher Education Commission in Policy A1.6. It is categorized as a STEM program defined by the federal CIP code category 11:1003 Computer and Information Sciences and Support Services.

Additionally, the program would provide a direct response to demonstrated workforce needs. Current projections provided by the Bureau of Labor Statistics² indicate that IT occupations will

¹ <https://www.nist.gov/itl/applied-cybersecurity/nice>

² <https://www.bls.gov/ooh/computer-and-information-technology/home.htm>

increase much faster than average (15%) through 2031. Information security is one area driving this demand. Specifically, the information security analyst was listed as high-demand position requiring an undergraduate degree, growing at a rate of 35%, and providing median pay of \$102,600. This position was also highlighted in the State of Tennessee Long Term Outlook to 2028 report³.

EMSI (Economic Modeling Specialist International) software was used to obtain a more detailed perspective of the workforce needs in the Middle Tennessee region as well as and nationally. From mid-2021 through mid-2022, there were 651 unique job postings in cybersecurity in the Middle Tennessee area (Davidson County, Rutherford County, Williamson County). The median salary for these positions was \$100,096. Seventy-three percent of the jobs required at least a bachelor's degree with 91% requiring a bachelor's degree or higher. Primary industries impacted by this need included professional, scientific, and technical services, manufacturing, finance, education, and healthcare. Additionally, the Academic Supply for Occupational Demand Report provided by the Tennessee Higher Education Commission notes security positions also support areas such as tech consulting or headquarter operations⁴. Nationally, across over 322,000 unique job postings, the median salary for cybersecurity positions is slightly higher at \$101,248 with 93% of jobs requiring a bachelor's degree or higher.

Existing Programs of Study at the Institution

If the proposed program is emerging from an existing minor or certificate program, provide the previous three years of enrollment and graduation data for the existing program.

There are no undergraduate programs or undergraduate concentrations in cybersecurity at Middle Tennessee State University. The only program related to security is at the graduate level: M.S. in Information Systems, Information Security and Assurance concentration, which has had a steady annual enrollment of about 37 students.

Community and Industry Partnerships

Provide a minimum of two letters of support from regional, community, and/or workforce partners in the ELON appendix. Letters should be dated and appear on letterhead.

Support letters (see Appendix) were obtained from organizations that play major roles in technology in the State of Tennessee. Elise Cambournac, President and CEO of the Nashville Technology Council, states that "In the last survey of corporate members, shortage of tech talent was the primary concern with cybersecurity listed as one of the top 3 skills this region needs to further develop." She also notes that the Nashville Technology Council believes that "MTSU is well positioned to close the gap in the cybersecurity workforce by equipping students with Cybersecurity skills to fill open jobs for our Middle Tennessee employers." This sentiment

³ http://www.jobs4tn.gov/admin/gsipub/htmlarea/uploads/LMI/Publications/Tennessee_Long_Term_Outlook_to_2028.pdf

⁴ <https://www.tn.gov/thec/research/supply-and-demand.html>

is echoed by the CISO for Bridgestone Americas, Tom Corridon, in his letter of support for the program. Moreover, he comments that “the attraction, development, and retention of talent in this field is critical to our success.” There is a clear need for additional qualified and educated individuals supporting cybersecurity across organizations in Tennessee. The focus on filling the supply-demand gap is noticeable, and MTSU is in a prime position to assist.

Accreditation

If the proposed program has a programmatic accrediting agency, please describe plans, timeline, and associated costs to obtain accreditation.

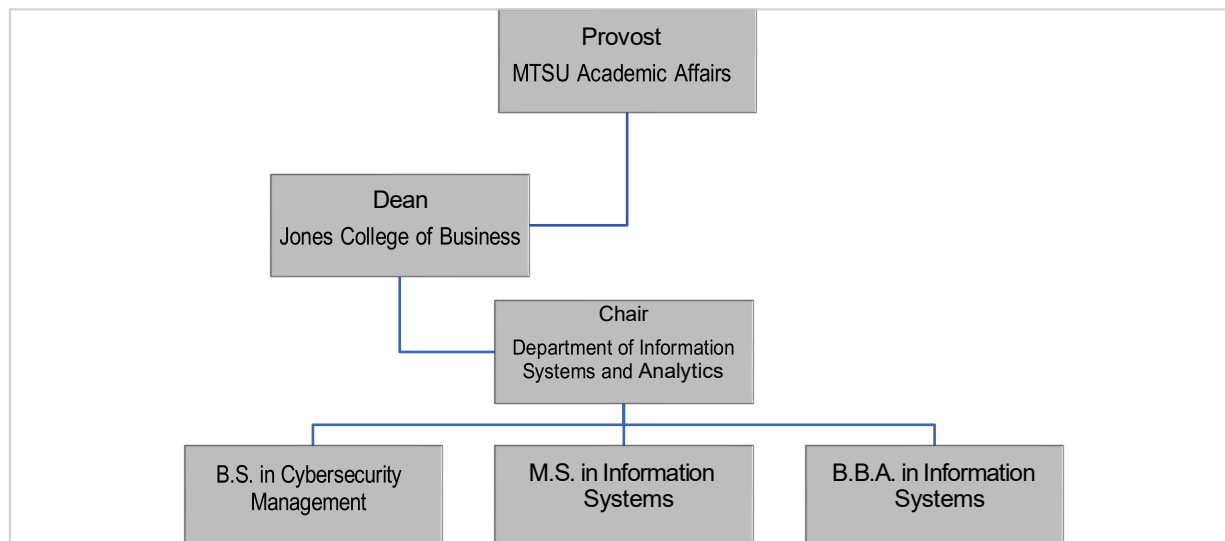
In addition to AACSB accreditation for the Jones College of Business, the B.B.A. in Information Systems program housed in the ISA Department is accredited by ABET.

Since the submission of the Expedited Letter of Notification (ELON), the degree has been reframed based on internal discussions between colleges and departments on campus. The curriculum has been adjusted to highlight the management aspect of the B.S. in cybersecurity management. ABET does not provide an accreditation that aligns with the final program design provided in the Expedited New Academic Program Proposal (ENAPP).

Administrative Structure

Provide an organizational chart that includes the college, department, administrative unit, and program director for the proposed academic program.

The degree programs in the Information Systems and Analytics Department are the primary responsibility of the department chair.



If a new academic department will be required for the proposed program, the THEC Academic Policy A1.3: New Academic Units must be followed and should be noted in this section. The request for a New Academic Unit must be submitted concurrently with the Expedited Letter of Notification.

A new academic department is not required to establish the B.S. in Cybersecurity Management. The program will be housed in the existing Information Systems and Analytics Department in the Jones College of Business at Middle Tennessee State University.

Enrollment and Graduation Projections

Provide initial projections for the first five years of enrollment and graduates. Enrollment projections should be realistic and based on demonstrable student demand. Attrition calculations should be based on the average rates of similar programs or overall institutional attrition rates.

Prior to determining the projections required, the enrollment and graduation rates of similar programs at MTSU were examined. The programs included were focused in somewhat similar fields with existing degrees in Information Systems and Analytics and Computer Science. For example, the graduation projections follow what was expected for a recent undergraduate program at MTSU in Data Science. The attrition rate used was based on a recent proposal for a similar program in addition to the 5-year average fall-to-fall retention rate for the MTSU Information Systems B.B.A. program, which is just over 89%⁵.

Table 1. Projected Enrollments and Graduates

| Projected Enrollments and Graduates | | | | |
|-------------------------------------|---------------|---------------------------------|---------------------|---------------------|
| Year | Academic Year | Projected Total Fall Enrollment | Projected Attrition | Projected Graduates |
| 1 | 2024-2025 | 29 | - | 0 |
| 2 | 2025-2026 | 47 | 3 | 0 |
| 3 | 2026-2027 | 56 | 2 | 4 |
| 4 | 2027-2028 | 64 | 1 | 9 |
| 5 | 2028-2029 | 73 | 1 | 14 |

⁵ <https://www.mtsu.edu/iepr/>

Institutional Alignment and Demand

Alignment with State Master Plan and Institutional Mission

Explain how the proposed program aligns with the THEC Master Plan and institutional mission statement or profile.

The Master Plan for Tennessee Postsecondary Education 2015-2025 calls for statewide strategic development of higher education programs that increases the educational attainment levels of Tennesseans; addresses the state's economic development, workforce development, and research needs; and calls for institutional mission differentiation to realize statewide efficiencies through institutional collaboration, minimized redundancy, a focus on location, and research. The proposed B.S. in Cybersecurity Management meets the State Master Plan by creating an undergraduate degree program and associated curriculum that focuses on supplying one of Tennessee's largest workforce demand areas: cybersecurity. The program also provides Tennesseans with the opportunity to prepare for careers in a growing and sustained workforce in cybersecurity. Based on projections for job growth from 2021-2031 for all technology-related jobs, information security analysts will grow 35% with a median salary of \$102,600. The demand and pay will continue to be attractive to prospective individuals looking to enter a technology related career.

Middle Tennessee State University has identified three primary goals in its campus Academic Master Plan⁶. Following are the goals along with how the B.S. in Cybersecurity Management aligns with each.

- 1) MTSU will advance academic quality through excellence in teaching, scholarship, and service and the celebration of MTSU's strengths.

An undergraduate degree program in Cybersecurity Management provides a tremendous opportunity for MTSU. The degree will offer students the ability to learn knowledge and skills required to work in a thriving part of the regional workforce.

Students will be able to take courses from expert faculty within and across the JCOB as well as through relationships with other key departments. Current faculty have extensive experience in teaching topics related to the program through their involvement in the MSIS program's security concentration. These faculty also have extensive work experience in the field of IT and a breadth and depth of knowledge to bring to their students. The diversity of faculty and programs is a strength of MTSU and by combining these resources into a new degree, it leverages the strengths of MTSU by bringing the best of all areas together. The new program will provide for additional focus as it relates to research opportunities and possibilities for grant funding.

⁶ <https://issuu.com/mtsumag/docs/mtsuacademicmasterplan>

Cybersecurity is an area with a tremendous amount of government and private support. It is anticipated that faculty will work with students and support current and ongoing research initiatives.

- 2) MTSU will promote student success and individual responsibility for accomplishments through a community dedicated to student-centered learning.

MTSU is skilled at providing students opportunities to succeed in the university environment and beyond. The B.S. in Cybersecurity Management will prove to be a valuable addition to the list of program offerings. The knowledge and skills to which students will be exposed will prepare them for direct entry into a segment of the workforce that is in great demand. This demand is not going to change any time in the foreseeable future. The program is planned to involve many experiences for the students, labs, competitions, student organizations, professional mentors, etc. These are all areas where students can learn to obtain and manage opportunities to drive them to reach their full potential.

- 3) MTSU will develop purposeful and sustainable partnering relationships and outreach.

Components of the B.S. in Cybersecurity Management will have defined projects that will involve working with industry leaders. These interactions are critical for MTSU students to fully engage in the cybersecurity field and grow by learning from not just faculty but from industry experts. The ISA Department also has an extensive list of employers that are involved annually with the IT Connect Career Fair. It is a goal of the ISA Department to create opportunities for students to make industry connections throughout their program.

Student Interest

Provide compelling evidence of student interest in the proposed program. Types of evidence vary and may include enrollment in related concentrations or minors; representative student and alumni surveys; and national, statewide, and professional employment forecasts and surveys.

Students in related programs (BlueSec student security group, academic focus, information systems and analytics majors, undecided students, etc.) at MTSU were surveyed regarding their interest in a potential program in cybersecurity. Seventy-five students completed the survey; all 75 students responded the questions noted in this section. These students were asked key questions related to a potential program in cybersecurity. For each question, most responses were quite positive and supported the inclusion of a new program in cybersecurity at MTSU.

1. If cybersecurity had been available as a major at MTSU when you first started, how likely is it you would have considered it as a major?
 - a. Extremely Likely: 35

- b. Likely: 29
2. If cybersecurity was available as a major at MTSU now, how likely is it that you would consider it as a major?
 - a. Extremely Likely: 32
 - b. Likely: 28
 3. Considering the importance of cybersecurity today, how important is it to have an undergraduate degree in cybersecurity for students at MTSU?
 - a. Very Important: 59
 - b. Important: 13
 4. If you were able to double major, would you choose Cybersecurity as a second major?
 - a. Extremely Likely: 38
 - b. Likely: 25

Existing Programs Offered at Public and Private Tennessee Universities

List all academic programs with the same or similar CIP code offered at public and private universities in Tennessee along with the number of degrees awarded for the last three years of available data.

The following table provides detail pulled from THEC's inventory of degree programs in public and private institutions in the State of Tennessee for the CIP code under which the proposed degree would exist as well as degrees in similar CIP codes. There are only two public institutions that offer a B.S. in Cybersecurity in the proposed 11.1003 CIP code. These include UT Martin and UT Southern. The remaining programs are degrees in different CIP codes that offer a concentration in an area similar or related to cybersecurity. **No other institution has a degree specifically related to cybersecurity management, where the curriculum is specifically designed to support students interested in pursuing careers in cybersecurity management such as security analysts and information security managers.**

Table 2. Similar Programs in Tennessee

| Federal CIP | Degree | Major | University | 21-22 | 20-21 | 19-20 |
|-------------|--------|---|---------------------------------|-------|-------|-------|
| 11.1003 | BS | Cybersecurity | UTM** | - | - | - |
| 11.1003 | BS | Cybersecurity | UTS** | - | - | - |
| 11.0101 | BS | Computing – Cybersecurity & Modern Networks Concentration | ETSU | | 78 | 73 |
| 11.0501 | BS | Computer Information Systems – Information Assurance & Security Concentration | APSU* | 36 | 41 | 32 |
| 11.0701 | BS | Computer Science – Cybersecurity & Networking Concentration | TSU* | 17 | 23 | 47 |
| 11.0701 | BS | Computer Science – Information Assurance & Security Concentration | TTU | 48 | 33 | 37 |
| 11.0701 | BS | Computer Science – Cybersecurity Concentration | UM | 14 | 5 | 3 |
| 11.0701 | BS | Computer Science – Cybersecurity Concentration | UTC | 9 | 14 | 16 |
| 11.1003 | BS | Cybersecurity | Lipscomb** | - | - | - |
| 43.0402 | BS | Cybersecurity & Digital Forensics | Christian Brothers University** | - | - | - |

*Concentration data not available; number represents data on B.S. degrees overall.

**No data available. Degree program is too new.

If there are current programs in Tennessee, provide a short narrative on how the proposed program will substantially differ from existing programs.

As noted in the above section, there are only two programs at public institutions in the State of Tennessee that offer the B.S. in Cybersecurity in the 11.1003 CIP code: UT Martin and UT Southern. Both programs are new. The UT Martin B.S. in Cybersecurity began in Fall 2022, and the start date for the program at UT Southern was Fall 2021. The B.S. in Cybersecurity Management at MTSU will be housed in the Jones College of Business and will provide the students with a minor in business administration. This focus will offer students with a defined context and background for working across a variety of organizations. Understanding the fundamental principles of business operations is key to developing and managing systems and securing the infrastructure and data critical to an organization's existence.

The programs that appear in related CIP codes vary primary by the degree driving the course of

study. For example, ETSU offers a B.S. in Computing with a concentration in cybersecurity and modern networks. TSU offers a B.S. in Computer Science with a concentration in cybersecurity and networking. Others in the above table follow similar structures. The primary difference between the program proposed for MTSU and these examples is in the amount of content dedicated to the coverage of cybersecurity and the fundamental technology-related topics that must be covered to provide the skill set needed for the jobs in the security field. It is important to note that Lipscomb University, a private university in Davidson County, also offers a B.S. in Cybersecurity. The cost of private institutions is often out of reach for students.

Universities in states that border Tennessee that are also members of the Southern Regional Education Board were examined to determine what the regional offerings were in cybersecurity. According to the Cybersecurity Guide⁷, there are 26 programs (bachelor's degrees and minors) in the seven SREB states that surround Tennessee. With the demand in the field in general and the specific demand for Tennessee, more programs are necessary to narrow the gap between availability of qualified workers and organizational need.

Articulation and Transfer

For proposed bachelor's programs, indicate all Tennessee Transfer Pathways (TTP) that may be acceptable for entry into the proposed program.

Two primary Tennessee Transfer Pathways currently exist that would align with the proposed B.S. in Cybersecurity Management: A.S. in Information Systems and A.S. in Computer Science.

The A.S. in Information Systems is available at the following community colleges:

- Chattanooga State Community College
- Cleveland State Community College
- Columbia State Community College
- Dyersburg State Community College
- Jackson State Community College
- Motlow State Community College
- Nashville State Community College
- Pellissippi State Community College
- Southwest Technical Community College
- Volunteer State Community College
- Walters State Community College.

The A.S. in Computer Science is available at the following community colleges:

- Chattanooga State Community College

⁷ <https://cybersecurityguide.org/programs/cybersecurity-bachelors-degree>

- Cleveland State Community College
- Columbia State Community College
- Jackson State Community College
- Motlow State Community College
- Nashville State Community College
- Northeast State Community College
- Pellissippi State Community College
- Southwest Technical Community College
- Volunteer State Community College

Indicate any additional community college or technical college programs that may be articulated for transfer into the proposed bachelor's program.

At this time, MTSU does not have processes formalized to drive articulation with technical college programs, but this would be an area of interest to explore as the program begins, grows, and relationships can be built with these institutions. Additionally, no other pathways or articulation agreements exist with community colleges beyond those listed in the previous section.



BRIDGESTONE AMERICAS, INC.
200 4th Avenue South
Nashville, TN 37201

To: Tennessee Higher Education Commission (THEC)

Date: January 10, 2023

Subject: Letter of Support for Middle Tennessee State University (MTSU) proposed Bachelor of Science in Cybersecurity Management

To whom it may concern,

Bridgestone Americas is pleased to provide this letter of support for Middle Tennessee State University (MTSU) proposed Bachelor of Science in Cybersecurity Management.

Bridgestone is a large employer in the Middle TN technology community, including corporate headquarters, manufacturing, distribution, and retail locations. Safety is at the core of mission and Cyber safety is becoming more important for us in our digital and solutions transformation. As the leader of Cyber Security for Bridgestone, the attraction, development, and retention of talent in this field is critical to our success. In today's hybrid work environment companies can recruit and source talent from anywhere around the globe but it is important to Bridgestone to have local Cyber Security talent in the Greater Nashville area.

MTSU has been a key stakeholder in the higher-education tech community in Middle TN and a strong partner with Bridgestone over the years, therefore we believe that MTSU is well positioned to close the gap in the cybersecurity workforce by equipping students with Cybersecurity skills to fill open jobs at Bridgestone and other Middle Tennessee employers.

Sincerely yours,

Thomas K. Corridon



Tom Corridon

Chief Information Security Officer
Vice President, IT
Bridgestone Americas, Inc.
Mobile: +1 (630) 290-1663



January 10th, 2023

To:

Tennessee Higher Education Commission (THEC)

Subject: Letter of Support for Middle Tennessee State University (MTSU) proposed Bachelor of Science in Cybersecurity Management

To whom it may concern,

The Greater Nashville Technology Council (NTC) is pleased to provide this letter of support for Middle Tennessee State University (MTSU) proposed Bachelor of Science in Cybersecurity Management.

The NTC supports the entire Middle Tennessee technology community, including over 550 corporate members and extensive partnerships with educators and policy makers across the region. The NTC mission is to advance the diverse technology ecosystem by connecting and promoting members, attracting, growing, and retaining tech talent, and providing opportunities to reinvest in the Greater Nashville community. In support of our mission, our members and our community partners, the NTC has created and grown many Tech Talent programs to support its stakeholders in attracting, growing and retaining tech talent. In the last survey of corporate members, shortage of tech talent was the primary concern, with cybersecurity listed as one of the top 3 skills this region needs to further develop. In addition, according to the last job report that MTSU and NTC collaboratively published in the fall of 2021, Information Security Analytics is one of the most in-demand jobs with over 500 new job postings every month, and a 5-year total job growth of 169%.

MTSU has been a key stakeholder in the higher-education tech community in Middle Tennessee and at NTC, we believe that MTSU is well positioned to close the gap in the cybersecurity workforce by equipping students with Cybersecurity skills to fill open jobs for our Middle Tennessee employers.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Elise Cambournac".

Elise Cambournac
President & CEO
Greater Nashville Technology Council

University Provost
 110 Cope Administration Building
 Middle Tennessee State University
 Murfreesboro, Tennessee 37132
 Office: (615) 898-2880 • Fax: (615) 898-5029



May 9, 2023

Julie A. Roberts, PhD
 Chief Academic Officer
 TN Higher Education Commission
 312 Rosa L. Parks Ave., 9th Floor
 Nashville, TN 37243

Dear Dr. Roberts:

Our sincerest gratitude to you and THEC’s Academic Affairs staff for the thoughtful review of MTSU’s ELON for a **Cybersecurity Management, Bachelor of Science program**. We have incorporated and highlighted in yellow the suggestions below in the revised ELON.

| ELON Section | Reviewer Comment | MTSU Response | ELON page # |
|---|--|--|--------------------|
| Justification for consideration of expedited policy | <i>Hyperlink is unavailable for Outlook Report, please update.</i> | A working link is provided. | 8 |
| Accreditation | <i>Are there any additional costs expected from the ABET accreditation process? If so, please include that in this section.</i> | Since the submission of the ELON, the degree has been reframed based on internal discussions between colleges and departments on campus. The curriculum has been adjusted to highlight the management aspect of the B.S. in cybersecurity management. ABET does not provide accreditation that aligns with the final program design provided in the ENAPP. | 9 |
| Administrative Structure | <i>Given the anticipated enrollment, will a program director be hired, or a directorship be assigned to a current faculty or staff member?</i> | The chair of the Department of Information Systems and Analytics will manage the degree program. If the program grows to a point requiring a program director, the department will seek the necessary support through appropriate channels in Academic Affairs. | 9 |
| Enrollment and graduation projections | <i>Projected graduates seem low compared to projected enrollment. Please provide explanation.</i> | There was an error in the projected graduates for Year 4; the value should have been 9. The projections follow what was expected for a recent undergraduate program at MTSU in Data Science. | 10 |

| | | | |
|--|--|--|--------------|
| Student interest | <i>It is unclear what percentage of students this represents. Did all students complete all sections of the survey? Please provide a narrative summary of student survey responses.</i> | All 75 students surveyed answered each question presented in the ELON. The survey also contained open-ended questions to help gauge interest in various cybersecurity content areas which were not presented in the ELON. The open-ended questions had a response rate of 92% (69/75 students responded). | 12 |
| Existing programs offered at public and private Tennessee universities | <i>Please revise to include the following programs at in-state private institutions:</i> <ul style="list-style-type: none"> • <i>CIP 11.1003: Lipscomb University</i> • <i>CIP 43.0403 (Cyber/Computer Forensics and Counterterrorism): Christian Brothers University</i> | Thank you for noting the omission of the private institutions offering programs in the same CIP code or in a similar area. The table of existing programs has been updated in the revised ELON to include the programs noted. | 14 |
| Public comments | <i>(TTU): With eight cybersecurity undergraduate programs already being offered at Tennessee public institutions, will this proposed program be redundant? According to MTSU's Office of Institutional Effectiveness, Planning, and Research, the first-to-second year retention rate has been around 20% in recent years. However, the attrition rates shown in Table 1 of the proposal are significantly lower. Finally, the enrollment, attrition, and graduation numbers do not match.</i> | While there are other cybersecurity programs, this degree will be uniquely focused on cybersecurity management. The curriculum is designed to support students interested in pursuing careers in cybersecurity management such as security analysts and information security managers. Additionally, based on demand for jobs in this area, MTSU feels there is room for degrees in the cybersecurity space, especially with a business management focus. The attrition rate used was based on a recent proposal for a similar program in addition to the 5-year average fall-to-fall retention rate for the MTSU Information Systems B.B.A. program, which is just over 89% ¹ . | 13 10 |
| | <i>(UM): The expedited LON, however, fails to address how national</i> | Thank you for the comment regarding faculty and the NIST framework. We are certainly aware of the challenges in | 7 |

¹ <https://www.mtsu.edu/iepr/>

| | | | |
|--|---|---|--|
| | <i>challenges in recruitment of qualified faculty in cybersecurity will be addressed. It is also recommended that the proposed program be mapped to the NIST Cybersecurity Education Framework for workforce development to ensure that skills of graduates are matched to the guidelines to ensure employer needs are being addressed.</i> | obtaining faculty and the competition in the field. We have a strong foundation of faculty that have been involved in our graduate concentration in security and assurance or have expertise in related areas that are interested in supporting the undergraduate program. We will additionally cross-train current faculty that have extensive experience in information systems. Our search for faculty and industry experts to support the program will explore opportunities to use professors of practice as well as traditional tenure-track positions. Regarding the NIST framework, we are aware of the framework and will make sure the components are integrated into our curriculum. We have updated the ELON to note that the NIST framework is taken into consideration. | |
|--|---|---|--|

Again, thank you for the support as we pursue this degree option for students at MTSU. We look forward to the continued review process.

Sincerely,



Mark Byrnes, PhD

Section II: Curriculum

Provide an adequately structured curriculum that (a) meets the stated objectives of the academic program, and (b) reflects breadth, depth, theory, and practice appropriate to the discipline and the level of the degree. The curriculum should be compatible with disciplinary accreditation and meet the criteria for the general education core, as well as articulation and transfer, where applicable.

Catalog description

Provide the catalog description for the proposed program.

The B.S in Cybersecurity Management provides a foundation of skills and knowledge necessary for working in cybersecurity. The program focuses on management of the cybersecurity function in organizations to develop and enrich protection, detection, and response capabilities. Topics covered in the program include network and cloud infrastructure and security, data security, governance, policy development and management, risk management, vulnerability assessment, system security, digital forensics, security analytics, and penetration testing.

Program learning outcomes

Provide the program learning outcomes for the proposed program. Outcomes should reflect the specific knowledge and skills expected for students to acquire as part of their educational experience in the proposed program.

The proposed undergraduate program will produce graduates with the knowledge and skills required to begin and maintain careers within the field of cybersecurity management through a dedication to continued skill development and lifelong learning.

Upon completion of the program, students will be able to

1. Apply principles of information systems design, development, and data management to support a secure computing environment.
2. Demonstrate an understanding of the technologies needed to defend computer systems and infrastructure from cyberattacks.
3. Develop the knowledge and skills needed to manage cybersecurity within an organizational environment.
4. Design, develop, and communicate effective policies and procedures that support business needs and enhance cybersecurity capabilities.

Student learning outcomes

Outline the student learning outcomes for the proposed program. Outcomes should clearly state the specific and measurable outcomes students will display to verify learning has occurred. Every student learning outcome must directly align with and/or relate to one or more program learning outcomes.

Each student learning outcome is followed by a reference to the associated program learning outcome(s) (**PO #**).

1. Identify vulnerabilities to the information assets of an organization. (PO 2; PO 3)
2. Define and implement appropriate controls to support confidentiality, integrity, and

- availability in organizational systems. (PO 1; PO 2; PO 3)
3. Communicate cybersecurity solutions to both technical and non-technical decision-makers. (PO 1; PO 3; PO 4)
 4. Apply business principles to solving cybersecurity-related problems. (PO 4)
 5. Capture and analyze data related to cybersecurity events. (PO 2; PO 3)
 6. Recognize ethical and legal issues impacting the design and development of secure systems and infrastructure. (PO 4)

Direct measures of student learning outcomes will be based on assignments in key courses that map to the overall program learning objectives.

Academic program requirements

Include the required number of semester credit hours (SCH), courses, (course prefix and number, title, SCH) and any special requirements including thesis, internships, practicum, etc.

In total, the program will consist of 120 hours of coursework and will be offered with both on ground and online course options. Forty-one (41) hours will be dedicated to general education. Core requirements will consist of 46 hours of security-related coursework. Students will take a business administration minor accounting for 18 hours, which leaves 15 hours of elective credit. The minor provides the management context and business foundations to support the focus of the proposed B.S. degree. A summary of the general program structure is provided in the following table:

| Degree Component | Hours |
|-------------------------------|------------|
| General Education | 41 |
| Program Core | 46 |
| Business Administration Minor | 18 |
| Electives | 15 |
| | 120 |

Detailed Program Structure

Program Core

| Course | Title | SCH |
|-----------|--|-----|
| INFS 1300 | Introduction to Cybersecurity | 3 |
| INFS 2600 | Introduction to Software Development and Programming | 3 |
| INFS 3300 | Cybersecurity Management Fundamentals | 3 |
| INFS 3350 | Cybersecurity Environment Management | 3 |
| INFS 3470 | Python for Business Applications | 3 |
| INFS 3800 | Information Systems Analysis and Design | 3 |
| INFS 3900 | Business Data Communications | 3 |
| INFS 4300 | Security Assurance for Information Systems Audit | 3 |
| INFS 4301 | Penetration Testing and Ethical Hacking | 3 |

| | | |
|-----------|---|---|
| INFS 4302 | Analytics for Cybersecurity Professionals | 3 |
| INFS 4310 | Digital Forensics | 3 |
| INFS 4350 | Cloud Infrastructure and Security | 3 |
| INFS 4790 | Database Design and Development | 3 |
| INFS 4970 | Advanced Topics in Security Management | 3 |
| INFS 4980 | Strategic Cybersecurity Management | 3 |
| INFS 4990 | Leadership Seminar | 1 |

Business Administration Minor

| Course | Title | SCH |
|--|--|------------|
| ACTG 3000 | Survey of Accounting for General Business | 3 |
| FIN 3010 | Principles of Corporate Finance | 3 |
| MGMT 3620 | Supply Chain Operations | 3 |
| MKT 3820 | Principles of Marketing | 3 |
| INFS 3100 | Principles of Management Information Systems | 3 |
| BLAW 3400 | Legal Environment of Business | 3 |
| Elective Courses | | 15 |
| General Education Requirements (options provided in Appendix) | | 41 |
| Total Program Hours | | 120 |

Existing and new courses

List existing and new courses for the proposed academic program including a catalog description and credit hours for each course.

Table 3. Existing Courses: The following table contains existing courses approved and/or offered through the Department of Information Systems and Analytics.

| Prefix | Number | Title | Catalog description | Credit Hours |
|--------|--------|--------------------------------------|--|--------------|
| INFS | 1300 | Introduction to Cybersecurity | The Introduction to Cybersecurity course provides a broad overview of cybersecurity, including Internet security, malware, vulnerability analysis, cyber security ethics, privacy, policies/procedures, and mitigation strategies for potential cyber threats. Assists students in understanding and applying this knowledge in their everyday lives | 3 |

| | | | | |
|------|------|---|---|---|
| INFS | 2600 | Introduction to Software Development and Programming | Programming logic and concepts using the .NET programming environment. Includes program design, data types, data structures, flow control, arrays, error control, graphical user-interfaces, and file processing as applied in the context of business information systems problem solving. | 3 |
| INFS | 3300 | Cybersecurity Management Fundamentals | A comprehensive study of the principles and practices of computer system security including operating system security, network security, software security, and web security. Students will learn common threats and vulnerabilities, along with basic principles and techniques when designing a secure system. | 3 |
| INFS | 3470 | Python for Business Applications | Introduces Python, a popular, general-purpose programming and scripting language well suited to a wide range of business problems. Topics include basics of programming-variables, strings, lists, functions, writing scripts that automate tedious tasks, parsing and interpreting data, interacting with APIs, and building web scrapers. Emphasis on practical applications in a business context. | 3 |
| INFS | 3800 | Information Systems Analysis and Design | Explores the roles and environments of project management, the product life cycle, and techniques for work planning, control, and evaluation. Covers developing a project plan, resource management, project scope and quality, budgeting, and managing project risk | 3 |
| INFS | 3900 | Business Data Communications | Practical explanation of data communications and networking technologies and infrastructure. Topics covered include networking concepts, appropriate technologies for effective design, best practices in overall network operations, network security, troubleshooting, and network management tools. | 3 |

| | | | | |
|------|------|---|---|---|
| INFS | 4300 | Security Assurance for Information Systems Audit | An in-depth look at developing, implementing, monitoring, and auditing an information system's security. Managerial concepts for security of operating systems, administering security, and legal/ethical/policy issues examined as well as a hands-on approach to implementing operating systems security techniques. Explores the advancement in security detection and implementation, problem-solving techniques, and the role and importance of the information systems auditor. | 3 |
| INFS | 4310 | Digital Forensics | Introduces digital forensic tools and procedures and their major purpose and use. Topics include the foundational process and legal aspects of computer forensics, steganography, and how to identify and use specialized forensic software. | 3 |
| INFS | 4350 | Cloud Infrastructure and Security | Focused on cloud computing deployment and service models, virtualization, providers, threats to cloud computing, management of cloud security and access management, and approaches to cloud storage, performance, and automation. | 3 |
| INFS | 4790 | Database Design and Development | Fundamental concepts: conventional data systems, integrated management information systems, database structure systems, data integration, complex file structure, online access systems. Emphasis on total integrated information systems database and database management languages. | 3 |

Table 4. New Courses: The following courses will be developed to complete the core for the proposed program.

| Prefix | Number | Title | Proposed Catalog Description | Credit Hours |
|--------|--------|-------|------------------------------|--------------|
|--------|--------|-------|------------------------------|--------------|

| | | | | |
|------|------|--|--|---|
| INFS | 3350 | Cybersecurity Environment Management | Introduction to cybersecurity operating environments with a focus on the design and management of technologies needed to secure systems and infrastructures. Fundamentals of operating systems will be covered as related to current cybersecurity technologies. | 3 |
| INFS | 4301 | Penetration Testing and Ethical Hacking | Provides the fundamental knowledge and skills required to discover and manage vulnerabilities in an organizational environment. Students will use various penetration testing methodologies, frameworks, tools, and techniques to exploit vulnerabilities. Topics include vulnerability assessment, penetration testing, social engineering, reconnaissance, and network scanning. | 3 |
| INFS | 4302 | Analytics for Cybersecurity Professionals | An introduction to the application of analytics techniques to data produced across organizational systems to manage security systems and security-related incidents and events. Provides essentials of data analytics related to security event and incident management and security metrics. Students will research and examine tools used in security data and incident management processes in an organization. | 3 |
| INFS | 4970 | Advanced Topics in Cybersecurity | Advanced topics related to data, application, and operating system security. | 3 |
| INFS | 4980 | Strategic Cybersecurity Management | An in-depth investigation of the strategies and management practices used to secure organizations against cyber threats. Students will learn how to develop and implement effective cybersecurity policies and procedures, assess risks and vulnerabilities, and respond to security incidents. | 3 |

| | | | | |
|------|------|---------------------------|---|---|
| INFS | 4990 | Leadership Seminar | Provides a brief introduction to the strategies and skills needed to effectively lead security teams. Activities will focus on personal skills development and on key factors influencing organizational leadership behavior. | 1 |
|------|------|---------------------------|---|---|

Program of study

Provide a sample program of study for students completing the program full-time. The sample program of study should include all courses by semester and term for students to complete the proposed program.

A sample full-time program of study by semester including general education, core courses, business administration minor, and electives is provided in the Appendix.

Assessment and evaluation

Identify who will be responsible for conducting program assessments and evaluations.

The Department of Information Systems and Analytics (ISA) chair will have responsibility for coordinating program assessments. In addition, the Department of ISA has an Assurance of Learning committee that will be involved in the creation, analysis, and submission of required assessment and evaluation documents. This committee will review program assessment and evaluations and implement any necessary changes.

Provide the schedule for program assessments or evaluations including program evaluations associated with Quality Assurance Funding, institutional program review, student evaluations, faculty review, accreditation, and employer evaluation. Include copies of relevant documents, rubrics, or other materials in the appendices of the ENAPP.

The B.S. in Cybersecurity Management program will conduct regular scheduled external reviews of this program in accordance with university and THEC policies. To complete these evaluations, the department chair will work with the MTSU office of Institutional Effectiveness, Planning, and Research (IEPR), which is responsible for overseeing external program reviews. IEPR conducts the following institutional surveys which will provide broad feedback about overall institution perceptions: Faculty Survey of Student Engagement, Alumni Survey, Graduating Student Survey, Job Placement Survey, and the Adult Learner Survey. References to these items may be obtained on the MTSU website.⁸

In addition to the institutional surveys, MTSU conducts student evaluations of faculty and the courses at the end of each semester. These evaluations are provided to the department chair. An example of the questions included in the MTSU course evaluation survey are provided in the

⁸ Please see <https://www.mtsu.edu/iepr/> for additional details on the review process provided by the MTSU Office of Institutional Effectiveness, Planning and Research (IEPR)

Appendix.

To gauge student learning, INFS 4980 also serves as a capstone for the program and a final opportunity to assess student learning. Projects and presentations will be evaluated by faculty based on a rubric that measures content knowledge, problem solving ability, communication, and professionalism.

Student retention and graduation rates will be monitored by the department chair. Employment of graduates will be tracked and analyzed by the department chair through a program-specific survey to be developed. This information will identify program strengths, student placements, as well as potential growth opportunities for future placement efforts.

Section III: Students

Academic standards

Clearly state the admission, retention, and graduation standards, which should align with institutional or governing board policy.

The B.S. in Cybersecurity Management will follow the University's general requirements for baccalaureate degrees and requires a minimum 2.00 inclusive GPA.

To graduate from MTSU with a bachelor's degree, a student must meet the following requirements.⁹

1. Students must complete a minimum of 120 semester hours with a 2.00 grade point average. (Some programs may require more than 120 hours.)
2. A minimum of 25 percent of credit for each degree awarded by MTSU must be earned through offerings by the University. Typically, a minimum of 30 hours earned through MTSU is required; however, in degree programs of more than 120 semester hours a greater number of hours would be required.
3. At least 36 semester hours of junior and senior (3000-4000 level) courses must be completed. Courses numbered 1000 and 2000 which are substituted for 3000- or 4000-level courses may not be used in the calculation of the 36 upper-division hours.
4. With approval of the dean of the college in which the student is pursuing the major, a candidate may complete 12 of the last 30 hours at another college or university or by CLEP.
5. No more than 60 semester hours completed by credit-by-examination, credit for service-related experience, and flight training may be counted for credit in a degree.
6. Students must complete at least 12 semester hours at the upper-division level through MTSU in each major and at least three semester hours at the upper-division level through MTSU in each minor. Additionally, no course used to satisfy a requirement in a major or minor may be used in another major or minor.
7. The student who seeks a second concentration in a major must complete a minimum of nine (9) hours that do not duplicate hours in the first major/concentration.
8. Students may not major and minor in the same discipline.
9. A minimum of 50 semester hours of senior college credit will be required of all students who transfer from colleges of less than four-year designation.

⁹ <http://catalog.mtsu.edu/content.php?catoid=34&navoid=7862&hl=%22graduation+requirement%22&returnto=search>

10. A minimum 2.00 GPA will be required in a major pursued as a graduation requirement and a minimum 2.00 is required in some minors.
11. All candidates must meet the [General Education](#) requirements as outlined and satisfy a technology requirement.
NOTE: Information applicable to transfer students may be found [below](#).
12. No more than 25 percent of the credits for nonbusiness degrees may be in courses commonly found in a school of business. Additionally, a student can have only one business minor.
13. **During priority registration when two semesters are remaining for graduation, students must submit a completed Intent to Graduate form, and if required, an upper-division form to their graduation analyst.** Students should contact their college advisors or the college advising office of their major for the appropriate process within their colleges. Some programs require formal approval with additional requirements for admission to candidacy.
14. Any or all students may be required to take one or more tests designed to measure general education achievement and/or achievement in selected major areas as a prerequisite to graduation for the purpose of evaluation of academic programs. Unless otherwise provided by an individual program, no minimum score or level of achievement is required for graduation. Participation in testing may be required for all students, for students in selected programs, and for students selected on a sample basis.
15. In compliance with SACSCOC accreditation standards, all students will have training in and use of technology.

Marketing and recruitment

Provide a plan that outlines how the proposed program will market and recruit a diverse population of students including underserved and historically underrepresented students and is aligned with the proposed implementation timeline.

There are several opportunities to market to and recruit a diverse population of students. The Department of Information Systems and Analytics faculty have direct connections with organizations such as Women in Technology Tennessee and the Nashville Technology Council. Additionally, faculty currently work closely with organizations such as the Information Systems Security Association (ISSA) to support professional learning activities. In addition to the external groups with which faculty work and under the charge of the department chair, designated faculty will do the following:

- Work with the MTSU Division of Marketing and Communications to craft press releases.
- Work with Creative Marketing Solutions at MTSU to develop web page, video, and print materials.
- Create brochures and banners for recruiting events.
- Meet with Jones College advising and recruitment staff to provide information on the new degree.
- Develop an online marketing strategy and implement content on key social media platforms.

Student support services

Provide an overview of student support services that will be available to students in the proposed program (e.g., academic advising, tutoring, internship placement, career counseling, or others).

The department chair serves as the primary contact for the students in the program. The Jones

College of Business houses a dedicated advising staff to support student advising needs. The MTSU Career Development Center offers career advising, professional development guides, internships, and job search support, as well as career fairs. The Department of Information Systems and Analytics also offers a career fair for students majoring in computing fields and provides tutoring options for students in core program courses.

Describe how the proposed program will ensure student success for all students, especially underserved and historically underrepresented students.

The department chair and faculty will serve as resources to ensure that students are progressing through the program. Students will obtain hands-on experience using cybersecurity-related technologies throughout the program preparing them for entry into the job market. Additionally, the chair and faculty will meet with students regularly to answer questions and provide an opportunity for students to interact and network outside of the classroom. The Department of Information Systems and Analytics works closely with groups such as the Nashville Technology Council and Women in Technology Tennessee to maintain relationships and connections to support our students.

As mentioned in the Marketing and Recruitment section, the department chair and faculty will work with organizations within the community; through these partnerships, initiatives to recruit, support and retain underrepresented students will be a priority.

Section IV: Instructional and Administrative Resources

Faculty resources

Current and anticipated faculty resources should ensure a program of high quality. The number and qualification of faculty should meet existing institutional standards and should be consistent with external standards.

Current faculty

Using the . Current Faculty Roster table, list the name, highest degree, rank, and primary department, full-time or part-time status, and percent of time to be devoted to the proposed program. If the proposed academic program is at the graduate level, designate graduate faculty status with an asterisk (). Please identify the faculty member who will have direct administrative responsibilities for the proposed program as "PD" after the faculty member's name.*

It is anticipated that several of the Department of Information Systems and Analytics full-time faculty will teach as part of the proposed curriculum in support of the undergraduate degree in cybersecurity management. The percentage of time provided is a general estimate representing participation in the program.

Table 5. Current Faculty Roster

| Current Faculty Roster | | | | | |
|------------------------------------|----------------|---------------------|---------------------------------|------------------------|-------------------------------|
| Faculty Name | Highest Degree | Rank | Primary Department | Full-time or Part-time | % of Time Devoted to Program* |
| Sandra Billings | MBA | Instructor | Information Systems & Analytics | Full | 20% |
| Nita Brooks | PhD | Professor | Information Systems & Analytics | Full | 20% |
| Carol Clark | PhD | Professor | Information Systems & Analytics | Full | 20% |
| Michael Erskine | PhD | Assistant Professor | Information Systems & Analytics | Full | 20% |
| Tim Greer (PD/Department Chair) | PhD | Associate Professor | Information Systems & Analytics | Full | 20% |
| Tim Miller | MS | Lecturer | Information Systems & Analytics | Full | 80% |
| Steve Morris | PhD | Professor | Information Systems & Analytics | Full | 20% |
| Sam Zaza | PhD | Assistant Professor | Information Systems & Analytics | Full | 40% |

*10% represents 1 class per year; 20% represents 1 class per semester; 40% represents 2 classes per semester; 80% represents 4 classes per semester

Anticipated faculty

- Using the Anticipated Faculty and Instructional Staff table, list the additional faculty likely needed during the next five years for successful implementation of the proposed program. For each proposed faculty hire, provide full-time or part-time status, anticipated salary (excluding benefits), anticipated start date, and any pertinent comments.

MTSU currently offers many of the courses required in the program and has qualified faculty to instruct and lead the program. Although there is expertise to offer the needed classes, we do expect that additional faculty will be needed to offer all required classes. We anticipate new faculty hires will be essential to ensure qualified coverage of the courses and to support the overall quality and success of the program. A conversion of a contingent faculty line to an instructor line is needed in Year 1, with no additional cost. One full-time professor of practice position is projected to start in Year 2, with an assistant professor to be hired in Year 3.

The B.S in Cybersecurity Management anticipates using adjunct faculty in conjunction with our tenure-track and full-time faculty to provide field experience and knowledge related to specific areas of the program. We would like to focus the use of adjuncts on finding individuals with key industry certifications to assist in delivery key concepts and tools to our students. Using individuals with recent and relevant experience also provides students closer access to the cybersecurity job market, opportunities, and connections.

Table 6. Anticipated Faculty and Instructional Staff

| Anticipated Faculty and Instructional Staff | | | | |
|---|------------------------|------------------------------|------------------------|--|
| Faculty Rank or Job Title | Full-time or Part-time | Anticipated Salary | Anticipated Start Date | Comments |
| Professor of Practice | Full-time | \$125,000 new + 38% benefits | Year 2 | This faculty member will bring industry experience and expertise to support the new program. They would be expected to teach any course in the cybersecurity management program. Assuming the program reaches projected enrollment. |
| Assistant Professor | Full-time | \$135,000 + 38% benefits | Year 3 | This faculty member is important to cover the minimum required courses needed to support the new program. Expertise in cybersecurity will allow the new faculty to teach any of the required cybersecurity courses. Assuming the program reaches projected enrollment. |

Non-Instructional staff

Using the **Error! Reference source not found.** table, list the additional Non-Instructional Staff needed during the next five years for successful implementation of the proposed program.

For each proposed non-instructional hire, provide full-time or part-time status, anticipated salary (excluding benefits), anticipated start date, and any pertinent comments.

We anticipate needing no new staff to support the program.

Section V: Institutional Capacity to Deliver Proposed Program

In assessing institutional capacity to deliver the proposed program, provide a narrative explanation of existing and needed resources. Additionally, provide the cost projections for one-time and recurring expenditures in the Estimated Costs to Deliver the Proposed Program table below. **Please note:** the narrative must align with the projected costs provided in the Estimated Costs to Deliver the Proposed Program table.

Accreditation

Describe any costs associated with regional and/or programmatic accreditation during the

planning and first five years for successful implementation of the academic program.

MTSU is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate, masters, and doctorate degrees. There is no other accreditation at this time that would align with this program.

Consultants

Provide a summary of anticipated consultant needs and associated costs during the planning and first five years for successful implementation of the academic program.

A consultant is not needed for the implementation of this program. We will use an external reviewer during the expedited program process, which occurs prior to program implementation. A \$1,500 honorarium is generally paid for this work.

Equipment

Assess the adequacy of the existing equipment available for the proposed academic program. Include physical equipment, computer facilities, special classrooms, etc.

The proposed program will utilize existing computer classrooms and campus computer labs. As the classrooms and computer labs already exist, no new physical equipment, computer facilities, or special classrooms are needed.

Describe additional equipment needed during the planning and first five years for successful implementation of the academic program.

Computers and office equipment will be required for each new full-time faculty hire. This one-time cost covers all the technology needs for the new faculty hired to teach in the program. Coinciding with the new faculty hires, these one-time expenses will occur in years 2024, 2025, 2026, and 2027 at \$5,000 per individual. In total, faculty equipment costs will be \$20,000.

Information technology

Describe current information technology resources available to support the program.

Existing classroom and laboratory facilities are adequate to implement this proposed degree program, and no additional laboratory or space needs are required. The program will also have access to additional technology resources such as a cloud computing resources and other network resources through the Department of Information Systems and Analytics.

Describe additional information technology acquisitions needed during the planning and first five years for successful implementation of the academic program.

No additional information technology acquisitions are needed.

Library resources

Provide an overview of the current library resources available to support the proposed program. This might include a summary or listing of the appropriate monographs, serials, databases, and

online resources that are held by the campus or college libraries to support the proposed program.

We require no additional library resources to support this program. The library currently provides journals, datasets, and other material relevant to the cybersecurity field.

Describe additional library acquisitions needed during the planning and first five years for successful implementation of the academic program.

No additional library resources are needed.

Marketing

Outline any anticipated costs associated with the marketing for the proposed program during the planning and first five years.

As discussed in the Marketing and Recruitment section, a variety of marketing platforms will be used to advertise the B.S. in Cybersecurity Management degree. Aspects that have an associated cost include:

- Work with MTSU Division of Marketing and Communications to craft press releases.
- Work with Creative Marketing Solutions at MTSU to develop web page, video, and print materials.
- Create brochures and banner for recruiting events.
- Develop and implement social media platforms and online marketing strategy.

The annual anticipated marketing budget is:

| Marketing Costs | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|----------------------------|---------------|---------------|---------------|---------------|---------------|
| Marketing | \$5,000 | \$2,000 | \$1,500 | \$1,500 | \$1,500 |
| Sub-Total Marketing | \$5,000 | \$2,000 | \$1,500 | \$1,500 | \$1,500 |

Facilities

Describe facilities that will support of the proposed program. For existing space and facilities, briefly describe the type(s) of space and facilities (e.g., a listing of the number and types of classrooms or labs, student offices or spaces, etc.).

The Jones College of Business contains dedicated labs for student use as well as dedicated classroom lab space. The Department of Information Systems and Analytics has two assigned student computer classrooms (BAS S304 & BAS S314) as well as one classroom with laptops available (BAS S278). There are several other lab classrooms available to the Jones College of Business in the Business and Aerospace Building¹⁰. The Department of Information Systems and Analytics has access to two servers that reside the department offices to support classroom and student needs. Additionally, several courses will be available online and will not need the use of an on-campus space for students to work in the requirement environments.

¹⁰ <https://www.mtsu.edu/usm/classpage.php>

Additionally, the Department of Information Systems and Analytics has two spaces used for student tutoring.

For new or renovated facilities, clearly outline them and include the amount and type of space, costs identified, and source(s) of funds to cover costs.

The program does not require any new or renovated space.

Travel

Provide a summary of anticipated travel expenses during the planning and first five years.

Travel is fixed at \$7,500 per year. This includes funds to support program administration and recruitment. It also includes funds for faculty to attend discipline-related conferences ensuring they are informed of the most recent developments in both academic and industry topics.

Other resources

Describe other support resources available to support the program. Describe additional support resources that may be needed during the planning and the first five years for successful implementation of the academic program.

No additional resources are projected.

Table 7. Estimated Costs to Deliver the Proposed Program

| Estimated Costs to Deliver the Proposed Program | | | | | | |
|--|-----------------|---------------|---------------|---------------|---------------|---------------|
| One-Time Expenditures | | | | | | |
| Category | Planning | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| Accreditation | | | | | | |
| Consultants | \$1,500 | | | | | |
| Equipment | | \$5,000 | \$5,000 | \$5,000 | \$5,000 | |
| Information Technology | | | | | | |
| Library | | | | | | |
| Marketing | | | | | | |
| Facilities | | | | | | |
| Travel | | | | | | |
| Other | | | | | | |
| Total One-Time Expenditures | \$1,500 | \$5,000 | \$5,000 | \$5,000 | \$5,000 | |
| Recurring Expenditures | | | | | | |
| Category | Planning | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| Accreditation | | | | | | |
| Consultants | | | | | | |
| Equipment | | | | | | |

| | | | | | | |
|---|---------|----------|----------|----------|----------|---------|
| Information Technology | | | | | | |
| Library | | | | | | |
| Marketing | | \$5,000 | \$2,000 | \$1,500 | \$1,500 | \$1,500 |
| Facilities | | | | | | |
| Travel | | \$7,500 | \$7,500 | \$7,500 | \$7,500 | \$7,500 |
| Other: | | | | | | |
| Total Recurring Expenditures | | \$12,500 | \$9,500 | \$9,000 | \$9,000 | \$9,000 |
| Grand Total (One-Time and Recurring) | \$1,500 | \$17,500 | \$14,500 | \$14,000 | \$14,000 | \$9,000 |

Appendix A

MTSU General Education Course Options¹¹**Communication (9 hours)***Required Courses*

- [ENGL 1010 - Expository Writing](#) **3 credit hours**
- [ENGL 1020 - Research and Argumentative Writing](#) **3 credit hours**
- [COMM 2200 - Fundamentals of Communication](#) **3 credit hours**

A minimum grade of C- is required in [ENGL 1010](#) and [ENGL 1020](#) to apply toward degree requirements.

Humanities and/or Fine Arts (9 hours)*Literature Requirement (3 hours)*

The 3-hour literature requirement is to be met with one of the following:

Note: The 2000-level English courses may not be taken simultaneously with the 1000-level composition courses.

- [ENGL 2020 - Themes in Literature and Culture](#) **3 credit hours**
- [ENGL 2030 - The Experience of Literature](#) **3 credit hours**
- [HUM 2610 - World Literatures](#) **3 credit hours**

Remaining Humanities and/or Fine Arts Requirement (6 hours)

Excluding the literature choice above, students should choose two of the following courses with different rubric (course) prefixes to meet the remaining 6-hour requirement in this area:

- [ANTH 2210 - Introduction to World Prehistory](#) **3 credit hours**
- [ART 1030 - Art Appreciation](#) **3 credit hours**
- [ART 1920 - Survey of Western Art I](#) **3 credit hours**
- [DANC 1000 - Introduction to Dance](#) **3 credit hours**
- [ENGL 2020 - Themes in Literature and Culture](#) **3 credit hours**
- [ENGL 2030 - The Experience of Literature](#) **3 credit hours**
- [HIST 1010 - Survey Western Civilization I](#) **3 credit hours**
- [HIST 1020 - Survey Western Civilization II](#) **3 credit hours**
- [HIST 1110 - Survey World Civilization I](#) **3 credit hours**
- [HIST 1120 - Survey World Civilization II](#) **3 credit hours**
- [HUM 2610 - World Literatures](#) **3 credit hours**
- [MUHL 1610 - The World of Music](#) **3 credit hours**

¹¹ http://catalog.mtsu.edu/preview_program.php?catoid=34&poid=11796

- [MUS 1030 - Introduction to Music](#) **3 credit hours**
- [PHIL 1030 - Introduction to Philosophy](#) **3 credit hours**
- [THEA 1030 - Introduction to Theatre](#) **3 credit hours**

Social/Behavioral Sciences (6 hours)

Note: *The two courses selected must have different rubric (course) prefixes.*

- [AST 2100 - Introduction to Africana Studies](#) **3 credit hours**
- [ANTH 2010 - Cultural Anthropology](#) **3 credit hours**
- [ECON 2410 - Principles of Economics, Macroeconomics](#) **3 credit hours**
- [ECON 2420 - Principles of Economics, Microeconomics](#) **3 credit hours**
- [GEOG 2000 - Introduction to Regional Geography](#) **3 credit hours**
- [GS 2010 - Introduction to Cross-Cultural Experiences](#) **3 credit hours**
- [HLTH 1530 - Health and Wellness](#) **3 credit hours** AND
- [HLTH 1531 - Health and Wellness Lab](#) **0 credit hours**
- [EMC 1020 - American Media and Social Institutions](#) **3 credit hours** OR
- [JOUR 1020 - American Media and Social Institutions](#) **3 credit hours** OR
- [RIM 1020 - American Media and Social Institutions](#) **3 credit hours**
- [PS 1005 - Introduction to American Politics](#) **3 credit hours**
- [PS 1010 - Introduction to Global Politics](#) **3 credit hours**
- [PSY 1410 - General Psychology](#) **3 credit hours**
- [RS 2030 - Religion and Society](#) **3 credit hours**
- [SOC 1010 - Introductory Sociology](#) **3 credit hours**
- [SOC 2010 - Social Problems](#) **3 credit hours**
- [WGST 2100 - Introduction to Women's Studies](#) **3 credit hours**

Natural Sciences (8 hours)

NOTE: *Two different nonsequential courses must be selected for natural science credit having different rubric (course) prefixes; at most only the first semester of any two-semester, discipline-specific sequence may count for General Education natural science credit.*

Lecture and Lab = 4 hours

- [ASTR 1030 - Exploring the Universe](#) **3 credit hours** AND
- [ASTR 1031 - Observing the Universe](#) **1 credit hour**
- [BIOL 1030 - Exploring Life](#) **4 credit hours** AND
- [BIOL 1031 - Exploring Life Lab](#) **0 credit hours**
- [BIOL 1110 - General Biology I](#) **4 credit hours** AND
- [BIOL 1111 - General Biology I Lab](#) **0 credit hours**
- [BIOL 2010 - Human Anatomy and Physiology I](#) **4 credit hours** AND
- [BIOL 2011 - Human Anatomy and Physiology I Lab](#) **0 credit hours**
- [BIOL 2020 - Human Anatomy and Physiology II](#) **4 credit hours** AND
- [BIOL 2021 - Human Anatomy and Physiology II Lab](#) **0 credit hours**
- [CHEM 1010 - Introductory General Chemistry I](#) **4 credit hours** AND
- [CHEM 1011 - Intro to General Chemistry I Lab](#) **0 credit hours**

- [CHEM 1030 - Chemistry for Consumers](#) **4 credit hours** AND
- [CHEM 1031 - Chemistry for Consumers Lab](#) **0 credit hours**
- [CHEM 1110 - General Chemistry I](#) **4 credit hours** AND
- [CHEM 1111 - General Chemistry I Lab](#) **0 credit hours**
- [GEOL 1030 - Introduction to Earth Science](#) **3 credit hours** AND
- [GEOL 1031 - Introduction to Earth Science Lab](#) **1 credit hour**
- [GEOL 1040 - Physical Geology](#) **4 credit hours** AND
- [GEOL 1041 - Physical Geology Lab](#) **0 credit hours**
- [P GEO 1030 - Physical Geography](#) **4 credit hours**
- [PHYS 1110 - Discovering Physics](#) **4 credit hours**
- [PHYS 2010 - Non-Calculus-Based Physics I](#) **0 credit hours** AND
- [PHYS 2011 - Physics Problems Laboratory I](#) **4 credit hours**
- [PHYS 2110 - Calculus-Based Physics I](#) **0 credit hours** AND
- [PHYS 2111 - Calculus-Based Physics Laboratory I](#) **4 credit hours**
- [PSCI 1030 - Topics in Physical Science](#) **4 credit hours** AND
- [PSCI 1031 - Topics in Physical Science Lab](#) **0 credit hours**
- [PSCI 1130 - Contemporary Issues in Science](#) **0 credit hours** AND
- [PSCI 1131 - Activities for Contemporary Issues in Science](#) **4 credit hours**

Mathematics (3 hours)

NOTE: 4-semester-hour courses are calculated as 3 hours for General Education and 1 hour in the major area.

- [MATH 1010 - Mathematics for General Studies](#) **3 credit hours**
- [MATH 1530 - Applied Statistics](#) **3 credit hours**
- [MATH 1630 - College Mathematics for Managerial, Social, and Life Sciences](#) **3 credit hours**
- [MATH 1710 - College Algebra](#) **3 credit hours**
- [MATH 1720 - Plane Trigonometry](#) **3 credit hours**
- [MATH 1730 - Pre-Calculus](#) **4 credit hours**
- [MATH 1810 - Applied Calculus I](#) **3 credit hours**
- [MATH 1910 - Calculus I](#) **4 credit hours**

History (6 hours)

- [HIST 2010 - Survey of United States History I](#) **3 credit hours**
- [HIST 2020 - Survey of United States History II](#) **3 credit hours**
- [HIST 2030 - Tennessee History](#) **3 credit hours**
- [HIST 2040 - Survey African American History I](#) **3 credit hours**
- [HIST 2050 - Survey African American History II](#) **3 credit hours**

Note:* Tennessee Code Annotated 49-7-110 requires that no person be granted a baccalaureate degree from a Tennessee public institution of higher education without having earned at least 6 semester hours of credit in American history (up to 3 of those hours may be in Tennessee history). This requirement is to be enforced for all students, including those seeking their first or any subsequent bachelor's degree, regardless of whether their high school degree comes from a U.S. or international institution, and regardless of their citizenship status. This requirement does not apply, however, to students who have earned 1 unit of American history in high school. **Please note that this requirement is separate from the current General Education history requirement.

2024-25 Cybersecurity Management Academic Map

Department of Information Systems and Analytics

Middle Tennessee State University • Murfreesboro



An academic map is a suggested four-year schedule of courses based on degree requirements in the undergraduate catalog. This sample schedule serves as a general guideline to help build a full schedule each term. Milestones, courses, and special requirements necessary for timely progress to complete a major are designated to keep you on track to graduate in four years. **Missing milestones could delay your program.**

This map is not a substitute for academic advisement—contact your advisor if you have any questions about scheduling or about your degree requirements. Also see the current undergraduate catalog (catalog.mtsu.edu) for a complete list of requirements and electives. *Note: Requirements are continually under revision, and there is no guarantee they will not be changed or revoked; contact the department and/or program area for current information.*

Suggested Fall/Spring Four-Year Schedule with Business Administration Minor

| FRESHMAN FALL | | | FRESHMAN SPRING | | |
|--|-----------|-------------------------|--------------------------------------|-----------|-------------------------|
| Course | Hours | Milestones/Notes | Course | Hours | |
| ENGL 1010 (Comm) | 3 | | ENGL 1020 (Comm) | 3 | |
| MATH 1630 | 3 | | HUM/FA (Rubric 1) | 3 | |
| Nat Sci (Rubric 1) | 4 | | Nat Sci (Rubric 2) | 4 | |
| INFS 1300 | 3 | | COMM 2200 (Comm) | 3 | |
| Elective | 3 | | Elective | 3 | |
| SUBTOTAL | 16 | | SUBTOTAL | 16 | |
| SOPHOMORE FALL | | | SOPHOMORE SPRING | | |
| ENGL 2020, ENGL 2030, or HUM 2610 (Hum/FA) | 3 | | Hum/FA (Rubric 2) | 3 | |
| HIST 2010, 2020, 2030, 2040, or 2050 | 3 | | HIST 2010, 2020, 2030, 2040, or 2050 | 3 | |
| Soc/Beh Sci (Rubric 1) | 3 | | INFS 2600 | 3 | |
| Elective | 3 | | Soc/Beh Sci (Rubric 2) | 3 | |
| Elective | 3 | | Elective | 3 | |
| SUBTOTAL | 15 | | SUBTOTAL | 15 | |
| JUNIOR FALL | | | JUNIOR SPRING | | |
| ACTG 3000 | 3 | | BLAW 3400 | 3 | Prereq: Junior standing |
| FIN 3010 | 3 | Prereq: Junior standing | INFS 3100 | 3 | Prereq: Junior standing |
| MKT 3820 | 3 | Prereq: Junior standing | INFS 3470 | 3 | |
| INFS 3300 | 3 | | INFS 3800 | 3 | Prereq: Junior standing |
| INFS 3900 | 3 | Prereq: Junior standing | INFS 3350 | 3 | Prereq: INFS 3300 |
| SUBTOTAL | 15 | | SUBTOTAL | 15 | |
| SENIOR FALL | | | SENIOR SPRING | | |
| MGMT 3620 | 3 | Prereq: Junior standing | INFS 4302 | 3 | |
| INFS 4300 | 3 | Prereq: Junior standing | INFS 4310 | 3 | |
| INFS 4301 | 3 | | INFS 4970 | 3 | |
| INFS 4350 | 3 | Prereq: INFS 3900 | INFS 4980 | 3 | |
| INFS 4790 | 3 | Prereq: INFS 2600 | INFS 4990 | 1 | |
| SUBTOTAL | 15 | | SUBTOTAL | 13 | |
| TOTAL HOURS IN PROGRAM: 120 | | | | | |

Appendix C

MTSU Course Evaluation

Please indicate your level of agreement with the following statements:

Quantitative Questions (choice of Strongly Disagree, Moderately Disagree, Neither Agree nor Disagree, Moderately Agree, Strongly Agree):

The instructor created an environment that helped students learn.

The course material was delivered in a clear and organized manner.

The instructor gave assignments related to the goals of the course.

The evaluation methods adequately assessed student academic performance.

The instructor was knowledgeable about the subject.

The course enhanced students' ability to think critically about the subject.

The instructor engaged the class and provided opportunities for student participation/contributions appropriate for class size/type. The instructor cared about student learning.

The instructor was willing to answer questions during or outside of class.

In general, the instructor was an effective teacher.

The qualitative questions for the survey include:

Please identify what you consider to be the strengths of the course and/or instructor:

Please identify the area(s) where you think the course could be improved:



**Middle Tennessee State University
Board of Trustees**

Academic Affairs, Student Life, and Athletics Committee

Information Item

DATE: May 23, 2023

SUBJECT: **Faculty Senate Presentation**

PRESENTER: Stephen B. Salter
2022-23 Faculty Senate President

BACKGROUND INFORMATION:

The President of the Faculty Senate will discuss why students come to and stay at MTSU. Two faculty members will present examples of their innovations in teaching and research.

Faculty Senate Presentation to the MTSU Board Of Trustees

Academic Affairs, Student Life and Athletics Committee • May 23, 2023



AGENDA

Who am I?

Why am I here?

Both Student Teaching and Research matter at MTSU.

I will begin by looking at the demand from students through Word Clouds that answer the questions:

- Why do Students come to MTSU
- Why do they stay?

Then, I will turn it over to two colleagues to provide solutions.

MTSU Student Views—Why do they come?

- Level 1 - Programs
- Level 2- Location in a small friendly town Murfreesboro close to a major job and innovation market in Nashville.
- Note: Affordable is Level 3 with Opportunities



MTSU Student Views—Why do they stay?

- Welcoming campus
- Supportive faculty

A word cloud of student views, tilted diagonally. The words are: family atmosphere, helpful advisors, student organizations, resources, new friends, food, welcoming campus, programs, supportive faculty, and large campus.

Patrick Richey

- Associate Professor Department of Communication Studies
- Began work at MTSU in 2011
- Ph.D. from the University of Southern Mississippi
- Army Civil Affairs Sgt in Iraq
- Director of Forensics at Middle Tennessee State University
- Faculty Senate Parliamentarian





Speech and debate changes lives,
as noted by the National Speech and Debate Association.

From building confidence, improving communication, and increasing critical thinking to better preparing students for college, speech and debate activities provide life-long benefits to young person's success in the future.

Speech and debate activities focus on the four core zones of literacy: reading, writing, speaking, and listening. Utilizing these skills inside and outside of the classroom helps students develop critical thinking and the ability to clearly articulate thoughts and ideas, speak with clarity, and think on your feet. Additionally, you can develop interpersonal skills, conflict resolution, assertiveness, and listening to peers. These important skills prepare youth to become engaged citizens, skilled professionals, and honorable leaders. (speechanddebate.org/membership)

MTSU's team focuses on the following events:

- After-Dinner Speaking
- Communication Analysis/Rhetorical Criticism
- Dramatic Duo
- Dramatic Interpretation
- Extemporaneous Speaking
- Impromptu Speaking
- Informative Speaking
- Parliamentary Procedure
- Poetry
- Propaganda
- Prose

The team is open to any student in good standing. No experience is necessary. Tournaments take place four times each semester, with minimal expenses.

Contact Info
Natonya Listach
Assistant Director of Forensics
MTSU Box 200
Murfreesboro, TN 37132
615-898-5176

Celebrating Over 100 Years of MTSU Debate Excellence

The team's roots in the Claxton and Grady Literary Societies, early MTSU forerunners of the modern debate team. The team has excelled from the beginning and has produced many accomplishments and alumni.

Students are provided the tools to become better thinkers, scholars, and speakers. Through debate, students strive to become better citizens. The ultimate goal of the team is not just victory in life. Our team looks to the past for guidance to a better future.

Victoria
is connected with the debate team that students may join: the Blue Raider Forensics Society Pi Kappa Delta. The team is open to any MTSU student in good standing. Major Team and individual practice occurs once or twice a week, preparing for competition. Traveling and competing at regional and national levels, the team hopes to provide experiences to include international competition. University and student fees for travel and debate entry fees. No experience is necessary to be a member of the team. Only the willingness to present arguments, keep up on current events, and be an active member.

Dr. Richey, Director of Forensics
Room 230A
Murfreesboro TN 37132

ENGAGE YOUR MIND
solve real-world problems
College of Liberal Arts

Patrick Leads a VICTORIOUS MTSU debate team

Why MTSU Debate matters and what it does for our students

- **We recruit**
- **We foster success**
- **We foster growth and leadership**
- **We foster critical thinking skills**

Why MTSU Debate matters and what it does for our students

- **We foster civil discourse**
- **We foster community and international relationships**
- **We retain and graduate**
- **We have strong bonds with our alumni**

Blue Raider Debaters



Loved and Feared by the Irish National Team



April Weissmiller: Cancer fighter



April Weissmiller

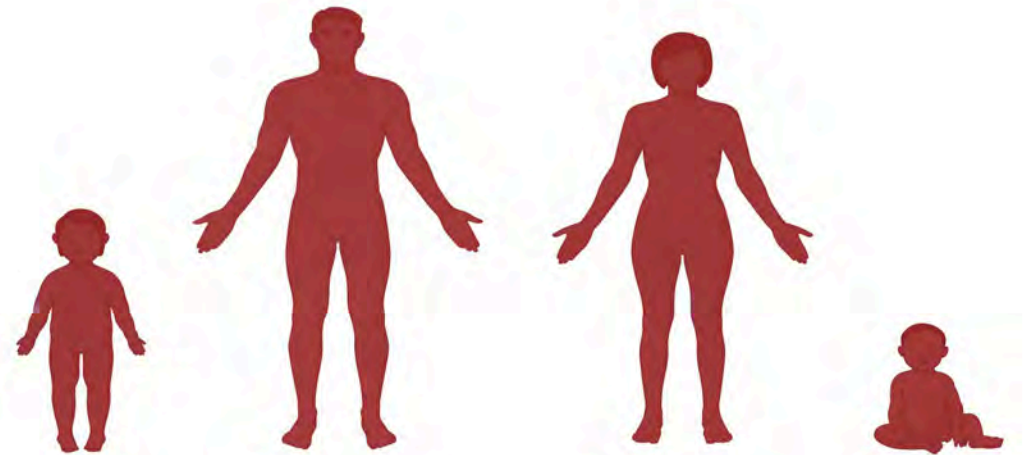
- **Dr. April Weissmiller** is an Assistant Professor in the Department of Biology.
- Obtained her bachelor's degree from San Diego State University and a subsequent doctoral degree from the University of California San Diego.
- She was a post-doctoral fellow at Vanderbilt University, focusing on understanding basic cancer mechanisms.

April Weissmiller (cont.)

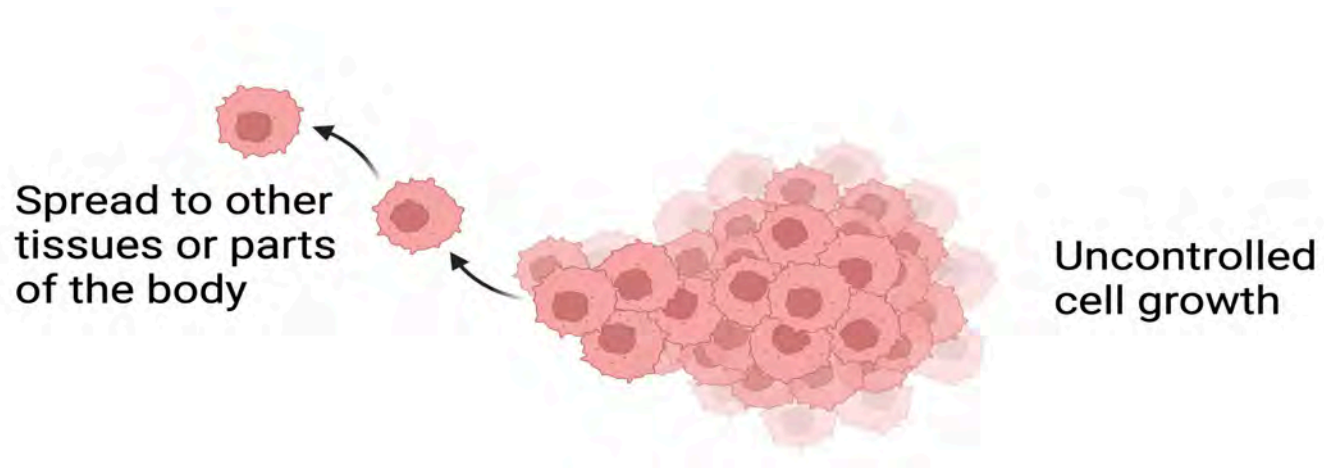
- At Vanderbilt, she received multiple fellowships from the American Association for Cancer Research, the Open Hands Overflowing Hearts Foundation, and the Rally Foundation for Childhood Cancer Research.
- She began her independent research career at MTSU in August 2020.

Cancer as a disease

- In 2018, **18.1 million new cases** of cancer were diagnosed with **9.5 million ending in death** (worldwide)
- By 2040, the number of deaths is expected to **double**, and the number of new cases expected to approach **30 million**



How to figure out how cancer works



My research program

The molecular mechanisms that control cancer processes

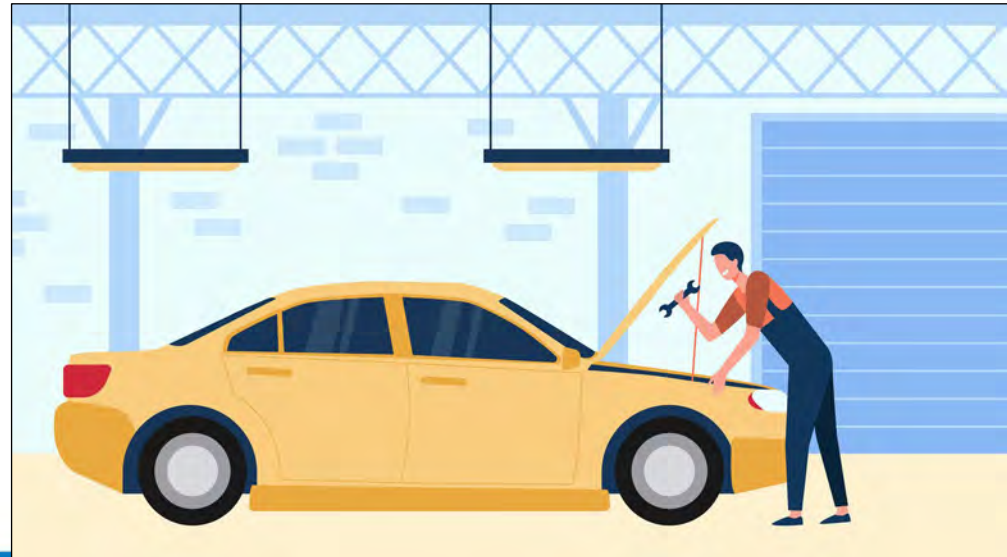


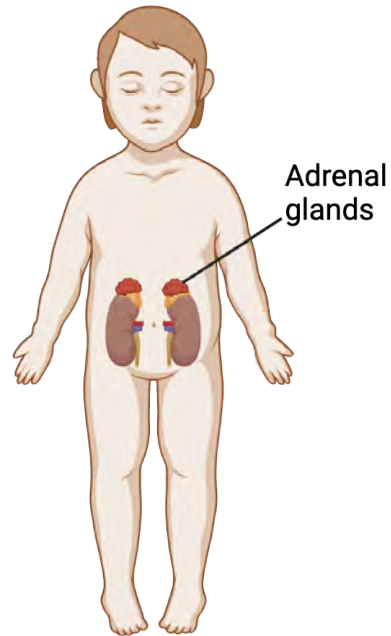
Image by pch.vector on Freepik

Images created with Biorender

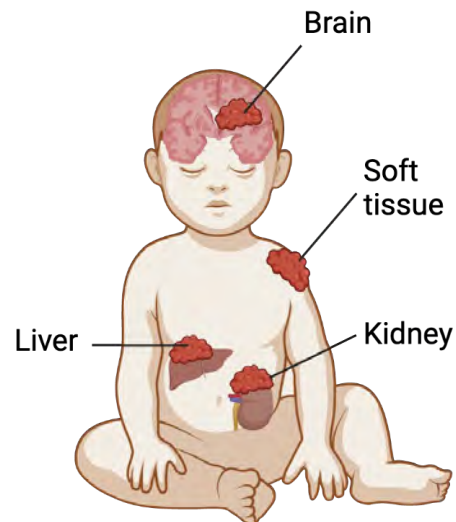
MIDDLE
TENNESSEE
STATE UNIVERSITY.

I AM *true*
BLUE

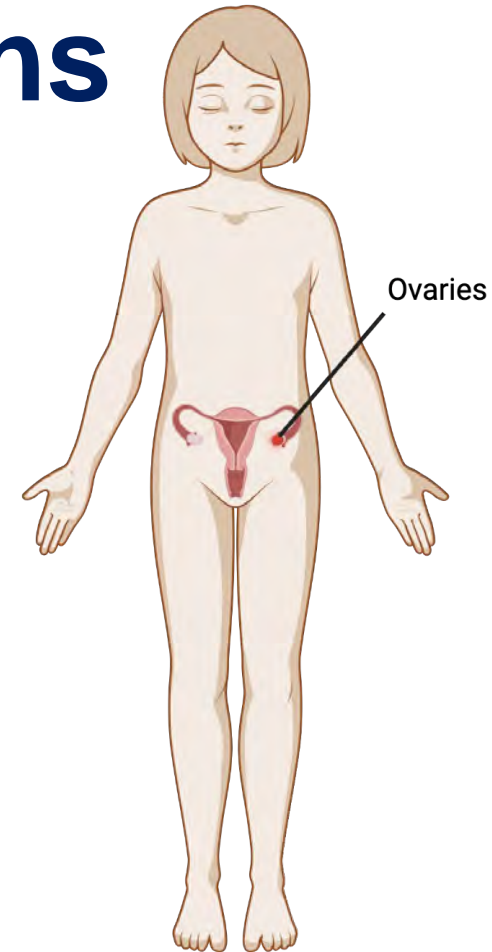
We study rare and deadly cancers with few treatment options



Neuroblastoma
Children



Rhabdoid tumor
Infants



SCCOHT
Young women

Impact of performing research at MTSU

Societal impact:

Drug companies and big pharma will avoid working on these cancers due to the small market size

Impact of performing research at MTSU

Revenue impact:

Cancer research foundations and the National Institutes of Health

2020-2025

Direct costs: ~ \$685,000

Funding that directly supports the personnel and costs related to executing the projects

Indirect costs: ~ \$169,000

Funding that MTSU strategically reinvests into the research environment

Impact of performing research at MTSU

Student impact:

Leigh Bumpous, MS

Oncology Clinical
Team Lead, Labcorp

Emma Elrayah

Biosciences PhD program
at University of Michigan

James Mendez, MS

Research Assistant II,
Vanderbilt University

**Workforce
development:**

Training and mentoring within the
laboratory

Since August 2020:

12 undergraduates
4 Masters students

Logan Carver

Medical school at East
Tennessee State University

Jack Maxwell

Masters of Science
in Biology at MTSU

Cheyenne Jones

Molecular cancer biology PhD
program at Duke University



QUESTIONS?







**Middle Tennessee State University
Board of Trustees**

Academic Affairs, Student Life, and Athletics Committee

Information Item

DATE: May 23, 2023

SUBJECT: **Student Trustee Presentation**

PRESENTER: Andrew Carpenter
2022-23 Student Trustee

BACKGROUND INFORMATION:

Mr. Carpenter will discuss student involvement at MTSU.



**Middle Tennessee State University
Board of Trustees**

Academic Affairs, Student Life, and Athletics Committee

Information Item

DATE: May 23, 2023

SUBJECT: **Application and Admission Report**

PRESENTER: Laurie Witherow
Associate Vice Provost for
Admissions and Enrollment Services

BACKGROUND INFORMATION:

Dr. Witherow will provide an update on application and admission activity.



**Middle Tennessee State University
Board of Trustees**

Academic Affairs, Student Life, and Athletics Committee

Information Item

DATE: May 23, 2023

SUBJECT: **Athletics Report**

PRESENTER: Chris Massaro
Athletics Director

BACKGROUND INFORMATION:

Mr. Massaro will provide an update on the Department of Athletics.



ATHLETICS / BRAA UPDATE

BLUE RAIDER ATHLETIC ASSOCIATION

ATHLETICS GIVING PROGRESS



FY23 ATHLETICS GIVING

Cash: \$3,553,965 (92% of \$3,871,800 Goal)

** \$19,553,965 including \$16 million Documented Planned Gift*

Cash & Pledges: \$5,437,985 (98% of \$5,500,000 Goal)

FY23 CHAMPIONS ANNUAL FUND

Cash: \$802,283 (64% of \$1,250,000 Goal)



LEGACY GIVING PROGRESS



BUILD BLUE FUND

Cash Balance: \$7,779,500

OUTDOOR TENNIS COMPLEX

Cash Balance: \$2,239,894

PETERSON CHAMPIONS PLAZA

Cash Balance: \$60,446

TOTAL CASH RECEIVED

Cash Balance: \$11,579,840

BUILD BLUE CAMPAIGN

(CASH/PLEDGES/VERBAL COMMITMENTS)

Progress: \$18,346,871 (92%)

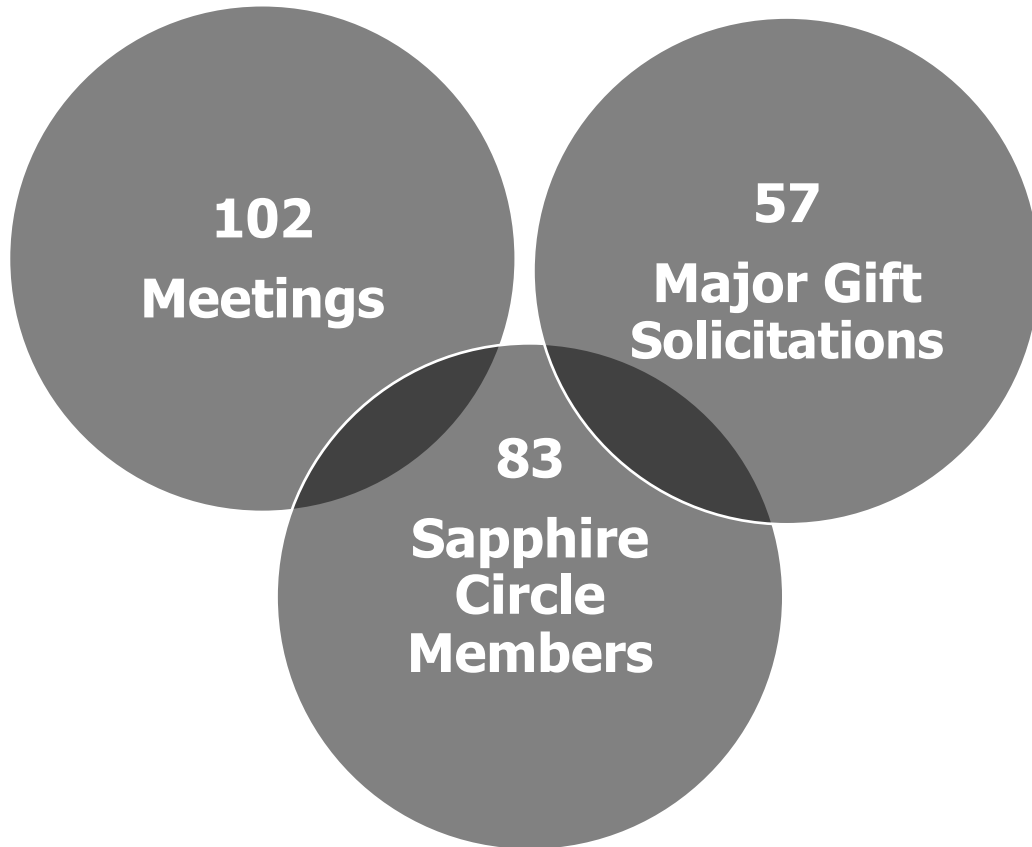
Goal: \$20,000,000



DEVELOPMENT ACTIVITY



PROGRESS



GOALS

