New Program Proposal

The following must be submitted to complete a new program request:

Submission Checklist:

☒ New Program Proposal
☒ Business Plan (https://www.ache.edu/index.php/forms/)
☒ Undergraduate or Graduate Curriculum Plan (https://www.ache.edu/index.php/forms/)

Primary Contact Information

Institution: Auburn University at Montgomery
Contact: Lei Wu, PhD
Title: Department Chair
Email: lwu@aum.edu
Telephone: 334-213-8666

Program Information

Date of Proposal Submission: 3/13/2026
Award Level: Bachelor's Degree
Award Nomenclature (e.g., BS, MBA): BS
Field of Study/Program Title: Artificial Intelligence and Robotics
CIP Code (6-digit): **11.0102**

Administration of the Program

Name of Dean: Douglas Leaman, PhD
Name of College/School: College of Sciences
Name of Chairperson: Lei Wu, PhD
Name of Department/Division: Computer Science & Computer Information Systems

Implementation Information

Proposed Program Implementation Date: 1/1/2027
Anticipated Date of Approval from Institutional Governing Board: 4/17/2026
Anticipated Date of ACHE Meeting to Vote on Proposal: 6/12/2026
SACSCOC Sub Change Requirement (Notification, Approval, or NA): Notification
Other Considerations for Timing and Approval (e.g., upcoming SACSCOC review):

New Program Proposal

I. Program Description

A. Concise Program Summary (one paragraph) to be included in ACHE Agenda:

The proposed Bachelor of Science in Artificial Intelligence and Robotics at Auburn University at Montgomery is an interdisciplinary undergraduate program designed to prepare students for careers and graduate study in robotics, automation, and intelligent systems. The curriculum integrates computer science, engineering fundamentals, mathematics, and hands-on laboratory experiences to develop expertise in programming, embedded systems, machine learning, computer vision, and autonomous systems. Emphasis is placed on applied problem solving, teamwork, ethical responsibility, and real-world projects aligned with regional and national workforce needs. Graduates will be equipped with the technical, analytical, and professional skills required to contribute to innovation in advanced manufacturing, healthcare, defense, logistics, and emerging technology sectors.

B. Specific Rationale (Strengths) for the Program

List three (3) to five (5) strengths of the proposed program as specific rationale for recommending approval of this proposal.

1. **High Workforce Demand and Career Relevance**: The program directly aligns with rapidly growing workforce needs in robotics, automation, artificial intelligence, and data-driven technologies across industries such as manufacturing, healthcare, defense, logistics, and smart infrastructure. Graduates will be well-positioned for high-demand, high-impact careers.
2. **Interdisciplinary, Hands-On Curriculum**: The proposed program integrates computer science, engineering, mathematics, and applied AI with extensive laboratory and project-based learning. This prepares students with both theoretical depth and practical experience in building real robotic and intelligent systems.
3. **Strong Alignment with AUM's Mission and Regional Economic Development**: The program supports Auburn University at Montgomery's mission to promote innovation, applied research, and workforce development in Central Alabama. It addresses regional needs for skilled professionals in advanced manufacturing, automation, and emerging technologies.
4. **Modern, Future-Focused Skill Development**: Students gain experience with current tools and technologies such as embedded systems, machine learning frameworks, robotics platforms, and simulation environments—ensuring graduates remain competitive as technologies evolve.

5. **Attractive Recruitment and Retention Potential**: Robotics and AI is a high-interest field among prospective students. This program will help AUM attract academically strong, diverse students and retain them through engaging, project-centered learning experiences.

C. External Support (Recommended)

List external entities (more may be added) that may have supplied letters of support attesting to the program's strengths and attach letters with the proposal at the end of this document.

None.

D. Student Learning Outcomes

List four (4) to seven (7) of the student learning outcomes of the program.

1. Students will be able to apply foundational concepts in robotics, artificial intelligence, computer science, and engineering—including programming, electronics, mechanics, and data structures—to analyze and solve real-world problems.
2. Students will design, build, and test robotic systems that integrate hardware and software components such as sensors, actuators, microcontrollers, and embedded systems.
3. Students will implement and evaluate AI algorithms, including machine learning, computer vision, and intelligent decision-making for autonomous and semi-autonomous systems.
4. Students will use mathematical and statistical methods (e.g., linear algebra, probability, and optimization) to model, simulate, and analyze robotic and AI systems.
5. Students will demonstrate effective teamwork and communication skills by collaborating on multidisciplinary projects and clearly presenting technical results to diverse audiences.
6. Students will apply ethical, societal, and professional considerations in the design and deployment of robotics and AI technologies.
7. Students will engage in problem-solving, innovation, and lifelong learning by using modern tools, research methods, and industry practices to adapt to evolving technologies in robotics and AI.

E. Similar Programs at Other Alabama Public Institutions

List programs at other Alabama public institutions of the same degree level and the same (or similar) CIP codes. If no similar programs exist within Alabama, list similar programs offered within the 16 SREB states. If the proposed program duplicates, closely resembles, or is similar to any other offerings in the state, provide justification for any potential duplication.

Using the Alabama Commission on Higher Education Program Inventory (ACHE: https://data.ache.edu/ACHE_ProgInvSearch), we reviewed bachelor's-level offerings under the same CIP code (or closely related CIP codes) to determine whether a comparable program already exists within Alabama's public institutions. Where a similar in-state program is identified, the table provides a brief justification describing the proposed B.S. in AI and Robotics' distinct focus and need, particularly its robotics-integrated curriculum and required hands-on lab components.

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
110102	Bachelor of Science	Alabama A&M University (AAM) - Artificial Intelligence	Similar degree program exists at Alabama A&M University (B.S. in Artificial Intelligence, CIP 110102). The proposed B.S. in AI and Robotics is differentiated by a robotics-integrated curriculum with required hands-on robotics labs and serves distinct workforce needs.

Beyond Alabama, we extended the scan to other SREB states to identify comparable bachelor-level programs with the same or similar CIP codes and related titles (e.g., Artificial Intelligence, Robotics). This regional comparison provides additional context on how peer institutions structure similar curricula and supports the justification that the proposed program's integrated AI-and-robotics scope and required robotics laboratory experiences represent a distinct program profile rather than unnecessary duplication. We summarize these details state by state below.

Arkansas: https://adhe.edu/students-parents/degree-information-and-approved-lists

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
110701 (similar)	Bachelor of Science	Henderson State University (HU) - Artificial Intelligence	Related offering is CS-coded; proposed B.S is differentiated by required robotics-focused labs/capstone and a robotics-integrated AI scope.

Delaware: https://education.delaware.gov/families/college-career-life/college-scholarship-financial-aid/choose-your-path/approved-colleges-and-institutions/

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CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
142701 (similar)	Bachelor of Science	University of Delaware - Artificial Intelligence Engineering	Related B.S engineering program exists; proposed B.S. in AI and Robotics is differentiated by an AI-and-robotics integrated curriculum with dedicated robotics labs and distinct workforce needs.

Florida: https://prod.flbog.net/ords/f?p=136:2:1002382261849262:::::

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
307001 (similar)	Bachelor of Science	Florida International University (FIU) - Data Science and Artificial Intelligence	Related B.S program exists under a different CIP; proposed B.S. in AI and Robotics is differentiated by robotics-integrated curriculum with required hands-on robotics labs and capstone aligned with distinct workforce needs.

Georgia: https://www.usg.edu/academic-program-finder

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
110102	Bachelor of Science	Middle Georgia State University - Applied Artificial Intelligence	Similar B.S program exists under CIP 110102; proposed B.S. in AI and Robotics is differentiated by a robotics-integrated curriculum with required hands-on robotics labs and capstone aligned with distinct workforce needs.
144201 (similar)	Bachelor of Science	Columbus State University - Robotics Engineering	Related B.S robotics engineering program exists; proposed program differs by emphasizing AI-driven robotics (AI core + robotics labs) rather than primarily engineering design focus.

Kentucky: https://dataportal.cpe.ky.gov/KYAcademicProgInventory.aspx

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
110102	Bachelor of Science	University of Kentucky - Artificial Intelligence (Pending Implementation)	Same CIP bachelor-level program exists; proposed B.S. in AI and Robotics is differentiated by a robotics-integrated curriculum with required hands-on robotics labs and distinct workforce needs.

Louisiana: https://apps.regents.state.la.us/Reports/Report.aspx?reportPath=/CRIN/CRIN_EXPORT

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication

N/A	Bachelor of Science	None found	No bachelor-level programs matching CIP 110102 (or closely related CIP codes) were identified in the Louisiana Regents Inventory extract for related public institutions.

Maryland: https://mhec.maryland.gov/institutions_training/pages/heprograms.aspx

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
110102	Bachelor of Science	University of Baltimore - Artificial Intelligence for IT Operation	Same CIP bachelor-level program exists; proposed B.S. in AI and Robotics is differentiated by a robotics-integrated curriculum with required hands-on robotics labs aligned with distinct workforce needs.
110102	Bachelor of Science	University of Maryland Global Campus (UMGC) - Artificial Intelligence	Same CIP bachelor-level program exists; proposed program differs by emphasizing AI + robotics integration (robotics labs/capstone) rather than general AI curriculum alone.

Mississippi: https://www.mississippi.edu/academic-affairs/academic-guidelines

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
110102	Bachelor of Science	Mississippi State University (MSU) - Artificial Intelligence	Same CIP bachelor-level program exists; proposed B.S. in AI and Robotics is differentiated by a robotics-integrated curriculum with required hands-on robotics labs aligned with distinct workforce needs.
150405 (similar)	Bachelor of Science	Alcorn State University (ASU) - Robotics and Automation Technology	Related B.S robotics/automation program exists under a different CIP; proposed program differs by emphasizing AI-driven robotics (AI core + robotics labs) rather than primarily robotics/automation technology training

North Carolina: https://www.northcarolina.edu/apps/programs/index.php

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
110102	Bachelor of Science	North Carolina Agricultural and Technical State University - Artificial Intelligence	Same CIP B.S program exists; proposed B.S. in AI and Robotics is differentiated by a robotics-integrated curriculum with required hands-on robotics labs aligned with distinct workforce needs.
110102	Bachelor of Science	the University of North Carolina at Charlotte - Artificial Intelligence	Same CIP B.S program exists; proposed program differs by emphasizing AI-and-robotics integration (robotics labs) and distinct workforce needs.

Oklahoma: https://okhighered.org/admin-fac/academic-reports/

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
110102	Bachelor of Science	Southwestern Oklahoma State University (SWOSU)	Same CIP B.S program exists; proposed B.S. in AI and Robotics is differentiated by a robotics-integrated curriculum with required hands-on

		- Artificial Intelligence	robotics labs aligned with distinct workforce needs.
110102	Bachelor of Science	Northeastern State University (NSU) - Artificial Intelligence and Data Analytics	Same CIP B.S program exists; proposed program differs by emphasizing AI + robotics integration (robotics labs) rather than AI + data analytics focus.
110102	Bachelor of Science	University of Oklahoma (OU) - Applied Artificial Intelligence	Same CIP B.S program exists; proposed program is differentiated by required robotics-focused labs and a robotics-integrated AI scope.
144201 (similar)	Bachelor of Science	Oklahoma State University (OSU) - Mechatronics and Robotics	Related B.S mechatronics/robotics program exists; proposed B.S differs by emphasizing AI-driven robotics (AI core + robotics labs) rather than primarily mechatronics/engineering design focus.

South Carolina: https://che.sc.gov/institutions-and-educators

CIP Code		Degree Title	Institution with Similar Program	Justification for Duplication
N/A	Bachelor of Science	None found	No bachelor-level programs matching CIP 110102 (or closely related CIP codes) were identified in the South Carolina Commission on Higher Education extract for related public institutions.	

Tennessee: https://www.tn.gov/thec/for-institutions/api.html

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
110102	Bachelor of Science	Tennessee Technological University - Artificial Intelligence (Approved – Not Active; effective 08/01/2026)	Same CIP B.S. program is approved but not yet active; proposed B.S. in AI and Robotics is differentiated by a robotics-integrated curriculum with required hands-on robotics labs/capstone aligned with distinct regional/workforce needs.

Texas: https://apps.highered.texas.gov/index.cfm

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
110102	Bachelor of Science	Angelo State University (ASU) - Artificial Intelligence	Same CIP B.S. program exists; proposed B.S. in AI and Robotics is differentiated by a robotics-integrated curriculum with required hands-on robotics labs aligned with distinct workforce needs.
110102	Bachelor of Science	Tarleton State University (TSU) - Artificial Intelligence and Machine Learning	Same CIP B.S. program exists; proposed program differs by emphasizing AI-and-robotics integration (robotics labs) rather than AI/ML-only scope.
110102	Bachelor of Science	The University of Texas at El Paso	Same CIP B.S. program exists; proposed B.S. in AI and Robotics is differentiated by required

		(UTEP) - Artificial Intelligence	robotics-focused labs and a robotics-integrated AI scope.
303101 (similar)	Bachelor of Science	Texas Tech University (TTU) - Human Centered Artificial Intelligence	Related B.S. program exists under a different CIP; proposed B.S. in AI and Robotics is differentiated by robotics-integrated curriculum with required hands-on robotics labs and distinct workforce needs.
307102 (similar)	Bachelor of Science	The University of Texas at Dallas (UT Dallas) - Business Analytics and Artificial Intelligence	Related B.S. program exists under a different CIP; proposed program differs by emphasizing AI-driven robotics (robotics labs) rather than business analytics–centered AI training.

Virginia:
https://research.schev.edu/rdPage.aspx?rdReport=degreeinventory.DegreeInventory_SCHEV

CIP Code		Degree Title	Institution with Similar Program	Justification for Duplication
N/A	Bachelor of Science	None found	No bachelor-level programs matching CIP 110102 (or closely related CIP codes) were identified in the Virginia Higher Education Data extract for related public institutions.	

West Virginia: https://www.wvhepc.edu/resources/data-and-publication-center/degree-inventory/

CIP Code	Degree Title	Institution with Similar Program	Justification for Duplication
144201 (similar)	Bachelor of Science	West Virginia University (WVU) - Robotics Engineering	Related B.S. robotics engineering program exists; proposed B.S. in AI and Robotics is differentiated by an AI-centered, robotics-integrated curriculum with required hands-on robotics labs aligned with distinct workforce needs.

F. Relationship to Existing Programs within the Institution

Nearly all new programs have some relationship to existing offerings through shared courses, faculty, facilities, etc. Is the proposed program associated with any existing offerings within the institution, including options within current degree programs? **Yes** ☒ **No** ☐

If ***yes***, please describe these relationships, including whether or not the program will replace or compete with existing offerings: (***Note:*** If this is a graduate program, list any existing undergraduate programs which are directly or indirectly related. If this is a doctoral program, also list related master's programs.)

The proposed B.S. in Artificial Intelligence and Robotics is associated with AUM's existing undergraduate offerings in Computer Science through shared foundational coursework, faculty expertise, and instructional resources. The program will leverage existing CS courses in programming, data structures, algorithms, databases, operating systems, and networking as

part of its foundation, while introducing dedicated AI-and-robotics coursework and required hands-on robotics laboratory experiences to create a distinct curricular pathway.

The proposed program is not intended to replace any existing degree program or concentration; instead, it complements current offerings by providing a standalone, robotics-integrated AI curriculum aligned with emerging workforce needs and interdisciplinary applications. Course scheduling and advising will be coordinated to minimize overlap conflicts and to allow students to progress efficiently through both shared foundation courses and the program-specific sequence.

G. Collaboration

Have any collaborations **within your institution** (i.e., research centers, across academic divisions, etc.) been explored? **Yes** ☐ **No** ☒

Have collaborations with **other institutions or external entities** (i.e., local business, industries, etc.) been explored? **Yes** ☐ **No** ☒

H. Programmatic Accreditation

Select the appropriate program accreditor from the drop-down menu below:

None

Provide a detailed timeline for gaining accreditation (i.e., when will full candidacy be reached?):

I. Professional Licensure

Will the program be considered a Professional Licensure Program based on the following definition: **Yes** ☐ **No** ☒

Professional Licensure Program: As defined in federal regulations, an instructional program that is designed to meet educational requirements for a specific professional license or certification that is required for employment in an occupation or is advertised as meeting such requirements.

If ***yes***, please explain:

Select the appropriate licensure body from the table below:

Choose an item.

Select the appropriate license from the table below:

Choose an item.

J. Professional Certification

Will students earn industry certifications while completing the degree or be prepared for industry certifications upon graduation? **Yes** ☐ **No** ☒

If ***yes***, please explain:

K. Admissions

Provide any additional admissions requirements beyond the institution's standard admissions process/policies for this degree level. Include prerequisites, prior degrees earned, etc.

Admission requirements include a high school diploma (or equivalent), official high school transcripts, and standardized test scores (ACT or SAT. Minimum background includes the following high school courses or equivalent: Pre-Calculus and a lab-based science course, preferably Physics. However, if the minimum background needed to succeed in this program is not met, appropriate prerequisite courses will be recommended.

L. Mode of Delivery

Provide the planned delivery format(s) of the program as defined in policy (i.e., in-person, online, hybrid). Please also note whether any program requirements can be completed through competency-based assessment.

The Bachelor of Science in Artificial Intelligence and Robotics will be offered using a 100% in-person or 100% online or a hybrid earning model, combining in-person instruction, online coursework, and hybrid formats. Foundational computing, mathematics, and theoretical AI courses may be offered fully online or in hybrid formats, while robotics, embedded systems, and applied AI laboratories will include a hybrid or in-person components to ensure hands-on experiential learning. Some program requirements, including programming assignments, simulations, and AI model development, may be completed remotely using cloud-based and virtual laboratory environments. However, robotics laboratories, capstone projects, and selected embedded systems courses require a hybrid model with physical presence for hardware interaction and team-based design experiences.

Competency-Based Assessment:
The program does not use a fully competency-based assessment model; however, selected courses incorporate project-based and performance-based assessments aligned with industry standards.

Can students complete the entire degree program through distance education (100% online) based on the following definition? **Yes** ☒ **No** ☐

Due to intensive hands-on robotics laboratories and capstone design experiences with both face-to-face and online facilities, the degree can be completed 100% online.

Distance Education: An academic program for which required instructional activities can be completed entirely through distance education modalities. A distance education program may have in-person requirements that are non-instructional (e.g., orientation, practicum).

M. Instructional Site(s)

Provide the planned location(s) where the program will be delivered (i.e., main campus, satellite campus, off-campus site.) If the program will be offered at an off-campus site, provide the existing site name or submit an ***Off-Campus Site Request*** if new.

Instruction will primarily occur on the AUM campus, utilizing existing computer science laboratories, robotics labs, and instructional facilities. Online components will be delivered through AUM's approved learning management system, e.g., Canvas.

Will more than 50% of this program be offered at an off-campus site(s) **Yes** ☐ **No** ☒

If ***yes***, which sites?

N. Industry Need

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Using the federal **Standard Occupational Code (SOC) System**, indicate the top three occupational codes related to post-graduation employment from the program. A full list of SOCs can be found at https://www.onetcodeconnector.org/find/family/title#17.

SOC 1 (**required**): 15-2051.00 Data Scientists
SOC 2 (optional): 15-1252.00 Software Developers
SOC 3 (optional): 17-2199.00 Engineers, All Other
SOC 4 (optional): 17-2199.08 Robotics Engineers

Briefly describe how the program fulfills a specific industry or employment need for the State of Alabama. As appropriate, discuss alignment with Alabama's Statewide or Regional Lists of In-Demand Occupations (https://www.ache.edu/index.php/policy-guidance/) or with emerging industries as identified by Innovate Alabama or the Economic Development Partnership of Alabama (EDPA).

The proposed B.S. in Artificial Intelligence and Robotics directly responds to measurable and documented workforce demand in Alabama for professionals with expertise in artificial intelligence, automation, robotics, data analytics, machine learning, and intelligent systems. Alabama's technology and manufacturing sectors have experienced rapid growth, with the state's tech sector increasing its economic output by approximately 50% since 2018 and projected to account for over 5% of total GDP by 2030 [1], supported by venture capital investment and expanding tech enterprises in Huntsville, Birmingham, and Mobile. This expansion underscores the importance of a workforce skilled in software, AI, and automation disciplines.

The manufacturing and advanced production industries, core components of Alabama's economy, are increasingly integrating automation and robotics into operations, creating demand for workers who understand advanced production systems, automated control, and robotics technology. Employers across aerospace, defense, automotive manufacturing, logistics, and cybersecurity sectors in the state actively seek graduates with interdisciplinary computing and automation competencies to manage intelligent systems and data-driven decision-making processes [2].

Statewide economic development and innovation organizations such as Innovate Alabama and the EDPA are investing in growth-stage tech and advanced manufacturing companies, reinforcing the strategic importance of technology-driven sectors. These investments support job creation in priority industries, including aerospace, advanced manufacturing, and software-related technologies, indicating employer demand for graduates with applied AI and robotics skills [3].

By emphasizing applied artificial intelligence, robotics systems, hands-on laboratories, industry-relevant software tools, and capstone design projects, the proposed program prepares graduates to step directly into high-need roles where they can design, implement, and maintain intelligent automation solutions. This prepares students to meet both current workforce demands and support the long-term economic competitiveness of Alabama's technology and manufacturing sectors.

References:

[1] Made in Alabama. (2026). *Advancing toward the future.* [Online]. Available: https://www.madeinalabama.com/sectors/technology/
[2] Carolyn Lee and Patricia Sims. (2025). *Alabama's workforce is key to manufacturing's future.* [Online]. Available: https://www.ccdaily.com/2025/02/alabamas-workforce-is-key-to-manufacturings-future/
[3] Innovate Alabama. (2025). *Innovate Alabama Invests in 13 Companies Driving Growth in Alabama's Priority Sectors.* [Online]. Available: https://innovatealabama.org/press/innovate-alabama-invests-in-13-companies-driving-growth-in-alabamas-priority-sectors

O. Additional Education/Training

Please explain whether further education/training is required for graduates of the proposed program to gain entry-level employment in the SOC occupations selected above.

The program is designed to provide sufficient theoretical foundation and applied experience to support immediate workforce entry and graduate-level advancement. Graduates of the proposed B.S. in Artificial Intelligence and Robotics will be qualified for entry-level employment in the SOC occupations listed above without requiring additional formal education.

While no further education is required for entry-level roles, graduates may choose to pursue:

1. Employer-provided on-the-job training;
2. Industry certifications or professional development opportunities;
3. Or graduate study in artificial intelligence, robotics, computer science, engineering, or related fields.

P. Student Demand

Please explain how you projected the student enrollment numbers in the **Business Plan, Lines 24-27** and provide evidence to substantiate student demand (i.e., surveys, enrollments in related courses, etc.).

The proposed program's applied focus, modern curriculum, and alignment with emerging workforce needs position it to attract new students, retain existing students, and expand enrollment beyond current computing programs. Projected student enrollment estimates included in the Business Plan (Lines 24–27) are based on multiple indicators of demonstrated and anticipated demand:

1. Strong enrollment trends in existing computer science, cybersecurity, and data-focused courses at AUM, including sustained student interest in AI- and robotics-related electives.
2. Growing regional and statewide demand for AI- and automation-skilled professionals, particularly in defense, aerospace, manufacturing, logistics, and technology sectors.

3. Recruitment potential from transfer students, dual-enrollment pathways, and students seeking interdisciplinary programs that combine computing, AI, and robotics rather than traditional single-discipline degrees.

4. Student interest surveys and advising data indicate increased demand for applied, career-focused computing degrees with clear workforce pathways.

II. Program Resources and Expenses

A. All Proposed Program Personnel

Provide all personnel counts for the proposed program.

Employment Status of Program Personnel		Personnel Information		
		Count from Proposed Program Department	Count from Other Departments	Subtotal of Personnel
Current	Full-Time Faculty	8	0	8
	Part-Time Faculty	0		0
	Administration	1		1
	Support Staff	1		1
**New To Be Hired	Full-Time Faculty	0		0
	Part-Time Faculty	0		0
	Administration	0		0
	Support Staff	0		0
		Personnel Total		

Provide justification that the institution has proposed a sufficient number of faculty (full-time and part-time) for the proposed program to ensure curriculum and program quality, integrity, and review:

Auburn University at Montgomery has allocated 8 dedicated, full-time faculty members to ensure the curricular quality and integrity of the B.S. in AI and Robotics. These faculty will utilize a strategic rotation model, alternating the courses from the major across the three academic semesters (Fall, Spring, and Summer) to provide consistent year-round coverage of program requirements. By coordinating their instructional loads, these faculties can maintain a high-quality hands-on mentorship while leveraging existing faculty from other departments for foundational coursework. This rotating faculty structure ensures that students have a clear, efficient pathway to graduation without compromising the rigor of technical instruction or program oversight.

Note: Include ***any new funds*** designated for compensation costs (faculty, administration, and/or support staff to be hired) in the **Business Plan, Line 7 - Personnel Salaries and Benefits**. Current personnel salary/benefits ***should not be included*** in the Business Plan.

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B. Proposed Faculty Roster*

Complete the following **Faculty Roster** to provide a brief summary and qualifications of current faculty and potential new hires specific to the program.

***Note**: Institutions must maintain and have current as well as additional faculty curriculum vitae available upon ACHE request for as long as the program is active, but CVs are **not** to be submitted with this proposal.

Current Faculty			
1	2	3	4
CURRENT FACULTY NAME (FT, PT)	COURSES TAUGHT including Term, Course Number, Course Title, & Credit Hours (D, UN, UT, G, DU)	ACADEMIC DEGREES and COURSEWORK Relevant to Courses Taught, including Institution and Major; List Specific Graduate Coursework, if needed	OTHER QUALIFICATIONS and COMMENTS Related to Courses Taught and Modality(ies) (IP, OL, HY, OCIS)
Olcay Kurson	-CSCI 3170 (Machine Learning), 3,UT -CSCI 4100 (Data Analytics & Components), 3, UT	Ph.D. in Computer Science, University of Central Florida	
Zhenlu Qin (FT)	-CSCI 2000 (Functional & Structural Programming), 4, UT -CSCI 3000 (Object-Oriented Programming), 4, UT -CSCI 3090 (3D Video Game Development), 3, UT -CSCI 2100 (Linux/Unix), 3, UT -CSCI 3170 (Machine Learning), 3,UT -CSCI 3180 (Deep Learning), 3, UT -CSCI 4350 (Networking), 3, UT	Ph.D. in Electrical and Computer Engineering, New Jersey Institute of Technology	
Sheik Anik	CSCI 3360 Embedded Reconfigurable Computing Foun. 3, UT CSCI 4150 Generative AI & Engineering, 3, UT CSCI 4140 Adv. Machine Learning Security Trait, 3, UT CSCI 4240 Internet of Things AI Cloud with Security, 3, UT CSCI 4300 Intro. Operating Systems, 3, UT	Ph.D. in Computer Science, Virginia Polytechnic Institute and State University,	
Sutanu Bhattacharya	CSCI 4610 Computational Biology Machine Learning, 3, UT CSCI 4160 Applied Natural Language Processing with LLM, 3, UT CSCI 6000 Data Structure and Algorithm, 3, UT CSCI 4150 Generative AI & Engineering, 3, UT	Ph.D. in Computer Science, Auburn University	
Weiqi Liu	CSCI 3170 Machine Learning, 3, UT CSCI 4060 AI Techniques for Intelligent Agents, 3, UT CSCI 4260 Computer Security and Reliability, 3, UT CSCI 4100 Data Analytics & Components, 3, UT CSCI 4220 Reinforcement Learning & Robotics AI, 3, UT CSCI 3010 Federated Learning & Distributed AI, 3, UT CSCI 4210 Large Lang. Model Dev. 3, UT	Ph.D. in Electrical and Computer Engineering, New Jersey Institute of Technology	

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Current Faculty			
1	2	3	4
CURRENT FACULTY NAME (FT, PT)	**COURSES TAUGHT including Term, Course Number, Course Title, & Credit Hours (D, UN, UT, G, DU)**	**ACADEMIC DEGREES and COURSEWORK Relevant to Courses Taught, including Institution and Major; List Specific Graduate Coursework, if needed**	**OTHER QUALIFICATIONS and COMMENTS Related to Courses Taught and Modality(ies) (IP, OL, HY, OCIS)**
Hua Yan	-CSCI 2000 (Functional & Structural Programming), 4, UT -CSCI 3000 (Object-Oriented Programming), 4, UT -CSCI 2100 (Linux/Unix), 3, UT -CSCI 2163 (Python), 4, UT -CSCI 2160 (Fundamentals of AI Computing), 3, UT -CSCI 3703 (Database), 3, UT -CSCI 4100 (Data Analytics & Components), 3, UT	M. S. in Computer Science from Concordia University, Currently pursuing Ph.D. in Computer Science and Software Engineering at Auburn University	
Yue Cui	-CSCI 3400 (Data Structure), 3, UT -CSCI 3600 (Algorithm Analysis & Design), 3, UT -CSCI 2020 (Micro Embedded System Dev), 3, UT -CSCI 2100 (Linux/Unix), 3, UT -CSCI 2163 (Python), 4, UT -CSCI 2160 (Fundamentals of AI Computing), 3, UT CSCI 3703 (Database), 3, UT	Ph.D. in Computer Science and Software Engineering, Auburn University	
Pengzhou He	-CSCI 2350 (Secure Paral Com Logic Design), 3, UT -CSCI 3330 (Configurable AI ML Privacy Assurance), 3, UT -CSCI 3340 (Private AI & Security), 3, UT -CSCI 3360 (Embed Reconfigurable Computation), 3, UT	Ph.D. in Computer Engineering, Villanova University	

Additional Faculty (To Be Hired)			
1	2	3	4
FACULTY POSITION (FT, PT)	**COURSES TO BE TAUGHT including Term, Course Number, Course Title, & Credit Hours (D, UN, UT, G, DU)**	**ACADEMIC DEGREES and COURSEWORK Relevant to Courses Taught, including Institution and Major; List Specific Graduate Coursework, if needed**	**OTHER QUALIFICATIONS and COMMENTS Related to Courses Taught and Modality(ies) (IP, OL, HY, OCIS)**

Abbreviations: (FT, PT): Full-Time, Part-Time; (D, UN, UT, G, DU): Developmental, Undergraduate Nontransferable, Undergraduate Transferable, Graduate, Dual: High School Dual Enrollment
Course Modality: (IP, OL, HY, OCIS): In-Person, Online, Hybrid, Off-Campus Instructional Site

C. Equipment

Will any special equipment be needed specifically for this program? **Yes ☐ No ☒**

If ***yes***, list the special equipment and include all special equipment costs in the ***Business Plan, Line 8***:

D. Facilities

Will new facilities or renovations to existing infrastructure be required specifically for the program? **Yes ☐ No ☒**

If ***yes***, describe the new facilities or renovations and include all *new* facilities and/or *renovation* costs in the ***Business Plan, Line 9***:

E. Assistantships/Fellowships

Will the institution offer any assistantships specifically for this program? **Yes ☐ No ☒**

If ***yes****,* provide the number of assistantships to be offered and include all *new* costs for assistantships in the ***Business Plan, Line 10.***

Explain the function of the Assistantships (i.e., teaching, research, etc.)?:

F. Library

Will any **additional** library resources be purchased to support the program? **Yes ☐ No ☒**

If ***yes***, briefly describe new resources to be purchased and include the cost of new library resources in the ***Business Plan, Line 11***:

G. Accreditation Expenses

If programmatic accreditation was indicated above, please include all accreditation costs in the ***Business Plan, Line 12*** and itemize and explain below:

H. Other Costs

Please include all other costs incurred with program implementation, such as marketing or recruitment, in the ***Business Plan, Line 13*** and explain below:

III. Program Revenue and Funding

A. Tuition Revenue: Please describe how you calculated the tuition revenue that appears in the ***Business Plan, Line 17***. Specifically, did you calculate using cost per credit hour or per term? Did you factor in differences between resident and non-resident tuition rates?
Note: Tuition Revenue should be proportional to total enrollment.

B. External Funding: Will the proposed program require external funding (*e.g.*, Perkins, Foundation, Federal Grants, Sponsored Research, etc.)? **Yes ☐ No ☒**

If ***yes***, please include all external funding in the ***Business Plan, Line 18*** and explain specific sources and funding below:

C. Reallocations: For each year will tuition revenue and/or external funding cover projected expenses? **Yes ☒ No ☐**

If ***not***, budget reallocation may be required. Please include all reallocations in the ***Business Plan, Line 19*** and describe below how your institution will cover any shortfalls in any given year.

ACADEMIC DEGREE PROGRAM BUSINESS PLAN								
INSTITUTION:	**Auburn University at Montgomery**							
PROGRAM NAME:	**Airtificial Intelligence and Robotics Major**						**CIP CODE:**	**11.0102**
SELECT LEVEL:	**UNDERGRADUATE (BACHELOR'S)**							
ESTIMATED *NEW* EXPENSES TO IMPLEMENT PROPOSED PROGRAM								
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**TOTAL**
PERSONNEL SALARIES & BENEFITS								$0
EQUIPMENT								$0
FACILITIES								$0
ASSISTANTSHIPS/FELLOWSHIPS								$0
LIBRARY								$0
ACCREDITATION								$0
OTHER COSTS								$0
TOTAL EXPENSES	$0	$0	$0	$0	$0	$0	$0	**$0**
***NEW* REVENUES AVAILABLE FOR PROGRAM SUPPORT**								
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**TOTAL**
TUITION + FEES	$114,201	$420,350	$538,720	$604,630	$604,630	$604,630	$604,630	$3,491,791
EXTERNAL FUNDING								$0
REALLOCATIONS								$0
TOTAL REVENUES	$114,201	$420,350	$538,720	$604,630	$604,630	$604,630	$604,630	**$3,491,791**
ENROLLMENT PROJECTIONS								
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**AVERAGE**
FULL-TIME ENROLLMENT HEADCOUNT	**No data reporting**	27	37	45	45	45	45	**40.67**
PART-TIME ENROLLMENT HEADCOUNT								**0.00**
TOTAL ENROLLMENT HEADCOUNT		27	37	45	45	45	45	**40.67**
***NEW* ENROLLMENT HEADCOUNT**		15	15	15	15	15	15	**15.00**
Validation of Enrollment			**YES**	**YES**	**YES**	**YES**	**YES**	
DEGREE COMPLETION PROJECTIONS								
Note: Do not count Lead "0"s and Lead 0 years in computing the average annual degree completions.								
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**AVERAGE**
DEGREE COMPLETION PROJECTIONS	**No data reporting**	0	0	8	8	8	8	**8.00**

Undergraduate Curriculum Plan

Undergraduate Curriculum Checklist:

1. Overview ☑
2. Components ☑
3. Options (as required) ☑

1. Undergraduate Overview

Enter the credit hour value for all applicable components (N/A if not applicable).
The credit hours MUST match the credit hours in the Curriculum Components table.

Curriculum Overview of Proposed Program	
Credit hours required in **General Education**	45
Credit hours required in **Program Courses & Required Electives**	54
Credit hours in **Program Options (concentrations/specializations/tracks)**	0
Credit hours in **Free Electives**	18
Credit hours in required **Capstone/Internship/Practicum**	3
Total Credit Hours Required for Completion:	**120**

Maximum number of credits that can be transferred in from another institution and applied to the program:	90
Intended program duration in semesters for full-time students:	8
Intended program duration in semesters for part-time students:	16

	YES	NO
Does the program require students to demonstrate industry-validated skills, specifically through an embedded industry-recognized certification, structured work-based learning with an enployer partner, or alignment with nationally recognized industry standards?:	☐	☑

If **yes**, please explain (i.e., number of hours required, etc.):

	YES	NO
Does the program inlcude any concentrations/ tracks/ options?	☐	☑

If **yes**, please explain (i.e., define):

2. Undegraduate Components

Please provide all course information as indicated in the following table. Indicate new courses with "Y" in the associated column. If the course includes a required work-based learning component, such as an internship or practicum course, please indicate with a "Y" in the WBL column.

Insert Additional Rows as Needed				
Institution:	Auburn University at Montgomery			
Program Name:	Artificial Intelligence and Robotics			
Program Level:	UNDERGRADUATE (BACHELOR'S)			
Curriculum Components of Proposed Program				
Course Number	**Course Name**	**Credit Hours**	**New? (Y)**	**WBL? (Y)**
General Education Courses		**45 minimum**		
AUM GENERAL CORE				
UNIV 1000	University Success: Bridge	3		
AREA I				
ENGL 1010	English Composition I	3		
ENGL 1020	English Composition II	3		
AREA II				
ENGL 2530 ENGL 2540 ENGL 2570 ENGL 2580 ENGL 2600 ENGL 2610 ENGL 2670 ENGL 2680	Survey of English Literature I Survey of English Literature II Survey of American Literature I Survey of American Literature II Survey of World Literature I Survey of World Literature II Survey of African American Literature I Survey of African American Literature II	3		
AREA II	One mandatory Literature course. Students must complete a 6-hour sequence in either Literature or in History. If two Literature courses are taken in a sequence, then only one History course is required	3		
MUSI 2110 THEA 2040 VISU 1000 VISU 2030 VISU 2040 VISU 2600	Music Appreciation Theatre Appreciation Introduction to the Visual Arts Art History I Art History II Introduction to World Architecture1	3		

CHIN 1010 CHIN 1020 COMM 1010 COMM 1017 COMM 2100 COMM 2212 FREN 1010 FREN 1020 FREN 2010 FREN 2020 GERM 1010 GERM 1020 GERM 2010 GERM 2020 LATN 1010 LATN 1020 PHIL 2000 PHIL 2010 I PHIL 2100 RELI 2010 SPAN 1010 SPAN 1020 SPAN 2010 I SPAN 2020 I	Elementary Mandarin Chinese I Elementary Mandarin Chinese II Introduction to Human Communication Introduction to Human Communication, Honors Media and Culture (3 Hours) Public Speaking Elementary French I Elementary French II Intermediate French I Intermediate French II Elementary German I Elementary German II Intermediate German I Intermediate German II Elementary Latin I Elementary Latin II Reasoning and Critical Thinking Introduction to Philosophy ntroduction to World Religions Elementary Spanish I Elementary Spanish II Intermediate Spanish I Intermediate Spanish II	3 or 4		
AREA III				
BIOL 1000/1001 BIOL 1010/1011 BIOL 1017/1018 BIOL 1020/1021 BIOL 1027/1028 BIOL 1050/1051 BIOL 2100/2101 BIOL 2010/2011 BIOL 2093 CHEM 1100/1101 CHEM 1200/1201 PHYS 2100/2101 PHYS 2200/2201 PSCI 1100/1101 PSCI 1300/1301 PSCI 1400/1401 PSCI 1500/1501	Introduction to Biology/Lab Cellular and Molecular Basis of Life/Lab Cellular and Molecular Basis of Life/Lab, Honors Organisms, Adaptations, and the Environment/Lab Organisms, Adaptations, and the Environment/Lab, Honors Introduction to Environmental Biology/Lab Anatomy and Physiology I/ Lab Fundamentals of Microbiology/Lab Essentials of Anatomy and Physiology/Lab General Chemistry I/Lab General Chemistry II/Lab General Physics I/Lab General Physics II/Lab Introduction to Physical Science/Lab Introduction to Earth Science Introduction to Astronomy/Lab Introduction to Chemistry/Lab	4		

BIOL 1000/1001 BIOL 1010/1011 BIOL 1017/1018 BIOL 1020/1021 BIOL 1027/1028 BIOL 1050/1051 BIOL 2100/2101 BIOL 2010/2011 BIOL 2093 CHEM 1100/1101 CHEM 1200/1201 PHYS 2100/2101 PHYS 2200/2201 PSCI 1100/1101 PSCI 1300/1301 PSCI 1400/1401 PSCI 1500/1501	Introduction to Biology/Lab Cellular and Molecular Basis of Life/Lab Cellular and Molecular Basis of Life/Lab, Honors Organisms, Adaptations, and the Environment/Lab Organisms, Adaptations, and the Environment/Lab, Honors Introduction to Environmental Biology/Lab Anatomy and Physiology I/ Lab Fundamentals of Microbiology/Lab Essentials of Anatomy and Physiology/Lab General Chemistry I/Lab General Chemistry II/Lab General Physics I/Lab General Physics II/Lab Introduction to Physical Science/Lab Introduction to Earth Science Introduction to Astronomy/Lab Introduction to Chemistry/Lab	4		
MATH 1610	Calculus I	4		
AREA IV				
HIST 1010 HIST 1017 HIST 1020 HIST 1027 HIST 1060 HIST 1070 HIST 1080 HIST 1090 HONR 1957 HONR 2757 HONR 3757	World History I to 1648 World History I, Honors World History II Since 1648 World History II, Honors History of Western World I History of Western World II U.S. History to 1865 U.S. History Since 1865 Honors Colloquium UHP Seminar UHP Seminar	3		
HIST 1010 HIST 1017 HIST 1020 HIST 1027 HIST 1060 HIST 1070 HIST 1080 HIST 1090 HONR 1957 HONR 2757 HONR 3757	World History I to 1648 World History I, Honors World History II Since 1648 World History II, Honors History of Western World I History of Western World II U.S. History to 1865 U.S. History Since 1865 Honors Colloquium UHP Seminar UHP Seminar	3		

ANTH 2110 ECON 1000 ECON 2010 ECON 2017 ECON 2020 ECON 2027 GEOG 2050 GEOG 2150 JUST 1270 POLS 1020 POLS 1200 PSYC 1000 PSYC 2780 SOCI 2000 SOCI 2007 SOCI 2010	Cultural Anthropology Essentials of Economics Economics I (Micro) Economics I (Micro), Honors Economics II (Macro) Economics II (Macro), Honors Geography of World Regions Human Geography Introduction to the American Legal System Introduction to American Politics International Relations General Introductory Psychology Human Growth Development Introduction to Sociology Introduction to Sociology, Honors Social Problems	3		
ANTH 2110 ECON 1000 ECON 2010 ECON 2017 ECON 2020 ECON 2027 GEOG 2050 GEOG 2150 JUST 1270 POLS 1020 POLS 1200 PSYC 1000 PSYC 2780 SOCI 2000 SOCI 2007 SOCI 2010	Cultural Anthropology Essentials of Economics Economics I (Micro) Economics I (Micro), Honors Economics II (Macro) Economics II (Macro), Honors Geography of World Regions Human Geography Introduction to the American Legal System Introduction to American Politics International Relations General Introductory Psychology Human Growth Development Introduction to Sociology Introduction to Sociology, Honors Social Problems	3		
Program Courses and Required Electives		**54 minimum**		
CSCI 2000/2001	Functional and structional Programming Languages and Labs	4		
CSCI 2100	Linux/Unix for AI/IT/Cyber Robotics Fundations	3		
CSCI 2020	Intoduction to Micro Embede System and Development	3		
CSCI 3000/3001	Object-Oriented Programming Languages and Labs	4		
CSCI 3400	Data Structure	3		
CSCI 3600	Algirithm Design and Analysis	3		
CSCI 3703	Introduction to Database Systems and Labs	4		
MATH 2260 or MATH 3600	Linear Algebra Applied Linear Algebra	3		
CSCI 2160	Fundamentals of AI Computing	3		
CSCI 2163	Pythong Programming Language for AI/IT/Cyber/Robotics	4		
CSCI 3170	Machine Learning Foundation	3		
CSCI 3180	Deep Learning Foundation	3		
CSCI	AI & Robotics Elective	3		
CSCI	AI & Robotics Elective	3		
CSCI	AI & Robotics Elective	3		

CSCI	AI & Robotics Elective	3		
CSCI	AI & Robotics Elective	3		

Program Options (enter total credit hours from all options below)		**18**		
Free Elective				
CSCI 2120	AI-Assisted Audio Design	3		
CSCI 3110	AI & Procedure Generation Digital Media	3		
CSCI 3140	Intelligent Robotics System Design & Development	3		
CSCI 3190	AI-assisted Serious Game Development for Education: Foundations	3		
CSCI 3210	Edge-AI Mechatronics & ML Engineering: Foundations	3		
CSCI 3220	AI-Driven Industrial Robotics & Automation: Foundations	3		
CSCI 3230	Applied Deep Learning for Robotics: Foundation	3		
CSCI 3330	Confidential AI & ML Privacy Assurance: Foundations & Lab	3		
CSCI 3340	Private AI & Secure Machine Acceleration: Foundations & Lab	3		
CSCI 3360	Embedded Reconfigurable Computing: Foundations	3		
CSCI 4050	Machine Speech Processing Applications: Foundations	3		
CSCI 4060	AI Techniques for Intelligent Agents: Foundations	3		
CSCI 4100	Data Analytics & Data Components: Foundations	3		
CSCI 4130	Robotics AI & Intelligent Vision: Foundations	3		
CSCI 4140	Advanced Machine Learning Security Traits: Foundations	3		
CSCI 4150	Generative AI & Engineering: Foundation	3		
CSCI 4160	Applied Natural Language Processing with LLMs: Foundations	3		
CSCI 4210	Large Language Model Interactive Simulation Development: Foundations	3		
CSCI 4220	Reinforcement Learning & Robotics AI: Foundations	3		
CSCI 4230	Advanced Topics in AI & Computer Science: Foundations	3		
CSCI 4240	Internet of Things AI Cloud with Security: Foundations	3		
CSCI 4610	Computational Biology Machine Learning: Foundations	3		

Capstone/Internship/Practicum		**3**		
CSCI 4924	Internship Capstone Practicum	3		
	Total Credit Hours Required for Completion:	**120**		