APPROVAL FORM FOR

DEGREE PROGRAMS

MISSISSIPPI STATE UNIVERSITY

NOTE: This form is a cover sheet that must accompany the degree program change proposal. The actual proposal should be prepared in accordance with format requirements provided in the *Guide and Format for Curriculum Proposals* published by the UCCC. Both cover sheet and proposal should be submitted to UCCC Mail Stop 9702 (281 Garner Hall), Phone: 325-9410.

College Education **Department:** ITIDCCL

Contact Person: Lara Threet **Mail Stop:** 9730 **E-mail:** lthreet@colled.msstate.edu

Nature of Change: New Degree **Date Initiated:** September 18, 2024

Current Degree Program Name: _____

Current Major: _____

Current Concentration(s): _____

Current Campus(es): Starkville

New Degree Program Name: Bachelor of Applied Science **Effective Date:** _____

Semester	Year
Fall	2025

Proposed Major: Advanced Manufacturing Technology

Proposed Concentration(s): _____ **Proposed Campus(es):** Distance

Summary of Proposed Changes:

The Bachelor of Applied Science in the Advanced Manufacturing Technology degree is designed for students who wish to enhance their skills in the management of manufacturing processes. The program focuses on technical learning, taught by faculty with industry experience, providing students with the necessary knowledge in the manufacturing environment, analysis, design, and implementation of manufacturing standards. Students must possess an accredited Associate of Applied Science (AAS) in Automated Manufacturing Technology, Mechatronics, Industrial Electronics Technology, Process Operations, or other related manufacturing AAS majors.

Approved: **Date:**

Department Head — 10/2/2024

Director of Academic Quality — 10/2/24

Chair, College or School Curriculum Committee — 12/2/2024

Kimberly R. Hall Digitally signed by Kimberly R. Hall
Date: 2024.12.02 12:19:16 -06'00'

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (If applicable)

Chair, Deans Council

NEW ACADEMIC DEGREE PROGRAM PROPOSAL

Institutional Request Form – Appendix 8
(Submit in PDF format with signatures.)

Institution:	Mississippi State University
Date of anticipated implementation:	August 2025
Program title as it will appear on Academic Program Inventory, Diploma, and Transcript:	Advanced Manufacturing Technology
Name of degree(s) to be awarded:	Bachelor of Applied Science
Six-digit CIP code:	15.0613
Total credit-hour requirement to earn the degree:	120
Responsible academic unit:	Department of Industrial Technology, Instructional Design, and Community College Leadership
Institutional contact: Phone: Email:	Lara Threet, 662.325.7253, lthreet@colled.msstate.edu
SACSCOC Substantive Change:	☒ Program proposed **IS NOT** a substantive change. ☐ Program proposed **IS** a substantive change.
Incremental, five-year cost of implementation:	$110,000
Incremental, five-year per student cost of implementation:	$808.00
Potential five-year, new revenue:	$1,472,156
Potential new, five-year revenue per student:	$10,824.00
Will it attract new students to the university?	☒ Yes ☐ No
List any institutions within the State offering similar programs:	Click or tap here to enter text.

Number of students expected to enroll in first 5 years:		Number of students expected to graduate in first 5 years:	
Year 1	12	Year 1	0
Year 2	15	Year 2	0
Year 3	24	Year 3	10
Year 4	35	Year 4	20
Year 5	50	Year 5	30
Total	136	Total	60

Program summary (include second majors completed, if applicable):

The Bachelor of Applied Science in the Advanced Manufacturing Technology is designed for students who wish to enhance their skills in the management of manufacturing processes. The program focuses on technical learning, taught by faculty with industry experience, providing students with the necessary knowledge in the manufacturing environment, analysis, design, and implementation of manufacturing standards. Students must possess an accredited Associate of Applied Science (AAS) in Automated Manufacturing Technology, Mechatronics, Industrial Electronics Technology, Process Operations, or other related manufacturing AAS majors.

The audit of recently approved academic programs ensures that the program outcomes are congruent with the Board-approved proposal. Please respond to the questions on the following pages to aid the institution and IHL staff in making recommendations to the IHL Board of Trustees.

Chief Academic Officer Signature – Date

Institutional Executive Officer Signature – Date

NEW ACADEMIC DEGREE PROGRAM PROPOSAL

Institutional Request Form – Appendix 8
(Submit in PDF format with signatures.)

New Academic Degree Program Questions:

1 Describe how the degree program will be administered including the name and title of person(s) who will be responsible for curriculum development and ongoing program review.

The degree will be administered through coordination of the BAS and INDT faculty and staff. Advising of the student will be a coordinated effort between the two areas to ensure students are meeting the requirements for the degree.
The degree will be offered both on the Starkville and Online campuses to reach the maximum number of students interested in the field.
The Industrial Technology degree already offers their bachelor's degree online, so there will not be any modifications required.
The faculty and staff of both the BAS and Industrial Technology will meet to discuss industry expectations and if we are meeting those expectations. The Director of Career and Technical Partnerships will serve on the Industrial Technology Advisory Board to help develop and discuss gaps in education. This will help both programs to be on the forefront of any issues and quick curriculum modifications.
Again, curriculum development and program review will be a coordinated effort between Industrial Technology and BAS.

2 Describe the educational objectives of the degree program including the specific objectives of any concentrations, emphases, options, specializations, tracks, etc.

The new Bachelor of Applied Science in Advanced Manufacturing Technology degree is administered by the Department of Instructional Systems and Workforce Development. There has been an increase in A.A.S. degrees in the field and there is a need for a bachelor's degree that can meet the needs of these students. This degree will help develop and prepare students for advanced careers in industry. Since the degree will be offered both face-to-face and online, it creates an unique opportunity for students to earn a bachelor's degree.
Learning Outcomes:

- Explain the needs and applications of PLCs through studying where and how they are used in the field.
- Identify the fundamental basics of PLC programming, common devices, capabilities, and materials used in the process.
- Solve programming challenges using PLC software as a tool to design, troubleshoot, edit, or correct existing programs
- Explain the common components, devices, and materials that are available to meet design process and production requirements
- Discuss why it's necessary to adhere to employee and machine safety standards dealing with PLC's and electronics
- Apply the fundamentals and theory of fluid power (hydraulics and pneumatics).
- Create working schematic drawings using symbols from fluid power design sketches.
- Apply schematic drawings to workable solutions and solve hydraulic and pneumatic problems.
- Analyze the operation of a hydraulic/pneumatic to make recommendations on how to improve it.
- Integrate automation into a hydraulic/pneumatic system.
- State the purpose and functions of the OSHA.
- List the OSHA inspection priorities and describe the inspection process.
- Describe the rights and responsibilities of employers and employees under the OSH Act.
- Explain base fire and safety egress and their requirements.
- Outline the general requirements for general safety standards
- Establish the guidelines and requirements for special purpose equipment
- Analyze an industrial problem
- Create a root-cause analysis of problem
- Synthesize analytical data
- Research possible solutions
- Design solution to problem
- Compose written document of proposed solution and supporting data
- Prepare a presentation based on written document of proposed solution and supporting data
- Defend proposed solution
- Construct "Plan of action" for implementing solution
- Identify basic chemical and atomic properties of common industrial materials.
- Identify the criteria used for matching materials to product specifications.
- Explain the behavior, properties, and characteristics of natural materials used in contemporary industry and society.
- Explain the behavior, properties, and characteristics of engineered materials used in contemporary industry and society.
- Identify common destructive testing methods used in industry to assure appropriate use of material for operational conditions.
- Identify common non-destructive testing methods used in industry to assure appropriate use of material for operational conditions.
- The student will be able to apply the basic concepts used in metrology
- The student will be able to apply the use of statistics in metrology
- The student will be able to define what makes up a measurement device and how to use it.
- The student will be able to analyze how metrology is used in industry.
- The student will be able to determine the correct measurement instrument for the application at hand. Apply both costing and forecasting manufacturing/production decisions.
- Interpret how Excel can be employed in the interrogation of production data to allow for "what if?" scenarios to be examined
- Create macros and graphical user interfaces (GUI's).
- Create cost models that can determine both design and manufacturing decisions based on cost.
- Analyze data from mock data sets to solve real-world cost modeling challenges.
- Explain how PLC configurations and modules are used in the manufacturing process.
- Demonstrate how ladder diagrams, logic circuits, and ladder logic can be used to develop an automated process.

NEW ACADEMIC DEGREE PROGRAM PROPOSAL

Institutional Request Form – Appendix 8

(Submit in PDF format with signatures.)

- Identify the priority details that must be considered when developing a program for an automation-based PLC.
- Explain the functions of control instructions, timers, and counters as they pertain to industrial operations.
- Demonstrate how to use information technology, data manipulation, and math functions to compare, compute, and transfer data.
- Describe functions that allow data to be shifted within registers and/or moved to other areas within the memory of the PLC.
- Assess the quality culture, philosophy, and major philosophers.
- Develop solutions to problems using statistical tools and techniques.
- Analyze the connection between quality assurance, manufacturing, and management practices.
- Develop the design of experiments in different manufacturing situations.
- Analyze the design of experiments in different manufacturing situations.
- Apply the use of statistical procedures used to control industrial processes.
- Define the importance of maintenance in industry.
- Assess how the effective use of maintenance can give a manufacturer a competitive advantage.
- Apply statistics and historical records to create maintenance programs.
- Assess the use of preventive and predictive maintenance management techniques, including destructive and non-destructive testing.
- Define the use of manufacturing processes that are in common use in modern manufacturing industry.
- Identify the benefits and drawbacks of common manufacturing processes.
- Assess the correct choice of manufacturing processes and processing routes to manufacture different components from various materials.
- Analyze the operation of manufacturing process technologies.
- Explain the sequencer instruction and how it is used in manufacturing.
- Identify Process Control Signals and scaling instructions and how they are used in industry.
- Identify a Proportional-Integral-Derivative (PID) Controller and its significance in the field.
- Identify various common types of programming used with PLC's
- Describe the components of communication networking principles, categories, and configurations.
- Describe the importance of properly starting up a system and how to keep it running.
- Create report detailing actions, successes/failures, costs/savings, and future recommendations
- Create presentation based on report written.
- Students will be able to assess their own behaviors and communication styles to find areas for improvement.
- Students will be able to identify how their interactions with others affect the other person and the relationship between them.
- Students will be able to identify key factors of positive and healthy work-life balance.
- Students will be able to identify causes, avoidance measures, and possible resolutions of workplace conflicts.
- Students will be able to identify effective methods of supporting a diverse and inclusive workforce

3 **Describe any special admission requirements for the degree program including any articulation agreements that have been negotiated or planned.**

Applicants to the BAS in Advanced Manufacturing Technology must possess an accredited Associate of Applied Science (AAS) in Automated Manufacturing Technology, Mechatronics, Industrial Electronics Technology, Process Operations, or other related manufacturing AAS majors and have a GPA of 2.0 as computed by Mississippi State University. Applicants must also be in good academic standing with their current college. The degree will utilize agreements designed for the Industrial Technology program for the Industrial Technology courses.

4 **Describe the professional accreditation that will be sought for this degree program. If a SACSCOC visit for substantive change will be necessary, please note.**

Association for Technology, Management and Applied Engineering (ATMAE) – "The Association of Technology, Management, and Applied Engineering (ATMAE) is a specialized accreditor for technology, management and applied engineering degrees. The primary purpose of ATMAE accreditation is to encourage and recognize the attainment of certain professional goals and standards for technology and to encourage continuous quality improvement through a voluntary and comprehensive evaluation process." https://www.atmae.org/page/Accreditation.

5 **Describe the curriculum for this degree program including the recommended course of study (appending course descriptions for all courses) and any special requirements such as clinical, field experience, community service, internships, practicum, a thesis, etc.**

General Education Core – 35 hours

English (General Education): 6 hours

- EN 1103 English Composition I or EN 1104 Expanded English Composition I
- EN 1113 English Composition II or EN 1173 Accelerated Composition II

Fine Arts (General Education): 3 hours

- Any course satisfying Fine Arts

Natural Sciences (General Education): 8 hours

- CH 1043 Survey of Chemistry I (or higher)
- CH 1051 Experimental Chemistry I (or higher)
- PH 1013 Physical Science Survey I (or higher)
- PH 1011 Physical Science Lab I (or higher)

Math (General Education): 3 hours
- MA/ST 2113 Introduction to Statistics (or BQA 2113)

Humanities (General Education): 6 hours
- Any course satisfying Humanities

Social/Behavioral Sciences (General Education): 6 hours
- Any course satisfying Social/Behavioral Science

Other Electives: 3 hours
- CO 1003 Fundamentals of Public Speaking (or CO 1013)

Major Core Courses: 40 hours
- PCS 2111 Introduction to the Bachelor of Applied Science
- INDT 2113 Introduction to PLC
- INDT 2613 Industrial Fluid Power
- INDT 3043 Industrial Safety
- INDT 3063 Industrial Human Relations
- INDT 3223 Industrial Materials
- INDT 3243 Industrial Metrology
- INDT 3373 Forecasting & Cost Modeling
- INDT 4223 Quality Assurance
- INDT 4233 Maintenance Management
- INDT 4263 Manufacturing Technology & Processing
- INDT 4203 Automated Systems
- INDT 4403 Automated Systems II
- PCS 4112 Professional Success Strategies in Applied Fields

Technical Electives in Discipline: 45 hours
- Satisfied by any technical elective approved by the BAS program and the department.

Total hours – 120 hours

6 Describe the faculty who will deliver this degree program including the members' names, ranks, disciplines, current workloads, and specific courses they will teach within the program. If it will be necessary to add faculty in order to begin the program, give the desired qualifications of the persons to be added.

Department of Industrial Technology, Instructional Design, and Community College Leadership
Denise Adair, Instructor
• INDT 3373 Forecast & Cost Modeling
Jody Buchanan, Instructor
• INDT 2613 Industrial Fluid Power
• INDT 3043 Industrial Safety
• INDT 4263 Manufacturing Technology & Processing
Fatima Hilali, Instructor
• INDT 3063 Industrial Human Relations
• INDT 4233 Maintenance Management
Lara Threet, Instructor
• INDT 3223 Industrial Metrology
Mickey Giordano, Instructor
• INDT 2113 Introduction to PLC Programming
• INDT 4203 Automated Systems
• INDT 4403 Automated Systems II
Swapnil Patole, Asst. Professor
• INDT 4223 Quality Assurance
College of Professional and Continuing Studies
Kali Dunlap, Instructor - PCS 4112 Professional Success Strategies in Applied Fields
Kenna Vowell, Instructor - PCS 2111 Introduction to the Bachelor of Applied Science

7 Describe the library holdings relevant to the proposed program, noting strengths and weaknesses. If there are guidelines for the discipline, do current holdings meet or exceed standards?

The Mississippi State Library has adequate holdings for the proposed program. The following databases for the Mississippi State Library are relevant to the Industrial Technology program:

- eBooks from EBSCO
- IEEE Xplore
- ScienceDirect
- SpringerLink

8 Describe the procedures for evaluation of the program and its effectiveness in the first five years of the program, including admission and retention rates, program outcome assessments, placement of graduates, changes in job market need/demand, ex-student/graduate surveys, or other procedures.

Students will undergo timely exams and quizzes throughout the semester, to ensure continuous learning. Some classes will have a capstone project or a comprehensive exam. An exit interview will be conducted for all graduates to determine job placement, job roles and suggestions on improving the BAS Advanced Manufacturing Technology program. The undergraduate coordinator will keep a track of admission and retention rates along with changes in job market demand. They will also keep a record of ex-graduates contact information to build a nexus which will help us in expanding our advisory board and update curriculum with in-demand skills. The undergraduate coordinator will also develop and administer surveys to send to students in their final semester, recent graduates, and employers to gain insight into the program from a student and industry perspective. This data will let the program know placement and success rates post-graduation. The data will also be used to begin discussions with the Industrial Advisory board to ensure the skills and knowledge are meeting the market need. The undergraduate coordinator will also work with the University's Office of Institutional Research and Effectiveness to gain data on retention rates.

9 What is the specific basis for determining the number of graduates expected in the first five years?

The BAS in Advanced Manufacturing Technology is unique and the only one in the State of Mississippi. There is a need for this type of program to help meet the growing need of technical professionals in industry in the State of Mississippi and the United States.
A needs assessment was delivered in the fall of 2022, and we received a remarkable 70% response rate. The survey sought to determine interest in the creation of a variety of BAS majors, and we are pleased to report that 100% of the respondents requested degrees in Advanced Manufacturing Technology that focused on building management skills. This overwhelming interest underscores the relevance and value of our BAS degree programs to the communities we serve. Further, since this degree is offered both face-to-face and online, looking at the growing popularity of the B.A.S. programs in the State of Mississippi and surrounding States, we predict a suitable number of applicants from the entire country. With the increased enrollment, the expected graduation rate is expected to grow, especially when graduates begin to excel in industry.

10 Using expected enrollment, provide the total anticipated budget for the program including implementation and 4 subsequent years (total of 5 years) of operation; any anticipated direct, indirect, and incremental costs necessary to start the program; anticipated, incremental annual revenue based on student enrollment; and other sources of funding.

Please explain what has been included in the costs and revenues.

Start-Up Costs: one-time costs associated with offering this program

Direct, Incremental Costs: additional annual costs to the university as a result of offering this program

Incremental Revenue: additional annual revenue assuming that this program will bring in new students paying full tuition

Non-Tuition Revenue: external funds, grants, contracts or other revenues attributable to the addition of this program

Differential: all revenues minus all costs

Year	Incoming Students	Total Enrollment	Start-Up Costs	A Additional Annual Costs	B Additional Annual Revenue	C Non-Tuition Revenue	(B+C)-A Differential

2024-25	12	12	$0.00	$0.00	$89,556	$0.00	$89.556
2025-26	15	27	$0.00	$0.00	$201,501	$0.00	$201,501
2026-27	24	41	$0.00	$0.00	$305,983	$0.00	$305,983
2027-28	35	56	$0.00	$55,000	$417,928	$0.00	$362,928
2028-29	50	76	$0.00	$55,000	$567,188	$0.00	$512,188
TOTAL	136	212	$0.00	$110,000	$1,582,156	$0.00	$1,472,156

11 Program Demand: Select one or both of the following to address student demand:

☒ Survey of Student Interest

Number of surveys administered: 25
Number of completed surveys returned: 17
Percentage of students interested in program: 70%

Include a brief statement that provides additional information to explain the survey.
The survey was submitted to alumni of similar A.A.S. program, and those who employ students with similar A.A.S. degrees.

☒ Market Analysis or Evidence of Labor Market Need

Due to the nature of the Bachelor of Applied Science program, which targets adult learners who are typically working students attending community colleges, we decided to conduct a survey of our partner schools for the BAS degree. The survey was intended to gauge institutional interest in our university providing a vertical alignment to their in-demand AAS degrees. This needs assessment was delivered in the fall of 2022, and we received a remarkable 70% response rate. The survey sought to determine interest in the creation of a variety of BAS majors, and we are pleased to report that 100% of the respondents requested degrees in Advanced Manufacturing Technology that focused on building management skills. This overwhelming interest underscores the relevance and value of our BAS degree programs to the communities we serve.

12 Employment Opportunities for Graduates (state, region, nation):

Graduates of the BAS in Advanced Manufacturing Technology degree have excellent employment opportunities in the state, region, and nation. The demand for workers with advanced manufacturing skills is projected to continue to grow in the coming years as the National Association of Manufacturers project 2.1M jobs to go unfilled by 2030 (2021). According to data from the Bureau of Labor Statistics (BLS), the employment of Industrial Production Managers is projected to grow by 1% from 2021-2031, while employment of manufacturing team leaders, production supervisors, and quality assurance analysts is projected to grow by 3%.
The following table shows the employment projections for Industrial Production managers, Manufacturing Team Leader, Production Supervisor, and Quality Assurance Analysts in the state, region, and nation for 2021-2031:

Job Title	Employment in the Mississippi	Employment in the Region	Employment in the Nation
Industrial Production Manager	310	2,940	408,100
Manufacturing Team Leader	1,030	7,610	417,900
Production Supervisor	1,620	11,040	639,100
Quality Assurance Analyst	420	2,810	121,300

As shown in the table, the highest employment opportunities for these positions are in the nation, followed by the region, and then the state. However, it is important to note that these positions still offer good employment opportunities in the state, with over 3,000 combined projected job openings for these positions in the state from 2021-2031 (Bureau of Labor Statistics, 2021; Mississippi Department of Employment Security, 2021; National Association of Manufacturers, 2021).

Furthermore, the skills and knowledge gained from a Bachelor of Applied Science in Advanced Manufacturing Technology degree can lead to other related job titles and industries, increasing the employment opportunities for graduates. For example, graduates may also find employment in related industries such as aerospace, automotive, and defense manufacturing.

Catalog Description:

The Bachelor of Applied Science in Advanced Manufacturing Technology is designed for students who wish to enhance their skills in the management of manufacturing processes. The program focuses on technical learning, taught by faculty with industry experience, providing students with the necessary knowledge in the manufacturing environment, analysis, design, and implementation of manufacturing standards. Students must possess an accredited Associate of Applied Science (AAS) in Automated Manufacturing Technology, Industrial Electronics Technology, Industrial Maintenance, Mechatronics, Process Operations, or other related manufacturing AAS majors.

NEW DEGREE OUTLINE FORM

Use the chart below to indicate your new degree outline. If any General Education (Core) course is acceptable in the category, please indicate by saying "any Gen Ed course". There is no need to type in the whole list. Expand rows as needed.

PROPOSED New Degree	
Degree: Bachelor of Applied Science **Major:** Advanced Manufacturing Technology	
The Bachelor of Applied Science in the Advanced Manufacturing Technology is designed for students who wish to enhance their skills in the management of manufacturing processes. The program focuses on technical learning, taught by faculty with industry experience, providing students with the necessary knowledge in the manufacturing environment, analysis, design, and implementation of manufacturing standards. Students must possess an accredited Associate of Applied Science (AAS) in Automated Manufacturing Technology, Mechatronics, Industrial Electronics Technology, Process Operations, or other related manufacturing AAS majors.	
Proposed Curriculum Outline	**Required Hours**
English (General Education): EN 1103 English Composition I or EN 1104 Expanded English Composition I EN 1113 English Composition II or EN 1173 Accelerated Composition II	**6**
Fine Arts (General Education): Any course satisfying Fine Arts	**3**
Natural Sciences (General Education): (2 labs required from Gen Ed): CH 1043 Survey of Chemistry I (or higher) CH 1051 Experimental Chemistry I (or higher) PH 1013 Physical Science Survey I (or higher) PH 1011 Physical Science Lab I (or higher)	**8**
Math (General Education): MA/ST 2113 Introduction to Statistics (or BQA 2113)	**3**
Humanities (General Education): Any course satisfying Humanities	**6**
Social/Behavioral Sciences (General Education): Any course satisfying Social/Behavioral Science	**6**
Subtotal	**32**

PROPOSED New Degree	
Degree: Bachelor of Applied Science **Major:** Advanced Manufacturing Technology	
Major Core Courses: PCS 2111 Introduction to the Bachelor of Applied Science INDT 2113 Introduction to PLC INDT 2613 Industrial Fluid Power INDT 3043 Industrial Safety INDT 3063 Industrial Human Relations INDT 3223 Industrial Materials INDT 3243 Industrial Metrology INDT 3373 Forecasting & Cost Modeling INDT 4223 Quality Assurance INDT 4233 Maintenance Management INDT 4263 Manufacturing Technology & Processing INDT 4203 Automated Systems INDT 4403 Automated Systems II PCS 4112 Professional Success Strategies in Applied Fields	**40**
Additional Required Courses: CO 1003 Fundamentals of Public Speaking (or CO 1013)	**3**
Technical Courses in Discipline Satisfied by any technical elective approved by the BAS program and the department.	**45**
Subtotal	**88**
Total Hours	**120**

Justification and Student Learning Outcomes:
The Bachelor of Applied Science along with the industrial technology faculty have proposed these modifications after reviewing the curriculum and obtaining feedback from industry leaders and research into similar offerings around the country. The modifications to the degree name are in response to a more marketable name. The changes to the Advanced Manufacturing Technology courses have been made to allow for a more well-rounded degree to aid them in developing the skills needed for their chosen career fields. Modifications were also made to the University Core areas to give students more exposure to topics and issues that are pertinent to their field, thus giving them more opportunities to gain initial employment, as well as career development.

Currently, there is a major shortfall of technical employees at both the state and national levels. These proposed changes will give graduating students the ability to find employment in high quality technical positions. To meet the demand for technical employees worldwide, the faculty of the Industrial Technology program agree the new concentrations should be offered online with the two previously approved concentrations. By offering the courses online, it will provide an opportunity for the program to reach potential students around the world.

The target audience for the online program would primarily be those already working in industry who are looking to take the next step in their career or who want to change career paths. These students need the flexibility an online degree program offers to succeed. Another target population are potential students who have other obligations or restrictions that prohibit them from attending classes face to face. The programs offered are not readily available online across the nation.

The modifications do not duplicate any programs are currently in the system. The current program has a good cross-section of students, and this is anticipated to remain the same.

The learning outcomes of this program are that students should be able to facilitate ideas from senior management to the production floor. They could also be able to manage the day-to-day operations, maintenance, and production troubleshooting of complex industrial equipment and systems. The graduate student should also be able to make recommendations on adaptation, deletion, or replacement/capital investment of equipment to aid the manufacturing process.

Support:
Accompanying this degree program modification is a letter of support signed by all the faculty in the industrial technology program. The faculty unanimously voted to support the proposed degree program changes for the curriculum.

Effective Date:
The proposed effective date is Spring 2025.

Four Letter Code:
AMFT

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF EDUCATION
Department of Industrial Technology, Instructional Design,
and Community College Leadership
P.O. Box 9730
108 Herbert Street
Industrial Education Building
P. 662.325.2281

September 19, 2024

TO: Box Council and UCCC Committee Members

FROM: Lara Threet

RE: Support of: Support of BAS Advanced Manufacturing Technology

This letter of support is offered by the Industrial Technology degree program faculty for the proposed following degree creation for the Bachelor's of Applied Science – Advanced Manufacturing Technology.

The degree will include the following Industrial Technology courses.

Course Additions to Advanced Manufacturing Technology Area

- INDT 2113 Introduction to PLC Programming
- INDT 2613 Industrial Fluid Power
- INDT 3043 Industrial Safety
- INDT 3063 Industrial Human Relations
- INDT 3223 Industrial Materials
- INDT 3243 Industrial Metrology
- INDT 3373 Forecast & Cost Modeling
- INDT 4224 Quality Assurance
- INDT 4233 Maintenance Management
- INDT 4263 Manufacturing Technology and Processes I
- INDT 4203 Automated Systems
- INDT 4403 Automated Systems II

The changes presented will provide a more robust curriculum to help meet the growing needs of industry for technical employees and aid with articulation and course flows.

MISSISSIPPI STATE UNIVERSITY

COLLEGE OF EDUCATION
Department of Industrial Technology, Instructional Design, and Community College Leadership
P.O. Box 9730
108 Herbert Street
Industrial Education Building
P. 662.325.2281

As indicated by the signatures below, the Industrial Technology program unanimously approves the above proposal as written for submission to the Box Council and the UCCC.

Industrial Technology Program Members:

Dadair 09/20/202
Dadair (Sep 20, 2024 08:54 CDT)
Ms. Denise Adair Date

Swapnil Patole 09/20/202
Swapnil Patole (Sep 20, 2024 11:18 CDT)
Dr. Swapnil Patole Date

09/19/202
Jody Wayne Buchanan (Sep 19, 2024 17:33 CDT)
Mr. Jody Buchanan Date

Lara Threet 09/23/202
Lara Threet (Sep 23, 2024 11:12 CDT)
Ms. Lara Threet Date

09/19/202
Mickey Giordano (Sep 19, 2024 17:57 CDT)
Mr. Mickey Giordano Date

John Wyatt
John Wyatt (Sep 20, 2024 08:31 CDT)
Dr. John Wyatt Date

Fatima Hilali 09/22/2024
Fatima Hilali (Sep 22, 2024 22:30 CDT)
Ms. Fatima Hilali Date