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: Dr. Swapnil Patole **Mail Stop:** 9730 **E-mail:** spatole@colled.msstate.edu
Nature of Change: New program **Date Initiated:** 09/2024 **Effective Date: 08/2025 Fall 2025**
Degree to be offered at: Campus 1 Online and Campus 5

New Degree Program Name: Masters of Applied Industrial Science in Industrial Technology

Major: Industrial Technology **Concentration:** Industrial Management, Community College Leadership in Technical Programs, and Instructional Design for Technical Programs

Summary of Proposed Changes:

This new interdisciplinary Master's of Applied Industrial Science in Industrial Technology program is administered by the Department of Industrial Technology, Instructional Design and Community College Leadership. The Master's of Applied Industrial Science in Industrial Technology degree program has three specializations: Industrial Management, Community College Leadership for Technical Programs, and Instructional Design for Technical Programs.

In addition to the development of three concentrations, the degree will require the development of nine (9) courses administered by the Industrial Technology program. The courses are found on following pages along with course descriptions.

The Master's of Applied Industrial Science will also participate in the Thrive in Five initiative at Mississippi State University. Highly qualified undergraduate students will have the opportunity to take up to nine (9) hours of graduate work.

Approved: ***Date:***

Department Head — 10/2/2024

Chair, College or School Curriculum Committee — 01/30/24

Digitally signed by Jeanette Fontaine
Date: 2025.01.06 14:31:52 -06'00'

Kimberly R. Hall

Digitally signed by Kimberly R. Hall
Date: 2025.01.06 14:37:51 -06'00'

Dean of College or School

Chair, University Committee on Courses and Curricula

Chair, Graduate Council (if applicable)

Chair, Deans Council

The Establishment of New Degree Programs

Report due to IHL: As needed by institution (Appendix 18 contains deadlines)
Template: Appendix 8 – New Degree Program Proposal
File Types to Submit to IHL: PDF format with signatures
Corresponding Board Policies: 501 and 502

New degree program requests are considered by the Board of Trustees at five (5) Board meetings: February, April, June, October, and November.

When required by SACSCOC guidelines for substantive change, institutions must adhere to *SACSCOC* procedures for proper notification and/or approval. New degree programs that are substantive changes will not be added to the Academic Program Inventory and institutions are prohibited from admitting students until the Office of Academic and Student Affairs receives documentation that the program has been included in the scope of the institution's accreditation.

When approved by the Board of Trustees and there are no substantive change limitations for admitting students, a new degree program shall enroll students within two academic years of approval. If the program has not enrolled students by the end of the second academic year, Board approval is rescinded, and the program will be deleted from the Academic Program Inventory.

It is expected that all new degree programs:

- Will be consistent with the role and mission of the institution;
- Will be considered only when all university degree programs within that discipline have professional accreditation (if available) and have met the minimum standards of productivity;
- Will be considered only when professional accreditation will be sought for this program (if available);
- Will require no more than 124 credit hours towards graduation if the request is for an undergraduate program, unless it meets the standard for exception;
- Will be consistent with the curricula of similar programs in this discipline and will meet any licensing or certification needs;
- Will meet local, state, regional, and national educational, societal, or cultural needs;
- Will not be unnecessarily duplicative of other programs within the System;
- Will be funded through documented resources; and
- Will include procedures for program effectiveness.

Process

1. A university requesting a new degree program shall submit an electronic, signed PDF copy of the *Appendix 8 - New Degree Program Proposal* to the OASA two months prior to the Board meeting at which action is expected.
2. Request for new degree programs will be evaluated by OASA during the two months prior to the Board meeting at which action is expected and placed on the agenda of the Chief Academic Officer's Council meeting one month prior to the Board meeting at which action is expected.
3. The Associate Commissioner of Academic and Student Affairs will apprise the respective Chief Academic Officer of OASA's evaluation of the requests for a new degree program during the month prior to the Board meeting at which action is expected.
4. If the Associate Commissioner of Academic and Student Affairs renders a positive decision, the requests for modification to an existing academic degree program will be placed on the Board of Trustees' Regular or Consent Agenda.

Appendix 8: New Degree Program Proposal

Institution:

Date of Implementation:	**Incremental, Five-Year Cost of Implementation:**	**Incremental, Five-Year Per Student Cost of Implementation:**
August 2025	Minimal	Minimal
Will it attract new students to the university? ☒ **Yes** ☐ **No**	**Potential Five-Year, New Revenue:** **$581,160.00**	**Potential New, Five-Year Revenue Per Student:** **$6,053.75**

Program Title as will Appear on Academic Program Inventory, Diploma, and Transcript: Industrial Technology

Six-Digit CIP Code: 15.0612

Name of Degree(s) to be Awarded: Master of Applied Industrial Science

Total Credit Hour Requirements to earn the degree: 30

List any institutions within the state offering similar programs:

There are no other MAIS Industrial Technology programs in the state.

Responsible Academic Unit(s):

Department of Instructional Systems and Workforce Development

Institutional Contact: Dr. Swapnil Patole & Ms. Lara Threet
Phone: 662.325.4504
Email: spatole@colled.msstate.edu
lthreet@colled.msstate.edu

Check one of the boxes below related to SACSCOC Substantive Changes.

☒ **Proposed Program is Not a Substantive Change**

☐ **Proposed Program is a Substantive Change**

Number of Students Expected to Enroll in First Five Years:

Year One	6
Year Two	8
Year Three	9
Year Four	11
Year Five	12
Total	46

Number of Graduates Expected in First Five Years:

Year One	0
Year Two	3
Year Three	8
Year Four	8
Year Five	16
Total	35

Program Summary:

The Master of Applied Industrial Science in Industrial Technology degree program has three specializations: Industrial Management, Community College Leadership for Technical Programs, and Instructional Design for Technical Programs. This program will provide students with advanced technological skills based on topics such as data science, business analytics, smart manufacturing, systems integration, predictive maintenance, along with the traditional manufacturing knowledge of production control and lean six sigma. The program will develop managerial skills in students to effectively manage U.S. technology intensive corporations. The Community College Leadership for Technical Programs will gain knowledge that will not only assist them in their careers but also help them transform secondary and post-secondary students into future Industrial Technologists. The Instructional Design for Technical Programs concentration will provide students with the knowledge to develop and critique effective learning, goal, objective, and outcome development, and technologies used to benefit the learning process.

Chief Academic Officer Signature **Date**

Institutional Executive Officer Signature **Date**

Institution:

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.**

A graduate coordinating committee for the Industrial Technology program will be formed consisting of Five members. The Five members will include three members from the Industrial Technology program appointed by the Department Head of Instructional Systems and Workforce Development, one member from the Instructional Systems appointed by the Department Head of Instructional systems and Workforce Development and one member appointed by the Department Head of Educational Leadership.

This committee will be responsible for making admission decisions. The Committee will also hear student petitions, approve or disapprove requirements competed at other institutions, and decide on other matters on a case-by-case basis. The committee will also be responsible for maintaining the curriculum and keeping it current.

The program will also participate in the Thrive in Five accelerated graduate program. High performing students who have completed 60 hours of collegiate work will be able to take up to three courses (9 hours) of graduate work. They will follow the same admissions process as applicants who have completed an undergraduate degree.

The graduate coordinator, designated by the Department Head of Industrial Technology, Instructional Design, and Community College Leadership, will be responsible for student advising. The graduate coordinator will also be responsible for the logistics of handling applications for admission, admitting students, communicating, and soliciting decisions from the committee.

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

This new interdisciplinary Master's of Applied Industrial Science in Industrial Technology program is jointly administered by the Department of Industrial Technology, Instructional Design, and Community College Leadership. There has been an overwhelming increase in student enrollment in the Bachelor's of Science Industrial Technology. Given the 300% enrollment increase for the Bachelors program in Industrial Technology at Mississippi State over the past 5 years and in particular the increasing popularity of the Distance learning BS program drives the need to develop a new Master's program in Industrial Technology that is offered online. There is currently no other Master's program in Industrial Technology in the State of Mississippi. This program will develop and prepare students for advanced careers in industry and post-secondary academics.

The Master of Applied Industrial Science in Industrial Technology degree program has three specializations: Industrial Management, Community College Leadership for Technical Programs, and Instructional Design for Technical Programs. The Industrial Management concentration will provide students with advanced technological skills based on topics such as data science, business analytics, smart manufacturing, systems integration, predictive maintenance, along with the traditional manufacturing knowledge of production control and lean six sigma. On the other hand, Community College Leadership for Technical Programs concentration will provide students with knowledge in data analytics and project management along with community college program planning, development, and administration. The Instructional Design for Technical Programs concentration will provide students with the knowledge to develop and critique effective learning, goal, objective, and outcome development, and technologies used to benefit the learning process.

Learning outcomes:

Industrial Management Concentration:
Upon graduation, graduates will be able to:

- Discuss the importance of process improvement culture in an organization at 90% when given discussion prompts.
- Apply the different tools for improving processes at 80% when given an industrial scenario.
- Categorize relationships between variables of data distribution at 85% when given questions referencing variables and relationships.
- Justify decisions using data models at 80% when given models to analyze.
- Develop work integration positions for industrial projects at 80% when given an industrial scenario.
- Manage project controls using the value measurement system at 80% when given an industrial scenario.
- Compare designs of manufacturing process control, process modeling, and monitoring at 80% when given an industrial scenario.
- Illustrate different innovations and methods developed in making new technologies at 85% when given questions referencing different

innovations and methods.

- Describe the methods of forecasting the future of sustaining and disrupting technologies at 85% when given questions referencing methods of forecasting technologies.
- Discuss advanced concepts of Lean Six Sigma at 80% when given an industrial scenario.
- Explain the DMAIC strategy of process improvement at 85% when given questions referencing the DMAIC strategy.
- Apply appropriate methodologies for product and service designs and location analysis at 80% when given an industrial scenario.
- Design organizational plan for supply chain planning and controlling operations utilizing capacity planning, aggregate planning, and inventory management at 80% when given an industrial scenario.
- Compare different production planning concepts at 90% when given questions referencing production planning concepts.
- Investigate manufacturing operations and metrics at 80% when given metrics found in an industrial scenario.
- Compose strategic plan for industry or instructional settings at 80% when given an industrial scenario.
- Analyze motivation of leadership at 85% when given questions referencing various motivations for leadership.
- Examine motivation of learning at 85% when given questions referencing various motivations for learning.
- Develop a business plan at 80% when given an industrial scenario.
- Relate strategies for growth at 80% when given an industrial scenario.

Community College Leadership for Technical Programs Concentration:
Upon graduation, graduates will be able to:

- Examine business and data analytics at 80% when given sample data to analyze.
- Develop educational materials that meet standard metrics at 80% when given instructional design standards.
- Critique educational materials for effectiveness at 80% when given instructional design standards.
- Design curricula based on the needs of the target audience and industry at 80% when given instructional design standards.
- Analyze motivation of leadership at 85% when given questions referencing various motivations for leadership.
- Discuss leadership skills at 90% when given discussion prompts.
- Analyze community college operations at 85% when given questions referencing key terms and concepts in question format.
- Examine the role of human resources administrators at 85% when given questions referencing key terms and concepts in question format.
- Identify key functions of human resources administrators at 85% when given questions referencing key terms and concepts in question format.
- Compare teaching strategies at 85% when given questions referencing key terms and concepts in question format.
- Develop course outcomes at 80% when given instructional design standards.
- Discuss the importance of process improvement culture in an organization at 90% when given discussion prompts.
- Apply the different tools for improving processes at 80% when given an industrial scenario.
- Justify decisions using data models at 80% when given models to analyze.
- Develop work integration positions for industrial projects at 80% when given an industrial scenario.
- Illustrate different innovations and methods developed in making new technologies at 85% when given questions referencing different innovations and methods.
- Describe the methods of forecasting the future of sustaining and disrupting technologies at 85% when given questions referencing methods of forecasting technologies.
- Outline the importance and need for continuous improvement in an organization at 80% when given questions referencing key terms and concepts in question form.
- Develop network scheduling using project graphics at 80% when given an industrial scenario.
- Examine motivation of learning at 85% when given questions referencing various motivations for learning.

Instructional Design for Technical Programs Concentration:
Upon graduation, graduates will be able to:

- Develop educational materials that meet standard metrics at 80% when given instructional design standards.
- Critique educational materials for effectiveness at 80% when given instructional design standards.
- Design curricula based on the needs of the target audience and industry at 80% when given instructional design standards.
- Compare teaching strategies at 85% when given questions referencing key terms and concepts in question format.
- Develop course outcomes at 80% when given instructional design standards.
- Illustrate different innovations and methods developed in making new technologies at 85% when given questions referencing different innovations and methods.
- Describe the methods of forecasting the future of sustaining and disrupting instructional technologies at 85% when given questions referencing methods of forecasting technologies.
- Examine motivation of learning at 85% when given questions referencing various motivations for learning.
- Develop course objectives at 80% when given instructional design standards.
- Discuss trends and issues in instructional design at 85% when given discussion prompts.
- Identify trends and issues in instructional design at 85% when given research prompts.
- Create a curriculum design portfolio at 80% when given best practices rubric.
- Organize learning material in a Learning Management System at 85% when given best practices rubric.
- Utilize current instructional technologies at 80% when given instructional design prompt.
- Identify education theorists at 80% when given quiz questions.
- Discuss education theories at 85% when given discussion prompt.
- Implement learning theory into instructional design at 80% when given design prompt.

Assessment Methods:

Students will be evaluated through discussions, quizzes, exams, and group projects.

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

Applicants to the Master's of Applied Industrial Science Industrial Technology program at Mississippi State University will meet the University's standard requirements for graduate admissions. Applicants will submit a statement of purpose, resume, and undergo an interview with the graduate coordinating committee for the Master's of Applied Industrial Science in Industrial Technology degree program. Admission into the program will be determined by a vote of this committee based on academic and work history

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.**

Core Courses (18 Credit Hours)
INDT 4863/6863 Manufacturing Strategy*
INDT 8143 Data Driven Decision Making*
INDT 8183 Smart Manufacturing*
INDT 8223 Technology in the 21st Century*
INDT 8313 Industrial Management & Training Development*
1 Elective

Manufacturing Management Electives (12 Credit Hours)
INDT 4253/6253 Advanced Lean Six Sigma Black Belt Techniques*
INDT 8253 Industrial Operations *
INDT 4873/6873 Manufacturing Production Control*
INDT 8323 Innovation for Industry and Education*

Community College Leadership in Technical Programs Electives (12 Credit Hours)
CCL 8143 Program Planning and Development
CCL 8153 HR Human Resources
CCL 8163 Organization and Administration in Postsecondary Institutions*
CCL 8173 CC Teaching and Learning

Instructional Design for Technical Programs Electives (12 Credit Hours)
TECH 6763 Digital Tools for 21st Century Teaching and Learning
TECH 8533 Evaluation and Assessment in Instructional Systems and Technology
TECH 8623 Instructional Design I
TECH 8723 Instructional Design II

*Under review by UCCC or submitted concurrently.

INDT 4853/6853 Manufacturing Strategy: 3 hours.
Three hours lecture. Manufacturing strategy focuses on the development and implementation of manufacturing proposals. Students will engage in process improvement, machine integration, and the business analytics required to write and present effective proposals.

INDT 8143 Data Driven Decision Making: 3 hours
Three hours lecture. Powerful informed decisions using data often explained by statistics is the main subject of this course. Data driven decision making methods and procedures which include data collection, sampling, data processing, and decision-making processes are covered.

INDT 8183 Smart Manufacturing: 3 hours
Three hours lecture. This course focuses on smart manufacturing and the production process by bringing together intelligent machines, advanced analytics, and the manufacturing industry workforce. Industrial operations into the fourth industrial revolution era, or Industry 4.0 is covered.

INDT 8223 Technology in the 21st Century: 3 hours.
(Prerequisite: INDT 8143) Three hours lecture. This class covers advanced topics of current industry trends. Topics covered include Electric vehicles, battery technology, predictive maintenance, Modeling and optimization, pf curve, technology forecasting, systems integration, horizon scanning, new energy solutions, artificial intelligence, self-driving cars.

INDT 8313 Industrial Management & Training Development: 3 credit hours.
This course is an exploration of industry management strategies, change theory, training program development, and how to measure effective training.

Elective (Students can choose from one of the other options or TECH 8990 AI in Education)

Manufacturing Management

INDT 4253/6253 Advanced Lean Six Sigma Black Belt Techniques: 3 hours.
(Prerequisite: INDT 4373 or Graduate Student) Three hours lecture. An in-depth understanding of lean and statistical tools used to reduce costs and improve processes. The DMAIC methodology of process improvement is thoroughly analyzed along with application of Minitab software.

INDT 8253 Industrial Operations *: 3 Credit Hours
Three hours lecture. Study of various operations in a supply chain and optimizing them to achieve competitive advantage. Topics include Supply Chain Design, Facility and Work Design, Forecasting and Demand Planning, Capacity Management, Operations Scheduling and Sequencing.

INDT 4873/6873 Manufacturing Production Control: 3 hours
(Prerequisite: INDT 4863 or INDT 6863) Three hours lecture. An overview of production systems and manufacturing operations with emphasis placed on the types of manufacturing systems and computer-integrated manufacturing.

INDT 8323 Innovation for Industry and Education: 3 Credit Hours
Three-hour lecture. This course is an exploration of industry management strategies, change theory, training program development, and how to measure effective training.

Community College Leadership in Technical Programs

CCL 8143 Program Planning and Development: 3 hours.
In-depth analysis of workforce education including the mission, the knowledge base, planning and developing programs, and delivering programs.

CCL 8153 Human Resources Administration: 3 hours.
Examines the role of the human resources administrator on workforce education leadership; key administrative functions, workforce development, benefits and compensation, and employee relations are analyzed.

CCL 8163 Organization and Administration in Postsecondary Institutions. 3 hours.
Three hours lecture. Organization of postsecondary institutions and their culture and climate; constituencies; and administration, including consideration of current events affecting institutions, the challenges they present, and possible solutions.

CCL 8173 Community College Teaching and Learning: 3 hours.
Comprehensive preparation for teaching at the community college: teaching strategies centered on outcomes and experiential learning, assessment of learning, and job-related responsibilities.

Instructional Design for Technical Programs

TECH 6763 Digital Tools for 21st Century Teaching and Learning 3 hours lecture.
Methods of using digital tools for effective learning that is aligned with national standards in the 21st century classroom.

TECH 8533 Evaluation and Assessment in Instructional Systems and Technology 3 hours lecture.
Focus on the effective course/program evaluation and assessment methods, theories, and applications in instructional systems and technology.

TECH 8623 Instructional Design I 3 hours lecture.
The analysis, design, development, implementation, and evaluation of instruction for organizations.

TECH 8723 Instructional Design II (Prerequisite: TECH 8623 or TKT 8623). 3 hours lecture.
Advanced application of instructional design for organizations

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.**

A list of faculty members who will be teaching the required courses in this program are listed below.

Industrial Technology

Swapnil Patole	Assist. Prof	INDT 8143 Data Driven Decision Making
Swapnil Patole	Assist. Prof	INDT 8253 Industrial Operations
Jody Buchanan	Instructor	INDT 8223 Technology in the 21st Century
Jody Buchanan	Instructor	INDT 4873/6873 Manufacturing Production Control
Swapnil Patole	Assist. Prof	INDT 8183 Smart Manufacturing
Swapnil Patole	Assist. Prof	INDT 4253/6253 Adv. Lean Six Sigma Black Belt Techniques
Jody Buchanan	Instructor	INDT 4863/6863 Manufacturing Strategy
Greg Francom	Assist. Clinic. Prof	INDT 8313 Ind. Management & Training Development
Joanne Beriswill	Assoc. Prof	INDT 8323 Innovation for Industry and Education

Community College Leadership in

Stephanie King	Professor	CCL 8143 Program planning and development
Linda Coats	Professor	CCL 8153 HR Human Resources
Stephanie King	Professor	CCL 8163 Org. & Admin. in Postsecondary Institutions
Linda Coats	Professor	CCL 8173 CC teaching and learning

Instructional Technology in Technical Programs (12 Credit Hours)

Greg Francom	Assist. Clinic. Prof	TECH 676 3 Digital Tools for 21st Centure Teaching and Learning
Dana AlZoubi	Assist. Clinic. Prof	TECH 8533 Evaluation and Assessment in Instructional Systems and Technology
Joanne Beriswill	Assoc. Prof	TECH 8623 Instructional Design I
Joanne Beriswill	Assoc. Prof	TECH 8723 Instructional Design II

7. **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 as part of their comprehensive exam. An exit interview will be conducted for all graduates to determine job placement, job roles and suggestions on improving the Master's program. The graduate coordinator will keep a track of admission and retention rates along with changes in job market demand. He 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 graduate 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 graduate coordinator will also work with the University's Office of Institutional Research and Effectiveness to gain data on retention rates.

8. **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

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

This Master's degree in Industrial Technology is unique and the only one in the State of Mississippi. Moreover, in nearby states of Alabama, Arkansas, and Louisiana no such master's degree exists with advanced manufacturing, Business analytics and data science skills to enable future leaders in technology to better equip themselves to serve the needs of America's modern age industries.

The current enrollment in Industrial Technology stands upwards of 250 students and many of our undergraduate students and alumni have enquired about the master's program start date. Some of these graduates have decided to go for MBA instead because a master's degree is not available in-state. Also, since this program has 3 concentrations, we anticipate a good number of applicants from secondary and post-secondary teachers for the Community College Leadership in Technical Programs and the Instructional Design for Technical Programs concentrations. Further, since this degree is offered completely online, looking at the growing popularity of the B.S. Industrial Technology in the State of Mississippi and surrounding States, we predict a good number of applicants from the entire country.

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.**

Year	Incoming Students	Total Enrollment	Start-Up Costs	A Additional Annual Costs	B Additional Annual Revenue	C Non-Tuition Revenue	A – (B+C) Differential
2024-2025	6	6	$2,000	0	$48,510.00	0	$48,510.00
2025-2026	9	15	0	0	$121,275.00	0	$121,275.00
2026-2027	10	20	0	$65,000	$161,700.00	0	$96,700.00
2027-2028	12	25	0	$65,000	$202,125.00	0	$137,125.00
2028-2029	13	30	0	$65,000	$242,550.00	0	$177,550.00
TOTAL	50	96	$2,000	$195,000	$776,160.00	0	$581,160.00

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

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

Start-Up costs include marketing and recruitment activities and materials.

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

Beginning Year 3, the program will hire an Assistant Professor to aid in teaching courses.

11. **Program Demand:**

The Master's of Applied Industrial Science degree in Industrial Technology will attract students with work opportunities in various managerial job roles including, Maintenance Manager, Engineering Manager, Purchasing Manager, Production Supervisor, Production Manager, Service Manager, Continuous improvement manager, Quality Manager, Operations Manager, Logistics Analyst, Project Manager. According to Labor Statistics, jobs in fields related to data analytics are projected to grow 33 percent by 2026, compared to an overall projected occupational growth of 7.4 percent.

A. Survey of Student Interest

Number of surveys administered 957
Number of completed surveys returned 65
Percentage of students interested in program 57%

The survey was submitted to alumni of the program, our advisory board, those who employ our students, as well as recent graduates.

B. Market Analysis or Evidence of Labor Market Need

As the workforce trends to higher degree requirements for management positions, providing a master's degree in the same field would be beneficial to students wishing to advance in their careers. The degree would offer a pathway for technical educators in community colleges who wish to move into administration. These same educators could also pursue the technical side of the degree if they wanted to teach at a university in the industrial technology field. There is only one other Mississippi university offering a degree like this one. The design of this degree focuses on managing industrial technologies, but also provides an avenue for education. In that regard, this degree is the only one of its kind in the state.

12. **Employment Opportunities for Graduates (state, region, nation):**
A Query for Mississippi jobs with Engineering manager skills turned up 339+ jobs, with above 68500+ listed nationwide. 6400+ Quality Manager jobs nationwide. Maintenance Manager 143+ jobs in Mississippi and 16200+ nationwide according to Glassdoor. Production Manager 125+ jobs in Mississippi and 15300+ jobs nationwide.

This tells us about the huge demand for managerial skills in the industry. Graduates from this program will inherit advanced manufacturing skills topped with data analytics and project management to better equip themselves to serve the needs of America's modern age industries.

NEW GRADUATE DEGREE OUTLINE FORM

1. Catalog Description:

Found below.

2. Graduate Degree Curriculum Outline

PROPOSED New Degree	
Degree: Master's in Applied Industrial Science (Non-Thesis) Major: Industrial Technology Concentration: Industrial Management, Community College Leadership for Technical Programs, and Instructional Design for Technical Programs	
The Industrial Technology faculty work with industry to meet industry needs and close skills gaps seen in various industries. The Industrial Technology curriculum encourages active learning by utilizing technologies found in industry and real-world industrial scenarios. The Master's of Applied Industrial Science degree program is a great fit for students who are looking to advance in their career and learn about new methods to build a culture of continuous improvement. Industrial Technology students are leaders in their chosen fields with employment opportunities on the rise. The department provides one-on-one advising for all Industrial Technology students. To this extent, the curriculum is divided into three concentrations: • Industrial Management • Community College Leadership for Technical Programs • Instructional Design for Technical Programs The Master's of Applied Industrial Science in Industrial Technology program is designed to provide a well-rounded study in Industrial Management and manufacturing skills as well as curriculum development and analysis and administrative leadership. The Industrial Management concentration is a blend of operations management and production control methodology laced with continuous improvement and smart manufacturing and provides students with the opportunity to participate in data driven decision making. The Community College Leadership for Technical Programs concentration will provide students with knowledge in data analytics and project management along with community college program planning, development, and administration. The Instructional Design for Technical Programs concentration will provide students with the knowledge to develop and critique effective learning, goal, objective, and outcome development, and technologies used to benefit the learning process. Career opportunities and advancement are excellent for this field.	
Proposed Curriculum Outline	**Required Total Hours**
	30
Core Courses: INDT 4863/6863 Manufacturing Strategy INDT 8143 Data Driven Decision Making INDT 8183 Smart Manufacturing INDT 8223 Technology in the 21st Century INDT 8323 Innovation for Industry and Education 1 Elective	
Total Core Hours	18
CONCENTRATION DESCRIPTION **Industrial Management**	
The Industrial Management concentration will provide students with a broad knowledge of management, data analysis, and manufacturing skills. The Industrial Management concentration is a blend of operations management and production control methodology laced with continuous improvement and smart manufacturing and provides students with the opportunity to participate in data driven decision making.	

Concentration Core Courses: **Industrial Management** INDT 4253/6253 Advanced Lean Six Sigma Black Belt Techniques INDT 4873/6873 Manufacturing Production Control INDT 8253 Industrial Operations INDT 8313 Industrial Management & Training Development	
Total Concentration Hours	12
CONCENTRATION DESCRIPTION **Community College Leadership in Technical Programs**	
The Community College Leadership concentration will provide students with knowledge in data analytics and project management along with community college program planning, development, and administration. Career opportunities and advancement are excellent for this field.	
Proposed Curriculum Outline	
CONCENTRATION CORE COURSES **Community College Leadership in Technical Programs** CCL 8143 Program Planning and Development CCL 8153 HR Human Resources CCL 8163 Organization and Administration in Postsecondary Institutions CCL 8173 CC Teaching and Learning	
Total Concentration Hours	12
CONCENTRATION DESCRIPTION **Instructional Design for Technical Programs**	
The Instructional Design concentration will provide students with the knowledge to develop and critique effective learning, goal, objective, and outcome development, and technologies used to benefit the learning process.	
Proposed Curriculum Outline	
CONCENTRATION CORE COURSES **Instructional Design for Technical Programs** TECH 6763 Digital Tools for 21st Century Teaching and Learning TECH 8533 Evaluation and Assessment in Instructional Systems and Technology TECH 8623 Instructional Design I TECH 8723 Instructional Design II	
Total Concentration Hours	12
Total Program Hours	30

Attachment B: Course Descriptions

Industrial Technology Courses

INDT 4253/6253 Advanced Lean Six Sigma Black Belt Techniques: 3 hours.
(Prerequisite: INDT 4373 or Graduate Student) Three hours lecture. An in-depth understanding of lean and statistical tools used to reduce costs and improve processes. The DMAIC methodology of process improvement is thoroughly analyzed along with application of Minitab software.

INDT 4863/6863 Manufacturing Strategy: 3 hours.
Three hours lecture. Manufacturing strategy focuses on the development and implementation of manufacturing proposals. Students will engage in process improvement, machine integration, and the business analytics required to write and present effective proposals.

INDT 4873/6873 Manufacturing Production Control: 3 hours
(Prerequisite: INDT 4863 or INDT 6863) Three hours lecture. An overview of production systems and manufacturing operations with emphasis placed on the types of manufacturing systems and computer-integrated manufacturing.

INDT 8143 Data Driven Decision Making: 3 hours
Three hours lecture. Powerful informed decisions using data often explained by statistics is the main subject of this course. Data driven decision making methods and procedures which include data collection, sampling, data processing, and decision-making processes are covered.

INDT 8183 Smart Manufacturing: 3 hours
Three hours lecture. This course focuses on smart manufacturing and the production process by bringing together intelligent machines, advanced analytics, and the manufacturing industry workforce. Industrial operations into the fourth industrial revolution era, or Industry 4.0 is covered.

INDT 8223 Technology in the 21st Century: 3 hours.
(Prerequisite: INDT 8143) Three hours lecture. This class covers advanced topics of current industry trends. Topics covered include Electric vehicles, battery technology, predictive maintenance, Modeling and optimization, pf curve, technology forecasting, systems integration, horizon scanning, new energy solutions, artificial intelligence, self-driving cars.

INDT 8253 Industrial Operations *: 3 Credit Hours
Three hours lecture. Study of various operations in a supply chain and optimizing them to achieve competitive advantage. Topics include Supply Chain Design, Facility and Work Design, Forecasting and Demand Planning, Capacity Management, Operations Scheduling and Sequencing.

INDT 8313 Industrial Management & Training Development: 3 credit hours.
This course is an exploration of industry management strategies, change theory, training program development, and how to measure effective training.

INDT 8323 Innovation for Industry and Education: 3 Credit Hours
Three-hour lecture. This course is an exploration of industry management strategies, change theory, training program development, and how to measure effective training.

Community College Leadership in Technical Programs

CCL 8143 Program Planning and Development: 3 hours.
In-depth analysis of workforce education including the mission, the knowledge base, planning and developing programs, and delivering programs.

CCL 8153 Human Resources Administration: 3 hours.
Examines the role of the human resources administrator on workforce education leadership; key administrative functions, workforce development, benefits and compensation, and employee relations are analyzed.

CCL 8163 Organization and Administration in Postsecondary Institutions. 3 hours.
Three hours lecture. Organization of postsecondary institutions and their culture and climate; constituencies; and administration, including consideration of current events affecting institutions, the challenges they present, and possible solutions.

CCL 8173 Community College Teaching and Learning: 3 hours.
Comprehensive preparation for teaching at the community college: teaching strategies centered on outcomes and experiential learning, assessment of learning, and job related responsibilities.

Instructional Design for Technical Programs

TECH 6763 Digital Tools for 211st Teaching and Learning 3 hours lecture.
Methods of using digital tools for effective learning that is aligned with national standards in the 21st century classroom.

TECH 8533 Evaluation and Assessment in Instructional Systems and Technology 3 hours lecture.
Focus on the effective course/program evaluation and assessment methods, theories, and applications in instructional systems and technology.

TECH 8623 Instructional Design I 3 hours lecture.
The analysis, design, development, implementation, and evaluation of instruction for organizations.

TECH 8723 Instructional Design II (Prerequisite: TECH 8623 or TKT 8623). 3 hours lecture.
Advanced application of instructional design for organizations

3. Justification and Student Learning Outcomes

This new interdisciplinary Master's of Applied Industrial Science in Industrial Technology program is jointly administered by the Department of Industrial Technology, Instructional Design, and Community College Leadership. There has been an overwhelming increase in student enrollment in BS Industrial Technology. Given the 300% enrollment increase for the Bachelor's program in Industrial Technology at Mississippi State over the past 5 years and in particular the increasing popularity of the Distance learning BS program drives the need to develop a new Master's program in Industrial Technology that is focused in part on data science. Since data science has been a discipline of interest of the Provost committee on Data Science and proposed MOA with institutions interest in Data Science. Also, there is currently no other Master's program in Industrial Technology in the State of Mississippi and this program will develop and better prepare students for advanced careers in Industrial and workforce sectors. This program is for Distance Campus.

The Master of Applied Industrial Science in Industrial Technology degree program has three specializations: Industrial Management, Community College Leadership for Technical Programs, and Instructional Design for Technical Programs. The Industrial Management concentration will provide students with advanced technological skills based on topics such as data science, business analytics, smart manufacturing, systems integration, predictive maintenance to name a few, along with the traditional manufacturing knowledge of production control and lean six sigma. On the other hand, Community College Leadership for Technical Programs concentration will provide students with knowledge in data analytics and project management along with community college program planning, development and working. Finally, the Instructional Design for Technical Programs will allow students to develop and critique learning activities and programs as well as set learning objectives, outcomes, and goals.

Learning outcomes:

Industrial Management Concentration:
Upon graduation, graduates will be able to:

- Discuss the importance of process improvement culture in an organization at 90% when given discussion prompts.
- Apply the different tools for improving processes at 80% when given an industrial scenario.
- Categorize relationships between variables of data distribution at 85% when given questions referencing variables and relationships.
- Justify decisions using data models at 80% when given models to analyze.
- Develop work integration positions for industrial projects at 80% when given an industrial scenario.
- Manage project controls using the value measurement system at 80% when given an industrial scenario.
- Compare designs of manufacturing process control, process modeling, and monitoring at 80% when given an industrial scenario.
- Illustrate different innovations and methods developed in making new technologies at 85% when given questions referencing different innovations and methods.
- Describe the methods of forecasting the future of sustaining and disrupting technologies at 85% when given questions referencing methods of forecasting technologies.
- Discuss advanced concepts of Lean Six Sigma at 80% when given an industrial scenario.
- Explain the DMAIC strategy of process improvement at 85% when given questions referencing the DMAIC strategy.
- Apply appropriate methodologies for product and service designs and location analysis at 80% when given an industrial scenario.
- Design organizational plan for supply chain planning and controlling operations utilizing capacity planning, aggregate planning, and inventory management at 80% when given an industrial scenario.
- Compare different production planning concepts at 90% when given questions referencing production planning concepts.
- Investigate manufacturing operations and metrics at 80% when given metrics found in an industrial scenario.
- Compose strategic plan for industry or instructional settings at 80% when given an industrial scenario.
- Analyze motivation of leadership at 85% when given questions referencing various motivations for leadership.
- Examine motivation of learning at 85% when given questions referencing various motivations for learning.
- Develop a business plan at 80% when given an industrial scenario.
- Relate strategies for growth at 80% when given an industrial scenario.

Community College Leadership for Technical Programs Concentration:

Upon graduation, graduates will be able to:

- Examine business and data analytics at 80% when given sample data to analyze.
- Develop educational materials that meet standard metrics at 80% when given instructional design standards.
- Critique educational materials for effectiveness at 80% when given instructional design standards.
- Design curricula based on the needs of the target audience and industry at 80% when given instructional design standards.
- Analyze motivation of leadership at 85% when given questions referencing various motivations for leadership.
- Discuss leadership skills at 90% when given discussion prompts.
- Analyze community college operations at 85% when given questions referencing key terms and concepts in question format.
- Examine the role of human resources administrators at 85% when given questions referencing key terms and concepts in question format.
- Identify key functions of human resources administrators at 85% when given questions referencing key terms and concepts in question format.
- Compare teaching strategies at 85% when given questions referencing key terms and concepts in question format.
- Develop course outcomes at 80% when given instructional design standards.
- Discuss the importance of process improvement culture in an organization at 90% when given discussion prompts.
- Apply the different tools for improving processes at 80% when given an industrial scenario.
- Justify decisions using data models at 80% when given models to analyze.
- Develop work integration positions for industrial projects at 80% when given an industrial scenario.
- Illustrate different innovations and methods developed in making new technologies at 85% when given questions referencing different innovations and methods.
- Describe the methods of forecasting the future of sustaining and disrupting technologies at 85% when given questions referencing methods of forecasting technologies.
- Outline the importance and need for continuous improvement in an organization at 80% when given questions referencing key terms and concepts in question form.
- Develop network scheduling using project graphics at 80% when given an industrial scenario.
- Examine motivation of learning at 85% when given questions referencing various motivations for learning.

<u>Instructional Design for Technical Programs Concentration:</u>
Upon graduation, graduates will be able to:

- Develop educational materials that meet standard metrics at 80% when given instructional design standards.
- Critique educational materials for effectiveness at 80% when given instructional design standards.
- Design curricula based on the needs of the target audience and industry at 80% when given instructional design standards.
- Compare teaching strategies at 85% when given questions referencing key terms and concepts in question format.
- Develop course outcomes at 80% when given instructional design standards.
- Discuss the importance of process improvement culture in an organization at 90% when given discussion prompts.
- Outline the importance and need for continuous improvement in an organization at 80% when given questions referencing key terms and concepts in question form.
- Examine motivation of learning at 85% when given questions referencing various motivations for learning.
- Critique degree for effective learning at 80% when given instruction development best practices
- Develop program objectives, goals, and outcomes at 85% when given development standards
- Organize program objectives, goals, and outcomes at 90% when given development standards
- Explain benefits of technology usage in education at 80% when given trends and issues of instructional technology
- Explore trends and issues of instructional technology at 80% when given research prompt
- Integrate new technology into instruction at 80% when given best practices
- Develop course using Learning Management System at 80% when given rubric
- Assemble Instructional Design report at 80% when given rubric
- Examine techniques to test effective learning at 80% when given best practices

Assessment Methods:

Students will be evaluated through discussions, quizzes, exams, and group projects.

4. Support
   A letter of support from the Department Head of Industrial Technology, Community College Leadership, and Instructional Technology are included with this plan.

5. Proposed 4 – Letter Abbreviation
   INDT

6. Effective Data

   Spring 2024

7. CIP Code
   15.0612

Industrial Technology IE Report

	Assessment Procedures	IE Results	Use of Results
INDT 4253/6253 Advanced Lean Six Sigma Black Belt Techniques:	**Distance:** New assessment and criterion for the 2025-2026 cycle. **Criterion (Column 2) :** 75% of the students will score 70% or higher on the final exam. **Notes for Procedure/Criterion Modification:** New assessment and criterion for the 2025-2026 cycle	**Assessment Result Year:** **Criterion Met?:**	**Use of Results (Column 4):**
INDT 4863/6863 Manufacturing Strategy:	**Distance:** New assessment and criterion for the 2025-2026 cycle. Students in INDT 4863/6863 Manufacturing Strategy will complete the final project. **Criterion (Column 2) :** 75% of the students will score 75% or higher on the final project. **Notes for Procedure/Criterion Modification:** New assessment procedure and criterion for the 2025-2026 cycle.	**Assessment Result Year:** **Criterion Met?:**	**Use of Results (Column 4):**
INDT 4873/6873 Manufacturing Production Control:	**Distance:** New assessment and criterion for the 2025-2026 cycle. **Criterion (Column 2) :** 75% of the students will score 75% or higher on the final exam. **Notes for Procedure/Criterion Modification:** New assessment and	**Assessment Result Year:** **Criterion Met?:**	**Use of Results (Column 4):**

	criterion for the 2025-2026 cycle		
INDT 8143 Data Driven Decision Making:	**Distance:** New assessment and criterion for the 2025-2026 cycle. **Criterion (Column 2) :** 75% of the students will score 75% or higher on the data analysis final project. **Notes for Procedure/Criterion Modification:** New assessment and criterion for the 2024-2025 cycle	**Assessment Result Year:** **Criterion Met?:**	**Use of Results (Column 4):**
INDT 8183 Smart Manufacturing:	**Distance:** New assessment and criterion for the 2025-2026 cycle. **Criterion (Column 2) :** 75% of the students will score 70% or higher on the final design project. **Notes for Procedure/Criterion Modification:** New assessment and criterion for the 2025-2026 cycle	**Assessment Result Year:** **Criterion Met?:**	**Use of Results (Column 4):**
INDT 8223 Technology in the 21st Century:	**Distance:** New assessment and criterion for the 2025-2026 cycle. **Criterion (Column 2) :** 70% of the students will score 75% or higher on the final design project. **Notes for Procedure/Criterion Modification:** New assessment and criterion for the 2025-2026 cycle	**Assessment Result Year:** **Criterion Met?:**	**Use of Results (Column 4):**
INDT 8253 Industrial Operations:	**Distance:** New assessment and criterion for the 2024-2026 cycle.	**Assessment Result Year:** **Criterion Met?:**	**Use of Results (Column 4):**

	Criterion (Column 2) : 80% of the students will score 75% or higher on the final design project. **Notes for Procedure/Criterion Modification:** New assessment and criterion for the 2025-2026 cycle		
INDT 8313 Industrial Management & Training Development:	**Distance:** New assessment and criterion for the 2025-2026 cycle. **Criterion (Column 2) :** 70% of the students will score 70% or higher on the final exam. **Notes for Procedure/Criterion Modification:** New assessment and criterion for the 2025-2026 cycle	**Assessment Result Year:** **Criterion Met?:**	**Use of Results (Column 4):**
INDT 8323 Innovation for Industry and Education:	**Distance:** New assessment and criterion for the 2025-2026 cycle. **Criterion (Column 2) :** 75% of the students will score 70% or higher on the final exam. **Notes for Procedure/Criterion Modification:** New assessment and criterion for the 2025-2026 cycle	**Assessment Result Year:** **Criterion Met?:**	**Use of Results (Column 4):**

MISSISSIPPI STATE
UNIVERSITY

APPROVAL FORM FOR

THRIVE IN FIVE PROGRAMS (BACHELOR'S/MASTER'S COMBINED DEGREE)

Proposal for adding an Accelerated Program, i.e. Bachelor's/Master's combined degree program. This proposal should be completed in its entirety and support letters attached before submitting to the Office of the Graduate School, Mail Stop 9703, 617 Allen Hall, Phone: 662-325-7400.

College: College of Education

Department: Industrial Technology, Instructional Design, & Community College Leadership

Major: Master of Applied Industrial Science

Concentration:

Contact Person: Lara Threet

E-mail: lthreet@colled.msstate.edu

Mail Stop: 9730

Date Initiated: September 18, 2024

Effective Date: August 1, 2025

PROPOSED Accelerated Degree Description

1. Department Information:

   Department Head: Dr. Vance Durrington

   Graduate Coordinator: N/A

   Department contact information: 662.325.2281
   108 Herbert Street Mississippi State, MS 39762

2. Graduate Catalog Accelerated Degree Description:

   e.g. Highly qualified undergraduates in the Department of XXX are encouraged to consider applying to the Accelerated Program. This program permits students to earn up to X hours of graduate level coursework during their final year of undergraduate studies. Student take graduate level courses and earn both

undergraduate credit and graduate credit simultaneously. Students need to consult with a potential graduate advisor to ensure graduate credit could be applied to a Program of Study for the graduate degree. Application to this program may be made as early as the end of the junior year (i.e., after completion of 60 or more hours of graded undergraduate courses). Student interested in applying to the Accelerated Program should contact the Department's Graduate Coordinator, Dr. XXX for more details.

Highly qualified undergraduates in the Department of Industrial Technology, Instructional Design, and Community College Leadership are encouraged to consider applying to the Masters of Applied Industrial Science Accelerated Program. This program permits students to earn up to 9 hours of graduate level coursework during their final year of undergraduate studies. Students take graduate level courses and earn both undergraduate credit and graduate credit simultaneously. Students need to consult with a potential graduate advisor to ensure graduate credit could be applied to a Program of Study for the graduate degree. Application to this program may be made as early as the end of the junior year (i.e., after completion of 60 or more hours of graded undergraduate courses). Students interested in applying to the Accelerated Program should contact the Department's Graduate Coordinator for more details.

3. Departmental requirements for entrance to the accelerated program:

This section should state Departmental Requirements (if any) that are above and beyond the University minimum requirements which are

- ***a GPA of 3.50 or higher on a 4.00 system for all undergraduate work, and***
- ***a minimum of 60 hours toward a Bachelor's degree.***

Example Departmental Requirements

- ***completion of course XXX***
- ***a statement of professional interests and goals from the applicant***

If the department has no additional requirements beyond the University minimum, simply state "no requirements beyond University requirements" in this section.

Students will be required to submit a resume and complete an interview with the program to determine eligibility. This is in keeping with requirements for other students entering the graduate program.

4. Standard guidelines from the Graduate Council to be included in the catalog (not to be altered by the proposing department):

For students enrolled in an Accelerated Program (i.e. Bachelor's/Master's combined degree program), the MSU Graduate Council has established these guidelines in cooperation with the Registrar's office:

Once the student is accepted into the accelerated program, the student and the advisor may select up to nine hours that will satisfy both undergraduate and graduate requirements. These courses may be split level (i.e. split 4000-6000 level) or 8000 level classes. The student should take the courses for graduate credit (i.e. 6000-level or higher). The combination of undergraduate and graduate credit hours may not exceed 13 hours within a semester.

The student should use the *Undergraduate Enrollment in Accelerated Degree Program* form to (i) receive from the Office of the Graduate School a level override that enables the student's enrollment in the graduate course(s) and (ii) activate a process with the Registrar's office to obtain both undergraduate and graduate credit for the course. After successfully completing the graduate-level class(s), the Registrar will grant credit for the undergraduate course and give the same grade as received for the graduate course. For the case of a split-level class, the transcript will show credit for both 4000-and 6000-level on the transcript. In the case of an 8000 level class, a special topics undergraduate course of the same title will be entered on the transcript to allow dual credit.

Students are permitted to opt out of the accelerated program at any time, at which point they would complete only the undergraduate portion of the program. No additional dual counting of courses would occur after the student opted out of the accelerated degree program.

Students are expected to apply to the graduate degree program during the last semester in which they are enrolled in the Bachelor's program. Application to the graduate degree program would be made through the standard application process via the Office of the Graduate School. Students will receive the Bachelor's degree once the requirements for the Bachelor's degree are met. Students will be required to complete all of the requirements for both the Bachelor's and graduate degrees in order to receive both degrees and those requirements will be identical to the requirements for students enrolled in traditional Bachelor's and graduate degree programs. Students will be classified as undergraduates until they fulfill all the requirements for the undergraduate degree. At that time, upon admission to graduate school, they will be classified as graduate students and will be subject to all the guidelines pertaining to the graduate degree.

5. Support letters required (Please attach)

   a. **Department curriculum committee**
   b. **Department head/chair**

Approved:	***Date:***
Department Head	9/23/24
Dean of College or School	
Chair, Graduate Council	
Dean of the Graduate School	
Provost	

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 18, 2024

TO: Box Council, UCCC Committee Members, Graduate Council, Deans Council, IHL Committee

FROM: Lara Threet

RE: Support of creation of a Master's of Applied Industrial Science Degree in Industrial Technology curriculum

This letter is of support is offered by the Industrial Technology degree program faculty for the proposed addition of a Master's of Applied Industrial Science in Industrial Technology degree. The following additions are requested:

- Creation of the following courses
  - INDT 4253/6253 Advanced Lean Six Sigma Black Belt Techniques
  - INDT 4863/6863 Manufacturing Strategy
  - INDT 4873/6873 Manufacturing Production Control
  - INDT 8143 Data Driven Decision Making
  - INDT 8183 Smart Manufacturing
  - INDT 8223 Technology in the 21st Century
  - INDT 8253 Industrial Operations
  - INDT 8313 Industrial Management & Training Development
  - INDT 8323 Innovation for Industry and Education

The proposed degree provides alumni of the undergraduate degree and others around the country the opportunity to earn a Master's of Applied Industrial Science in Industrial Technology. This degree is the only of its kind in the state of Mississippi. The degree will be solely online and provide students with skills required to either manage industrial systems, manage community college technical programs, or develop curriculum for technical programs. The degree is unique in that it will have a concentration for Industrial Management, Community College Leadership for Technical Programs, and Instructional Design for Technical Programs.

The Industrial Management concentration will provide students with advanced technological skills based on topics such as data science, business analytics, smart manufacturing, systems integration, predictive maintenance, along with the traditional manufacturing knowledge of production control and lean six sigma. On the other hand, Community College Leadership for Technical Programs concentration will provide students with knowledge in data analytics and project management along with community college program planning, development, and administration. The Instructional Design for Technical Programs concentration will provide students with the knowledge to develop and critique effective learning, goal, objective, and outcome development, and technologies used to benefit the learning process.

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108 Herbert Street
Industrial Education Building
P. 662.325.2281

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

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

Swapnil Patole 09/20/2024
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

Outlook

RE: Letter of Support

From King, Stephanie <SKing@colled.msstate.edu>
Date Thu 9/19/2024 8:36 AM
To Threet, Lara <lthreet@colled.msstate.edu>

Lara, I'll be glad to. The UCCC manual says, "If the new degree program includes the addition of a course, or courses, taught outside of their home department of the degree program, then the outside department(s) should provide a letter of support should be requested. Email communication is considered appropriate."

With this email, as the program coordinator for the MS in Workforce Education Leadership (WEL), I support the inclusion of the following courses from the WEL program in your curriculum. All courses are approved and being offered on a regular basis.

CCL 8143 Program Planning and Development
CCL 8153 Human Resources Administration
CCL 8163 Organization and Administration in Postsecondary Institutions
CCL 8173 Community College Teaching and Learning

Stephanie B. King, PhD
Professor, Community College Leadership
Mississippi State University

From: Threet, Lara <lthreet@colled.msstate.edu>
Sent: Wednesday, September 18, 2024 6:58 PM
To: King, Stephanie <SKing@colled.msstate.edu>
Subject: Letter of Support

Good evening, Dr. King.

I am working on redoing the paper work for the Industrial Technology Master's degree. We need an updated letter of support from Community College Leadership for the courses we would like to offer for the CCL for Technical Programs.

I am attaching the courses here as a refresher. If you have any questions, please let me know!

CCL 8143 Program Planning & Develo
CCL 8153 HR Human Resources
CCL 8163 Organization and Administration in Postsecondary Institutions (At the time of the original letter, this one was in development. Is that still the case?)
CCL 8173 CC Teaching and Learning

Thank you for your help and support!

Hail State!

Lara Threet

Program Coordinator & Instructor
Industrial Technology
Phone (662) 325.7253

158 C IED Building | 108 Herbert Street Mississippi State University

Click the icon to see what is happening in INDT!

Outlook

Graduate Classes

From Bray, Marty <mbray@colled.msstate.edu>
Date Thu 9/19/2024 3:54 PM
To Threet, Lara <lthreet@colled.msstate.edu>

With this email, as the graduate coordinator for the instructional systems/design and workforce development programs, I support the inclusion of the following courses from the graduate programs in your curriculum. All courses are approved and being offered on a regular basis.

TECH 6763 Digital Tools for 21st Century Teaching and Learning
TECH 8533 Evaluation and Assessment in Instructional Systems and Technology
TECH 8623 Instructional Design I
TECH 8723 Instructional Design II

Dr. Marty Bray

Dr. Lessell Martiny (Marty) Bray
Associate Professor
Industrial Technology, Instructional Design,
and Community College Leadership
Mississippi State University