### PROPOSAL – 1

### NEW DEGREE PROGRAM

1. **PROPOSED PROGRAM TITLE:** Master of Science in Product Innovation

2. **CIP CODE REQUESTED:** 50.0404

Link for CIP Codes:  <http://nces.ed.gov/ipeds/cipcode/resources.aspx?y=55>.

3. **PROPOSED STARTING DATE:** Summer 2023

4. **CONTACT PERSON**

Name (Provost/Academic Affairs Officer): Dr. Ketevan Mamiseishvili

Title: Interim Vice Provost for Academic Affairs

Name of Institution: University of Arkansas Fayetteville

E-mail Address: kmamisei@uark.edu

Phone Number: (479) 575-2151

Name (Program Contact Person): Jonathan Johnson

Title: Professor, Strategy, Entrepreneurship and Venture Innovation

E-mail Address: jonjohn@uark.edu

Phone Number: 479-575-6227

5. **PROGRAM SUMMARY**

The **Master of Science in Product Innovation** will prepare students to usher new products from the idea through the commercialization phases in existing companies or in new ventures. The program aims to equip students with the knowledge, skills, and abilities to improve the probability of commercial success for innovative new products and services. The Master of Science in Product Innovation program will consist of a 12-month, 30-hour program that includes full summer, fall and spring terms. The students will select from one of two primary fields of study in the program electives:

1. A practicum-based product incubation field, in which students will participate in a product incubator program to develop and test new prototypes, or
2. A new venture development field, in which students will develop a business model, plan, and pitch around an existing product idea, refining and testing the product in tandem with this work as part of an interdisciplinary team.

The curriculum will cover the needs-based product design, prototype development and testing, business model development and validation, and project and product management. In addition to 21 hours of coursework, students will enroll in 9 hours of intensive experiential classes. Incubation programs overseen by the Office of Entrepreneurship and Innovation will be at the heart of the Practicum experience for students in field of study 1; the primary coursework in the Graduate Certificate in Entrepreneurship will provide that substance for students in field 2.

List degree programs or emphasis areas currently offered at the institution that support the proposed program.

Master of Business Administration

Graduate Certificate in Entrepreneurship

6. **NEED FOR THE PROGRAM**

Submit Workforce Analysis Form or Employer Needs Survey (only when workforce data is deficient for the academic disciple within the proposal)

See Appendix C (Workforce Analysis Form)

Indicate if employer tuition assistance is provided or if there are other enrollment

incentives.

Some companies have employer tuition assistance programs dependent upon employee

time with the company.

Describe what need the proposed program will address and how the institution became aware of this need.

* Over several years, we have heard from key stakeholders of the University of Arkansas of the need for students trained in product innovation and management. Demand for relevant knowledge, skills and abilities comes from the corporate sector, from the entrepreneurial community and from the University of Arkansas itself.
* Doug McMillon, CEO of Walmart founding donor of the McMillon Innovation Studio, has asked the Walton College to prepare students for careers in product management and innovation, which is in high demand at Walmart. The company uses a product management framework to address many problems and opportunities in the company, including opportunities to develop software solutions for customers and associates.
* The University of Arkansas recently received a $194.7M grant from the Walton Family Foundation to create the Institute for Integrative and Innovative Research (I3R), which will fund commercializable interdisciplinary research in support of the region and the state. The MSPI will directly support this effort.
* The Walton College recently received a $4.13M grant from the Walton Family Foundation to create curriculum that supports the development of outdoor products and services industries in the region. The MSPI will offer a concentration in outdoor products innovation and management in service to these programs.
* More generally, the University of Arkansas has established entrepreneurship as one of its strategic pillars, and we have had significant success in graduating students who have gone on to establish successful businesses of their own. This includes students from across the university, including STEM disciplines. The MSPI will provide students who have developed commercializable ideas as undergraduates with the knowledge necessary to transform those ideas into market ready products and services.

Indicate which employers contacted the institution about offering the proposed program.

* Doug McMillon, CEO of Walmart and founding donor of the McMillon Innovation Studio, has asked the Walton College to offer product management educational opportunities to students.
* The Walton College has several advisory boards—including the Executive Advisory Board, the Alumni Advisory Board, and the DREAM Board (focused on entrepreneurship)—each of which has expressed strong support for developing programs that promote entrepreneurship and innovation in the state and the region. The Department of Strategy, Entrepreneurship and Venture Innovation was created in January 2020 accelerate these objectives, which includes the creating and offering the MSPI.
* The university itself has requested that we offer programs that will support the commercialization of faculty and graduate student intellectual property, especially in STEM fields.

Indicate the composition of the program advisory committee, including the number of members, professional background of members, topics to be considered by the members, meeting schedule (annually, bi-annually, quarterly), institutional representative, etc.

We will initially utilize the Walton College’s DREAM Board to provide feedback and guidance to the program. A dedicated advisory board for the Department of Strategy, Entrepreneurship and Venture Innovation will be created within the next five years and will take over this role when established. The DREAM Board meets bi-annually.

Indicate the projected number of program enrollments for Years 1 - 3.

Year 1 - 15 students

Year 2 – 25-30 students

Year 3 – 30-40 students

Indicate the projected number of program graduates in 3-5 years.

In 3 – 5 years we expect to graduate approximately 30 – 40 students.

7. **CURRICULUM**

# Provide curriculum outline by semester (include course number and title).

# (For bachelor’s degree program, submit the 8-semester degree plan.)

**Requirements for the Master of Science in Product Innovation:**

**Core Courses (new classes in *italics*)**

**Summer**

*SEVI 5423 User Research in Applied Environments (3 hours)*

SEVI 5213 Business Foundations for Entrepreneurs (3)

***Fall***

*SEVI 5433 Legal, Social and Economic Context for Product Innovation (3)*

*SEVI 5443 Principles of Product Design and Prototyping (3)*

Elective (see below, 3)

Product Incubation Field

SEVI 545V *Product Innovation Practicum (3)*

OR

New Venture Development Field

SEVI 5323 New Venture Development 1 (3)

**Spring**

*SEVI 5463 Product Management (3)*

Elective (see below, 3)

Product Incubation Field

*SEVI 545V Product Innovation Practicum (6)*

OR

New Venture Development Field

SEVI 541V New Venture Development 2 (6)

**Electives (select any 6 hours from the following) 6**

SEVI 5363 – Innovation & Creativity

MKTG 5553 – New Product Development and Strategy

MKTG 5223 - Marketing

WCOB 5023 – Sustainability in Business

SCMT 5733 – Supply Chain Strategy, Governance, and Change Management

MSEN 5253 – Emerging Technologies in Industry

Other courses approved by the Program Director may count as electives

**Total Hours** **30**

Give total number of semester credit hours required for the program, including prerequisite courses.

30 hours

Identify new courses and provide course descriptions.

**SEVI 5423 User Research in Applied Environments**

Course Description: An introduction to the basic methods of user research, including human-centered design and customer discovery. Teams will learn how to pair qualitative, team-based interviewing techniques with quantitative market research to identify and explore important needs and market opportunities.

Catalog Copy: User Research in Applied Environments provides an introduction to the basic methods of user research relevant to new product creation. Quantitative and qualitative methodologies will be covered.

**SEVI 5433 Legal, Social and Economic Context for Product Innovation**

Course Description: Examines a variety of contextual issues important to product development, including industry and competitor analysis, supply chains and sales channels, social and environmental ethics, and liability concerns. The course will combine readings, guest lectures, and project work that applies course concepts to the students’ specific projects.

Catalog Copy: Examines legal, social and economic issues relevant to new product development, including intellectual property and liability, industry and competitor analysis, supply chains and sales channels, and social and environmental issues.

**SEVI 5443 Principles of Product Design and Prototyping**

Course Description: Foundational skills-building in product design, including hands-on experimentation with digital design and prototyping tools (e.g. Autodesk, Solidworks, Adobe). This course will pair readings, lectures, and hands-on mini-workshops to build confidence and capability in product design in the context of the students’ own ideas.

Catalog Copy: Foundational skills-building in product design, including hands-on experimentation with digital design and prototyping tools. This course will pair readings and lectures with hands-on workshops and projects.

**SEVI 545V Product Innovation Practicum**

Course Description: In this two-semester Practicum, students will have an opportunity to develop new products that are based on validated needs within their chosen industries; to form relationships with corporate and entrepreneurial partners that allow for those products to be tested in real-world pilots; and to develop and test viable business models.

Catalog Copy: Provides the opportunity to develop new products that are based on validated needs within their chosen industries in an applied setting. Students will develop products from idea to launch phases.

**SEVI 5463 Product Management**

Course Description: The relationship between design, product development, and product management in a business environment is explored. Students will learn techniques of project and product management, using the tools widely deployed in innovative corporate and startup environments to track user needs, manage product iterations, and execute design sprints (e.g. Jira, Trello, Airtable).

Catalog Copy: Explores aspects of product management, including product strategy, lifecycle management, and testing. Also covers techniques of project and product management using appropriate tools.

Identify required general education courses, core courses and major courses.

None

For each program major/specialty area course, list the faculty member assigned to teach the course.

SEVI 5423 User Research in Applied Environments—**New faculty member**

SEVI 5213 Business Foundations for Entrepreneurs—**Paul Mlakar**

SEVI 5433 Legal, Social and Economic Context for Product Innovation—**Jonathan Johnson**

SEVI 5443 Principles of Product Design and Prototyping—**New faculty member**

SEVI 545V Product Innovation Practicum—**New faculty member**

SEVI 5323 New Venture Development I—**Sarah Goforth, David Hinton**

SEVI 541V New Venture Development II—**Sarah Goforth, David Hinton**

Identify courses currently offered by distance technology (with an asterisk\*) and endnote at the end of the document.

Indicate the number of contact hours for internship/clinical courses.

There are no internship/clinical requirements for this degree.

State the program admission requirements.

Admission into the program will require a bachelor’s degree from an accredited university. Because students will be provided an introductory Fundamentals course, all majors are admissible. Relevant educational and/or work experience relevant to the student’s product innovation interest is required. Undergraduate degree, GPA, work experience, and recommendations will be used as evidence of ability. Admission will be determined by the program director.

Describe specified learning outcomes and course examination procedures.

Learning outcomes will include the following subject domains: Needs-based product design, prototype development and testing, business model development and validation, and project and product management. Graduates will be able to identify meaningful problems and market needs, design and develop prototypes and working models, build financial statements, communicate complex ideas persuasively, conduct market analyses, obtain intellectual property protections, and develop sophisticated go-to-market plans.

Through their educational experience, these students will also gain first-hand innovation and product management experience on a technology innovation team within an industry or startup context.

Examinations will involve traditional essay and short answer formats. A substantial proportion of grades in later classes will depend on evaluations of student product designs, market analyses, business plans, and other outcome-based work products.

Include a copy of the course evaluation to be completed by the student.

The Standard Purdue Course Evaluation form will be used. See Appendix A.

Include information received from potential employers about course content.

Potential employers from the retail and CPG sectors expressed interest in product management skills, including graduates capable of managing the process from idea to commercialization and launch phases. Entrepreneurial opportunities based on student and/or faculty research ideas will require the skills necessary to develop commercialized product ideas that can serve as the basis of start-up businesses.

Provide institutional curriculum committee review/approval date for proposed program.

February 9, 2022

8. **FACULTY**

List the names and credentials of all faculty teaching courses for the proposed program. Include college/university awarding degree; degree level; degree field; subject area of courses faculty currently teaching and/or will teach. (For associate degrees and above: A minimum of one full-time faculty member with appropriate academic credentials is required.)

|  |  |  |
| --- | --- | --- |
| **Faculty Member** | **Degree, Subject** | **Institution** |
| Jonathan Johnson | PhD, Management | Indiana University |
| New Faculty Hire | TBD |  |
| New Faculty Hire | TBD |  |
| Sarah Goforth | MA, Science Journalism | University of Wisconsin-Madison |
| David Hinton | MBA | Mayo Clinic Graduate School of Biomedical Sciences |
| Paul Mlakar | MBA | University of Arkansas |

Indicate lead faculty member or program coordinator for the proposed program.

Jonathan Johnson, Lead Faculty, Department of Strategy, Entrepreneurship and Venture Innovation

Total number of faculty required for program implementation, including the number of existing faculty and number of new faculty. For new faculty, provide the expected credentials/experience and expected hire date.

* 4 existing faculty plus 2 new faculty positions for the Sam M. Walton College of Business (WCOB).
* New faculty – teaching faculty (nontenure track), graduate degree (MS or higher) and/or extensive work experience related to product design and management (Fall 2022)
* New faculty – teaching faculty (nontenure track), graduate degree (MS or higher) and/or extensive work experience in outdoor industries (Fall 2022)

For proposed graduate programs: Provide the curriculum vita for faculty teaching in the program, and the expected credentials for new faculty and expected hire date. Also, provide the projected startup costs for faculty research laboratories, and the projected number of and costs for graduate teaching and research assistants.

See the faculty curriculum vitae in Appendix B.

9. **DESCRIPTION OF RESOURCES**

* + Current library resources in the field – existing campus resources
  + Current instructional facilities including classrooms, instructional equipment and technology, laboratories (if applicable) - existing campus resources
  + New instructional resources required, including costs and acquisition plan – existing
  + Learning Management System (Blackboard)

10. **NEW PROGRAM COSTS – Expenditures for the first 3 years**

New administrative costs (number and position titles of new administrators) –

Program Director (50% position) - $50,000

Administrative Assistant (50% position) - $15,000

Number of new faculty (full-time and part-time) and costs –

2 Nontenure Track Faculty members (50%) - Ph.D. in Business $100,000 per faculty member plus 30% fringe costs

New library resources and costs - None

New/renovated facilities and costs - None

New instructional equipment and costs - None

Distance delivery costs (if applicable) – No additional

Other new costs (graduate assistants, secretarial support, supplies, faculty development, faculty/students research, program accreditation, etc.) - None

**If no new costs required for program implementation, provide explanation.**

The program will be delivered in existing facilities using current technology. Additional Blackboard resources will be developed with our current Instructional Design team. No new renovations or library resources are being requested. No graduate assistantship support is requested. Professional student expenses (meals, textbooks, case studies, data sets) will be supported by professional fees.

11. **SOURCE OF PROGRAM FUNDING – Income for the first 3 years of program operation**

1. Grant funds (Walton Family Foundation) developed for Years 1 – 3 to support faculty positions (50% allocated to MSPI, 50% allocated to undergraduate certificate), program director, and administrative assistant: $630,000.
2. Provost Office Approval for 75% Tuition/Fees recovery to the program

If there will be a reallocation of funds, indicate from which department, program, etc. –

Provost Office Approval for 75% Tuition/Fees recovery to the program.

Provide the projected annual student enrollment, the amount of student tuition per credit  
 hour, and the total cost of the program that includes tuition and fees.

Year 1 - 15 students

Year 2 – 20 – 25 students

Year 3 – 25 – 30 students

Tuition and Fees based on current rates for Master of Information Systems, Master of Applied Business Analytics, and Graduate Certificate in Enterprise Systems – 30 hours

Full-time Program

Current In-State Tuition & Fees

Current Out-of-State Tuition & Fees

Current International Tuition & Fees

Indicate the projected annual state general revenues for the proposed program (Provide   
 the amount of state general revenue per student).

Other (grants [list grant source & amount of grant], employers, special tuition rates,   
 mandatory technology fees, program specific fees, etc.).

12. **ORGANIZATIONAL CHART REFLECTING NEW PROGRAM**

13. **SPECIALIZED REQUIREMENTS**

If specialized accreditation is required for program, list the name of accrediting agency.

Association to Advance Collegiate Schools of Business International

Indicate the licensure/certification requirements for student entry into the field.

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# None

# Provide documentation of Agency/Board review/approvals (education, nursing—initial approval required, health-professions, counseling, etc.)

NA

14. **BOARD OF TRUSTEES APPROVAL**

Provide the date that the Board approved (or will consider) the proposed program.

May 26, 2022

Provide a copy of the Board meeting agenda that lists the proposed program, and written documentation of program/unit approval by the Board of Trustees prior to the Coordinating Board meeting that the proposal will be considered.

15. **SIMILAR PROGRAMS**

# List institutions offering program:

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Proposed master’s program – list institutions in Arkansas and region - None

Proposed doctoral program – list institutions in Arkansas, region, and nation

State why proposed program needed if offered at other institutions in Arkansas or region.

List institution(s) offering a similar program that the institution used as a model to develop the proposed program.

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## University of Texas at Austin, Master of Science in Technology Commercialization

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Provide a copy of the e-mail notification to other institutions in the state notifying them of the proposed program. Please inform institutions not to send the response to **“Reply All”**. If you receive an objection/concern(s) from an institution, reply to the institution and copy ADHE on the email. That institution should respond and copy ADHE. If the objection/concern(s) cannot be resolved, ADHE may intervene.

16. **DESEGREGATION**

State the total number of students, number of black students, and number of other minority students enrolled in related degree programs, if applicable.

1. **INSTITUTIONAL AGREEMENTS/MEMORANDUM OF UNDERSTANDING (MOU)**

If the courses or academic support services will be provided by other institutions or organizations, include a copy of the signed MOU that outlines the responsibilities of each party and the effective dates of the agreement.

1. **ACADEMIC PROGRAM REVIEW**

Provide scheduled program review date (within 10 years of program implementation date).

2026-2027 Association to Advance Collegiate Schools of Business

1. **PROVIDE ADDITIONAL INFORMATION IF REQUESTED BY ADHE** **STAFF**
2. **INSTRUCTION BY DISTANCE TECHNOLOGY**

If the proposed program will be offered by distance technology, provide the following information:

Summarize institutional policies on the establishment, organization, funding and management of distance courses/degrees.

Describe the internal organizational structure that coordinates (development, technical support, oversight) distances courses/degrees.

Summarize the policies and procedures to keep the technology infrastructure current.

Summarize the procedures that assure the security of personal information.

Provide a list of services that will be outsourced to other organizations (course materials, course management and delivery, technical services, online payment, student privacy, etc.).