BOARD APPROVED
December 4, 2020
Janice Indrutz
Corporate Secretary

PURDUE UNIVERSITY BOARD OF TRUSTEES
EXECUTIVE SUMMARY DEGREE PROPOSAL TEMPLATE

PLEASE NOTE THAT THE FULL PROPOSAL CHECKLIST WILL NEED TO BE COMPLETED FOR THE INDIANA COMMISSION ON HIGHER EDUCATION (see https://in.gov/che/files/checklist_of_criteria_web.pdf)
Both this template and the full checklist document are submitted to the Purdue Board of Trustees.
When this form is complete, please save and return to weiderhaft@purdue.edu with tables as separate attachment.

DATE: **September 2, 2020**
TO: Board of Trustees
FROM: *Lynn Bryan*, Primary Contact, (765) 496-2859; labryan@purdue.edu
CC: *Robin Cunningham*, Secondary Contact, (765) 494-2975; rebell@purdue.edu
SUBJECT: *Interdisciplinary MS in Secondary STEM Education with initial Licensure*

CAMPUS OFFERING DEGREE: West Lafayette

ANTICIPATED START DATE: As soon as possible (Fall 2020)

1. IS THE DEGREE RESIDENTIAL, HYBRID, OR ONLINE?

IF ONLINE, RATIONALE FOR GOING THROUGH SPECIFIC PURDUE CAMPUS—PWL, PFW, PNW, PG

This degree will be offered online through Purdue West Lafayette (PWL). Professor Lynn Bryan in the College of Education, West Lafayette campus, received the $5.1M *Indy STEM Teacher Residency* (ISTR) grant from the U.S. Dept. of Education that will support students in obtaining this degree.

2. BRIEF OVERVIEW OF DEGREE/WHY IS THE DEGREE NEEDED?

The Interdisciplinary MS with a major in Secondary STEM Education with Initial Licensure consists 42 credit hours and includes coursework to meet the requirements for three program components: (1) Indiana initial teaching licensure in secondary (grades 5-12) science or mathematics; a master's degree in Curriculum and Instruction, STEM Concentration; and (3) the K-12 Integrated STEM Education Graduate Certificate.

This program is funded by the $5.1M *Indy STEM Teacher Residency Program* (ISTR) grant from the U.S. Dept of Education (DOE). Participants will complete the ISTR program in 18 months, which will include a one-year teaching residency in the Indianapolis Public Schools while taking courses for the online MS/Grad Cert/Licensure program. Participants will receive a stipend to cover the cost of tuition, fees, books and as well as some living expenses. Funding is available for the next five years to admit 15 students each year totaling 60 participants.

3. BRIEF EVIDENCE OF FEDERAL, STATE, AND REGIONAL LABOR MARKET NEED

It is estimated that there are over 170 STEM occupations in Indiana's workforce, accounting for 12.1% of all jobs in Indiana (Leeuw, Baer, & Zimmer, 2017). Numerous reports detail how STEM-related industries are rapidly increasing in Indiana and are expected to generate thousands of jobs in key STEM occupational groups each year (e.g., TEConomy Partners, 2016). For example, the health and life sciences industry alone has grown over 22% in employment since 2001 and, according to the Indiana Department of Workforce Development (2019), is expected to continue to generate 12,000 job openings in key occupational groups annually. It accounts for one in ten private sector jobs across all skills levels and has higher average wages in almost every occupational group. The demand for talented, skilled STEM workers in the state makes a telling case for educators and workforce professionals to focus efforts on innovation, job creation and development in STEM. Meeting this demand starts with placing highly-qualified teachers in the K-12 classrooms, a call that the ISTR Program is positioned to answer. The ISTR Program is focused on impacting the greater Indianapolis metropolitan area by partnering with Indianapolis Public Schools (IPS). IPS is facing critical challenges in attracting high quality teachers and ensuring retention for some of the most high-need students in the state. Diverse in both population and opportunity, IPS is an urban school district serving over 30,000 students and employing 2,600 educators through their schools and special program. Currently no students outside the grant will be admitted. In the future, the hope is to expand the program beyond Indianapolis public schools.

4. COSTS

A. Tuition and Fees—In-state and out-of-state
$425 per credit hour Instate
$450 per credit hour Out of State

B. Financial Projection Table

C. Program Review and Expenditure Summary (Table 2)

D. Enrollment Projection (Table 3)

5. LIST OF SIMILAR DEGREES IN THE PURDUE SYSTEM AND DISTINCTIVE ELEMENTS FOR THIS DEGREE

Transition to Teaching Licensure Program
Graduate Certificate in K-12 Integrated STEM Education
MS Education in Curriculum and Instruction, STEM Concentration

The *Interdisciplinary MS with a major in Secondary STEM Education with Initial Licensure* will combine the Transition to Teaching Licensure Program and the MS Education in Curriculum and Instruction, STEM Concentration, and the Graduate Certificate in K-12 Integrated STEM. By offering this new degree, can complete a state licensure program, and MS, and graduate certificate within one degree program—unlike similar degree programs. In addition, the *Interdisciplinary MS with a major Secondary STEM Education with Initial Licensure* degree incorporates a one-year teacher residency under the tutelage of a Clinical Preparation Teacher Leader in an IPS science or mathematics classroom. Finally, this major targets a specific audience of post-baccalaureate STEM professionals who wish to pursue a career in STEM teaching. With one application, students will be able to complete a comprehensive program that prepares them to be a highly-qualified secondary science and/or mathematics teacher with knowledge and skills to integrate engineering design through project-/problem-based approaches.

6. COMPETITIVE DEGREES – BRIEF SUMMARY

Purdue University: MS Education in Curriculum and Instruction, STEM Concentration is a similar degree by coursework, but does not offer licensure as a component.

Grand Canyon University has a Secondary STEM Education with initial licensure, but most graduate degrees do not have the initial licensure combined https://www.gcu.edu/degree-programs/masters-secondary-education-stem-licensure

This is such a targeted degree IU and Ball State which are competitive with teaching programs in the state of Indiana do not have Secondary STEM Education MS degrees with initial licensure

Table 2
Program Revenue and Expenditure Summary
Board of Trustees Table
Purdue Main Campus
Masters Degree in Secondary STEM Education with Initial Licensure

	Year #1 FY 2021	Year #2 FY 2022	Year #3 FY 2023	Year #4 FY 2024	Year #5 FY 2025
Total Incremental Revenue*	$ 52,347	$ 125,309	$ 125,285	$ 126,767	$ 96,307
Total Expenditures	$ 55,132	$ 82,509	$ 89,811	$ 95,751	$ 82,024
Projected Program Surplus/(Deficit)**	**$ (2,785)**	**$ 42,800**	**$ 35,474**	**$ 31,016**	**$ 14,283**

*Based on the anticipated number of ***new*** students to campus; transfers or existing students are not included. Projected incremental revenue is based on the current ***full-time, resident*** tuition and fees approved by the Bursar.

**Projected surplus/deficit is an aid to identify potential new University revenue, anticipated program costs, and degree substantiality. This does not represent any type of funding request.

Additional Departmental Footnotes:

This degree will be offered online through Purdue West Lafayette (PWL). Professor Lynn Bryan in the College of Education, West Lafayette campus, received the $5.1M Indy STEM Teacher Residency (ISTR) grant from the U.S. Dept. of Education that will support students in obtaining licensure, a graduate certificate and a MS degree.

- Each student receives $46,500 as a living wage from the grant.
- Students are then responsible to pay Purdue tuition, fees and all expenses associated with the program.
- Students are responsible for books and materials also.
- Direct grant support is not reflected in the financial model.
- Revenue for this financial model is based on student credit hours and direct payment from students. This is the reason for the deficit the first year.
- Grant funds are available for instructional and administrative support, but are not reflected in this model.

Table 3
Projected Headcount and FTE Enrollment and Degrees Conferred
Board of Trustees & ICHE Table
Purdue Main Campus
Masters Degree in Secondary STEM Education with Initial Licensure

	Year #1 FY 2021	Year # 2 FY 2022	Year # 3 FY 2023	Year # 4 FY 2024	Year # 5 FY 2025
Enrollment Projections (Headcount)	15	15	15	15	15
Enrollment Projections (FTE)	29	71	71	71	42
Degree Completions Projection	0	14	14	14	14

Program Highlights:
The Interdisciplinary MS Secondary STEM Education with Initial Licensure allows us to provide students with a more target
Transition to Teaching licensure program
MS in Curriculum and Instruction
Students also receive a Graduate Certificate in K-12 Integrated STEM Concentration
Practicums will be completed in the Indianapolis Public Schools.
Participants will also become employed by the Indianapolis Public Schools upon completion of the program.
Combining the licensure program and the mS also allows us to streamline the application process for students.
60 students will be supported by the grant.
Currently no students outside the grant will be admitted. In the future, the hope is to expand the program beyond Indianapolis public schools.

Recommended Approval:

10/27/20

Jay T. Akridge — Date
Provost and Executive Vice President for
Academic Affairs and Diversity

Approved:

10/30/20

Mitchell E. Daniels, Jr. — Date
President