

**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](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](mailto:weiderhaft@purdue.edu) with tables as separate attachment.

**DATE:** November 5, 2020  
**TO:** Board of Trustees  
**FROM:** Shripad Revankar, (765) 496-1782, [shripad@purdue.edu](mailto:shripad@purdue.edu)  
**CC:** Kellie Reece, (765) 494-5741, [kreece@purdue.edu](mailto:kreece@purdue.edu)  
**SUBJECT:** Master of Nuclear Engineering (MNE) Degree program (Online delivery)

**CAMPUS OFFERING DEGREE:** West Lafayette

**ANTICIPATED START DATE:** January 2021

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

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

Online degree program. Purdue University West Lafayette campus has School of Nuclear Engineering (SNE) with reputed graduate program over 60 years in the College of Engineering. Faculty of SNE teach the online courses required for the online degree program.

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

Purdue University School of Nuclear Engineering (SNE) proposes to offer Online Master of Nuclear Engineering (MNE) degree program which is designed for working engineers and professionals to advance their skills without disrupting their careers. The degree program offers flexible plans of study with a format that allows one to study from their location.

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

A recent study carried on Market Demand for an Online Master’s-Level Nuclear Engineering Program (MARKET RESEARCH BRIEF Market Demand for an Online Master’s-Level Nuclear Engineering Program, Analysis of National Employer Demand and Peer Institution Offerings, April 2018) involved data and input from 6 institutions currently offering online master’s degree in nuclear engineering, and over 15 companies and national labs that hires nuclear engineers at master’s level. This study indicated that the online program (in master of nuclear engineering) presents an opportunity for Purdue University. Bureau of Labor Statistics (BLS) projects Nuclear Engineers, Consulting and Management in Nuclear Engineering Jobs will grow 4 percent from 2016 to 2026. Employment is projected to decline in electric power generation, but projected to increase in research and development in engineering, and in management, scientific, and technical consulting services.

**4. COSTS**

A. Tuition and Fees—In-state and out-of-state

Description	Resident	Non-Resident & International
Per Course (1cr)	\$ 1,139.00	\$ 1,348.00

B. Financial Projection Table

<https://www.purdue.edu/provost/policies/iche.html> (Tab 1)

**Excel file attached**

C. Program Review and Expenditure Summary  
<https://www.purdue.edu/provost/policies/iche.html>(Tab 2)

	Year #1	Year #2	Year #3	Year #4	Year #5
	FY 2021	2022	FY 2023	FY 2024	2025
<b>Total Incremental Revenue*</b>	\$ 78,000	\$ 117,000	\$ 195,000	\$ 234,000	\$ 273,000
<b>Total Expenditures</b>	\$ 68,008	\$ 100,098	\$ 174,050	\$ 230,958	\$ 271,905
<b>Projected Program Surplus/(Deficit)**</b>	<b>\$ 9,992</b>	<b>\$ 16,902</b>	<b>\$ 20,950</b>	<b>\$ 3,042</b>	<b>\$ 1,095</b>

D. Enrollment Projection  
<https://www.purdue.edu/provost/policies/iche.html>(Tab 3)

<b>Table 3</b>					
<b>Projected Headcount and FTE Enrollment and Degrees Conferred</b>					
<b>Board of Trustees &amp; ICHE Table</b>					
<b>Purdue West Lafayette Campus</b>					
<b>Master of Nuclear Engineering Degree in College of Engineering</b>					
	Year #1	Year #2	Year #3	Year #4	Year #5
	FY 2021	2022	FY 2023	FY 2024	2025
<b>Enrollment Projections (Headcount)</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>
<b>Enrollment Projections (FTE)</b>	<b>0.4</b>	<b>0.6</b>	<b>1.0</b>	<b>1.3</b>	<b>1.5</b>
<b>Degree Completions Projection</b>	<b>0</b>		<b>10</b>	<b>15</b>	<b>20</b>

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

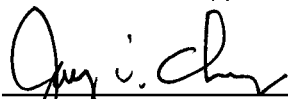
Several Schools in Purdue College of Engineering (such as Mechanical Engineering, Industrial Engineering, Electrical and Computer Engineering etc) have online Master degree program. Nuclear Engineering does not have currently online master degree program. As nuclear engineering is unique area quiet distinct from other engineering involving nuclear radiation and nuclear engineering this MNE degree program is required.

**6. COMPETITIVE DEGREES – BRIEF SUMMARY**

The following are the competing degrees. However, Purdue University planned ME is standout in terms of market demand in nuclear power engineering. And Purdue engineering reputation will make MNE very competitive degree

- #1. Kansas State University-Online Master of Science in Nuclear Engineering
- #2. North Carolina State University-Master of Nuclear Engineering
- #3. University of Maryland College Park-Online Graduate Program in Nuclear Engineering
- #4. University Engineering Alliance-Online courses in Nuclear Engineering  
(Baylor, Kansas State University, Texas A&M, University of Kansas, University of Missouri, University of Nebraska-Lincoln, Oklahoma State University, and University of Texas-Austin).
- #5. Worcester Polytechnic Institute-Master of Engineering in Power Systems Engineering with focus on nuclear systems
- #6. University of Texas Austin-Master of Science in Nuclear and Radiation Engineering  
A minimum of 30 credits
- #7. Thomas Edison State University-Master of Science in Applied Science and Technology (MSAST) degree with a concentration option in Nuclear Energy Technology Management.
- #8. Pennsylvania State University World Campus-Online Master of Engineering in Nuclear Engineering
- #9. Iowa State University-Online Master in Energy Systems Engineering with emphasis in nuclear energy.
- #10. Northeastern University-The Online Master of Science in Energy Systems -focus in nuclear power

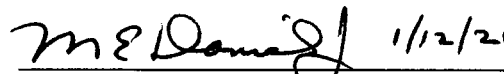
*Recommended Approval:*



12/15/20

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

*Approved:*



1/12/21

Mitchell E. Daniels, Jr.  
President

**Table 2**  
**Program Revenue and Expenditure Summary**  
**Board of Trustees Table**  
**Purdue West Lafayette Campus**  
**Master of Nuclear Engineering Degree in College of Engineering**

	Year #1 FY 2021	Year #2 2022	Year #3 FY 2023	Year #4 FY 2024	Year #5 2025
<b>Total Incremental Revenue*</b>	\$ 78,000	\$ 117,000	\$ 195,000	\$ 234,000	\$ 273,000
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<b>Projected Program Surplus/(Deficit)**</b>	<b>\$ 9,992</b>	<b>\$ 16,902</b>	<b>\$ 20,950</b>	<b>\$ 3,042</b>	<b>\$ 1,095</b>

\*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:**

**Table 3**  
**Projected Headcount and FTE Enrollment and Degrees Conferred**  
**Board of Trustees & ICHE Table**  
**Purdue West Lafayette Campus**  
**Master of Nuclear Engineering Degree in College of Engineering**

	Year #1 FY 2021	Year # 2 2022	Year # 3 FY 2023	Year # 4 FY 2024	Year # 5 2025
<b>Enrollment Projections (Headcount)</b>	10	15	20	25	30
<b>Enrollment Projections (FTE)</b>	0.4	0.6	1.0	1.3	1.5
<b>Degree Completions Projection</b>	0		10	15	20