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 6, 2019**
TO: Board of Trustees
FROM: Manoj S. Patankar, Primary Contact, (765) 496-3136; mspatankar@purdue.edu
CC: Mary Johnson, Secondary Contact, (765) 494-1064; mejohnson@purdue.edu
SUBJECT: Doctor of Philosophy in Aviation Technology and Management

CAMPUS OFFERING DEGREE: West Lafayette

ANTICIPATED START DATE: Fall 2020

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

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

Residential

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

This proposal aims to establish a West Lafayette-based, Purdue PhD program in Aviation Technology and Management within the School of Aviation and Transportation Technology. This program will support the School and Polytechnic Institute goals to increase domestic and international graduate student populations while providing expanded opportunities for research, both within the academic community and with external research partners. The program serves several critical needs to include supporting and expanding the research mission of Purdue by increasing the School of Aviation and Transportation Technology profile both nationally and internationally, enhancing high quality faculty recruitment, and further promoting an environment of academic investigation across all student levels at the university.

The general focus of this program involves the study of all aspects of aviation from an Air Transportation perspective. Program approval will enhance opportunities for the School's graduates and raise the status and profile of the program, which in turn will improve competitiveness for external funding and recruitment of high quality faculty and students within the global academic market.

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

Boeing Company researchers have forecast 617,000 new commercial pilot hires over the next twenty years, with 248,000 of those in the United States. They also forecast 679,000 new aviation maintenance workers to be hired over the same time frame with 127,000 of those in the United States (www.boeing.com/commercial/market). Indiana Department of Workforce Development data do not specifically address demand for doctoral degree holders in the air transportation discipline, but terminal degree holders will be needed to address aviation industry growth through university level aviation programs and aviation research. Employment in educational services related to aviation in colleges, universities, and professional schools have been forecast to increase by 10.8 percent over the period from 2012 to 2022 (U.S. Bureau of Labor Statistics).

4. COSTS

A. Tuition and Fees—In-state and out-of-state
- In-state: $9,990 per year
- Out-of-state: $28,594 per year

B. Financial Projection Table
https://www.purdue.edu/provost/policies/iche.html (Tab 1)

Table 1
Program Financial Projection
Financial Office Table
Purdue West Lafayette
PhD in Aviation, Purdue Polytechnic Institute

	Year #1 FY20	Year #2 FY21	Year #3 FY22	Year #4 FY23	Year #5 FY24
I. ENROLLMENT					
1. Program Credit Hours Generated (FTE * 30 for BS & FTE * 24 for masters/graduate)					
a. Existing Courses	150	300	450	450	450
b. New Courses					
Total	**150**	**300**	**450**	**450**	**450**
2. Full-Time Equivalents (FTE)					
a. Full-Time FTEs	5	15	25	30	30
b. Part-Time FTEs					
Total Full/Part-Time FTE	**5**	**15**	**25**	**30**	**30**
c. On-Campus Transfer FTEs	5				
d. New-to-Campus FTEs		15	25	30	30
Total On/New-to-Campus FTE	**5**	**15**	**25**	**30**	**30**
3. Program Majors - Headcount					
a. Full-Time Students	5	15	25	30	30
b. Part-Time Students					
Total Full/Part-Time HC	**5**	**15**	**25**	**30**	**30**
c. In-State	1	3	5	6	6
d. Out-of-State	4	12	20	24	24
Total In/Out of State HC	**5**	**15**	**25**	**30**	**30**

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

Table 2
Program Revenue and Expenditure Summary
Board of Trustees Table
Purdue West Lafayette
PhD in Aviation

	Year #1 FY20	Year #2 FY21	Year #3 FY22	Year #4 FY23	Year #5 FY24
Total Incremental Revenue (1)(3)	$ -	$ 158,433	$ 264,055	$ 16,866	$ 316,866
Total Expenditures	$ 129,790	$ 190,185	$ 251,080	$ 251,080	$ 251,080
Projected Program Surplus/(Deficit)(2)	**$ (129,790)**	**$ (31,752)**	**$ 12,975**	**$ 65,786**	**$ 65,786**

(1) 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.

(2) 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.

(3) Footnote from department: Per instructions, the revenue shown was calculated using a conservative estimate of 100% Indiana residents. Our Spring 2019 graduate student enrollment mix in Aviation Technology was 16% In State / 84% Out of State.

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

Table 3
Projected Headcount and FTE Enrollment and Degrees Conferred
Board of Trustees & ICHE Table
Purdue West Lafayette
PhD in Aviation

	Year #1 FY20	Year # 2 FY21	Year # 3 FY22	Year # 4 FY23	Year # 5 FY24
Enrollment Projections (Headcount)	**5**	**15**	**25**	**30**	**30**
Enrollment Projections (FTE)	**5**	**15**	**25**	**30**	**30**
Degree Completions Projection			**5**	**10**	**15**

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

There are no other similar programs in the Purdue System

6. COMPETITIVE DEGREES – BRIEF SUMMARY

Currently, the only similar programs in the United States are conducted at the University of North Dakota (PhD in Aerospace Sciences), Embry-Riddle Aeronautical University (PhD in Aviation), Saint Louis University (PhD in Aviation), and Florida Institute of Technology (PhD in Aviation Science). Each of these programs has an increasing trend of enrollment.

Recommended Approval:

11/13/19

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

Approved:

11/13/19

Mitchell E. Daniels, Jr. — Date
President