

## 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:****TO:** Board of Trustees**FROM:** James Mohler, Primary Contact, (765) 494-2601; [jlmohler@purdue.edu](mailto:jlmohler@purdue.edu)**CC:** Steve Beaudoin, Secondary Contact; [sbeaudoi@purdue.edu](mailto:sbeaudoi@purdue.edu)**SUBJECT:** Master of Science degree in Defense Engineering and Technology (concentration in Expeditionary Warfare)**CAMPUS OFFERING DEGREE:** West Lafayette**ANTICIPATED START DATE:** Fall 2019**1. IS THE DEGREE RESIDENTIAL, HYBRID, OR ONLINE?**

IF ONLINE, RATIONALE FOR GOING THROUGH SPECIFIC PURDUE CAMPUS—PWL, PFW, PNW, PG  
The M.S. degree in Defense Engineering and Technology (concentration in Expeditionary Warfare will provide a mechanism for units desiring a university level degree to offer interdisciplinary, multidisciplinary or transdisciplinary (IMT) offerings. This first instance of the degree is to support an interdisciplinary effort between the Colleges of Engineering, the Polytechnic Institute, and Cranfield University (a British University) to provide a custom created curriculum for the Naval Surface Warfare Center Crane Division (NSWC Crane) Naval Sea Systems Command (NAVSEA). Subsequent to this proposal will be a proposal for a dual degree as this effort includes shared course offerings between Purdue University and Cranfield University. The degree is being offered in a hybrid format at the Westgate location in southern Indiana.

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

Purdue University faculty in the Colleges of Engineering and the Polytechnic Institute have unique knowledge, skills and abilities that are desired by NSWC Crane and NAVSEA. Aligned with Purdue University's land grant mission and in conjunction with a unique research and education partnership between those organizations and Cranfield University, it is logical for Purdue University to pursue the delivery of the M.S. degree in Defense Engineering and Technology with a concentration in Expeditionary Warfare.

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

No other programs such as the one being proposed for the major Defense Engineering and Technology with a concentration in Expeditionary Warfare exists. This is the reason that the unique partnership between Purdue University and Cranfield University is being created to meet the need outlined by the Naval Surface Warfare Center Crane (NSWC Crane) Naval Sea Systems Command (NAVSEA).

**4. COSTS**

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

The program will comprise a total of thirteen courses, each of which shall count for three credits at Purdue University. Six of the courses will be offered by Purdue faculty, and six by Cranfield faculty. The thirteenth course will be a 3-credit research course, which will be mentored remotely by either Purdue or Cranfield faculty, upon mutual agreement of the students and mentoring faculty. This research will be performed at Crane, and funds and facilities for the research will be provided by Crane. Each course will be offered for a per student fee of \$5500. Minimum class size will be 20 students.

- B. Financial Projection Table  
<https://www.purdue.edu/provost/policies/iche.html> (Tab 1)
- C. Program Review and Expenditure Summary  
<https://www.purdue.edu/provost/policies/iche.html> (Tab 2)
- D. Enrollment Projection  
<https://www.purdue.edu/provost/policies/iche.html> (Tab 3)

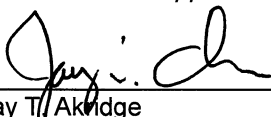
**5. LIST OF SIMILAR DEGREES IN THE PURDUE SYSTEM AND DISTINCTIVE ELEMENTS FOR THIS DEGREE**

There are no similar degrees of which we are aware. This degree provides flexibility for any combination of units to offer an interdisciplinary degree at Purdue University.


**6. COMPETITIVE DEGREES – BRIEF SUMMARY**

There are no competitive degrees of which we are aware.

*Recommended Approval:*

 11/12/19  
\_\_\_\_\_  
Jay T. Akridge Date  
Provost and Executive Vice President for  
Academic Affairs and Diversity

*Approved:*

 11/13/19  
\_\_\_\_\_  
Mitchell E. Daniels, Jr. Date  
President

**Table 1**  
**Program Financial Projection**  
**Financial Office Table**  
**Purdue West Lafayette Campus**  
**MS Degree in Defense Engineering and Technology with Concentration in Expeditionary Warfare**

	Year #1 FY 2020	Year #2 FY 2021	Year #3 FY 2022	Year #4 FY 2023	Year #5 FY 2024
<b>I. ENROLLMENT</b>					
<b>1. Program Credit Hours Generated</b> (FTE * 30 for BS & FTE * 24 for masters/graduate)					
a. Existing Courses	120	120	150	150	180
b. New Courses					
<b>Total</b>	<b>120</b>	<b>120</b>	<b>150</b>	<b>150</b>	<b>180</b>
<b>2. Full-Time Equivalents (FTE)</b>					
a. Full-Time FTEs	23	23	28	28	34
b. Part-Time FTEs					
<b>Total Full/Part-Time FTE</b>	<b>23</b>	<b>23</b>	<b>28</b>	<b>28</b>	<b>34</b>
c. On-Campus Transfer FTEs					
d. New-to-Campus FTEs	23	23	28	28	34
<b>Total On/New-to-Campus FTE</b>	<b>23</b>	<b>23</b>	<b>28</b>	<b>28</b>	<b>34</b>
<b>3. Program Majors - Headcount</b>					
a. Full-Time Students					
b. Part-Time Students	20	20	25	25	30
<b>Total Full/Part-Time HC</b>	<b>20</b>	<b>20</b>	<b>25</b>	<b>25</b>	<b>30</b>
c. In-State	20	20	25	25	30
d. Out-of-State					
<b>Total In/Out of State HC</b>	<b>20</b>	<b>20</b>	<b>25</b>	<b>25</b>	<b>30</b>

**Notes**

For both undergraduate and graduate degree enrollment projections, please carefully consider competitive degree enrollments and how the Purdue program will be marketed in the calculation of enrollment and degree completion projections.

^ Enter footnotes in the last section of this table for to provide additional details (required for 'other' categories) and projection and/or calculation logic.

Year #1

Year #2

Year #3

Year #4

Year #5

**Table 1**  
**Program Financial Projection**  
**Financial Office Table**

Purdue West Lafayette Campus

MS Degree in Defense Engineering and Technology with Concentration in Expeditionary Warfare

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>II. INCREMENTAL REVENUE</b>					
<b>1. Projected # of New Students</b> <sup>(1)</sup>	23	23	28	28	34
<b>2. General Tuition &amp; Fees</b> <sup>(2)</sup>					
a. General Service	10,306	10,306	10,306	10,306	10,306
b. Technology Fee	45	45	45	45	45
c. Repair & Rehabilitation Fee	68	68	68	68	68
d. Student Fitness & Wellness Fee					
e. Student Activity Fee					
<b>Total General Service T&amp;F</b>	<b>\$ 10,419</b>	<b>\$ 10,419</b>	<b>\$ 10,419</b>	<b>\$ 10,419</b>	<b>\$ 10,419</b>
<b>3. Additional Fees - if applicable</b> <sup>(3)</sup>					
a. Differential Fees	281	281	281	281	281
b. Course Fees					
c. Digital Education (DE) Fees	300	300	300	300	300
<b>Total Additional Fees</b>	<b>\$ 581</b>	<b>\$ 581</b>	<b>\$ 581</b>	<b>\$ 581</b>	<b>\$ 581</b>
<b>Total Incremental Revenue</b>	<b>\$ 247,500</b>	<b>\$ 247,500</b>	<b>\$ 309,100</b>	<b>\$ 309,100</b>	<b>\$ 371,800</b>

**Notes**

(1) New Students represents the anticipated number of *new* students to campus; transfers or existing students are **not** to be included. The Total is set equal to the 'New-to-Campus FTEs' completed in the Enrollment section (I2d).

(2) T&F must match approved Bursar rates (refer to Bursar website). The calculation should be based on the **Full-Time/ Resident** Student T&F. If the new degree program is primarily Part-Time students, then the T&F needs to be adjusted appropriately for this type of expected enrollment.

(3) If additional fees are applicable, then each fee must be individually listed above and match approved Bursar rates (refer to Bursar website).

Bursar T&F Website: <https://www.purdue.edu/bursar/tuition/index.html>

^ Enter footnotes in the last section of this table for to provide additional details (required for 'other' categories) and projection and/or calculation logic.

	Year #1 FY 2020	Year #2 FY 2021	Year #3 FY 2022	Year #4 FY 2023	Year #5 FY 2024
<b>III. EXPENDITURES</b>					

**Table 1**  
**Program Financial Projection**  
**Financial Office Table**  
**Purdue West Lafayette Campus**

**MS Degree in Defense Engineering and Technology with Concentration in Expeditionary Warfare**

<b>1. Additional Fees - Net Revenue <sup>(4)</sup></b>	<b>FTE</b>	<b>Cost</b>	<b>FTE</b>	<b>Cost</b>	<b>FTE</b>	<b>Cost</b>	<b>FTE</b>	<b>Cost</b>	<b>FTE</b>	<b>Cost</b>
10% F&A Fee		24,750		24,750		30,910		30,910		37,180
10% PO Fee		24,750		24,750		30,910		30,910		37,180
<b>Total Additional Fees</b>		<b>\$ 49,500</b>		<b>\$ 49,500</b>		<b>\$ 61,820</b>		<b>\$ 61,820</b>		<b>\$ 74,360</b>
<b>2. Salary and Wages</b>										
a. Faculty	0.30	108,455	0.30	109,516	0.30	110,604	0.30	111,719	0.30	112,862
b. Limited Term Lecturers										
c. Graduate Students										
d. Other (Post Doc/Staff)	0.50	35,023	0.50	35,898	0.50	36,796	0.50	37,716	0.50	38,659
<b>Total S&amp;W</b>	<b>0.80</b>	<b>\$ 143,477</b>	<b>0.80</b>	<b>\$ 145,414</b>	<b>0.80</b>	<b>\$ 147,400</b>	<b>0.80</b>	<b>\$ 149,435</b>	<b>0.80</b>	<b>\$ 151,521</b>
<b>3. Fringes and Fee Remissions</b>										
a. Fringe Benefits		18,149		18,602		19,067		19,544		20,033
b. Fee Remissions										
<b>Total FB &amp; FR</b>		<b>\$ 18,149</b>		<b>\$ 18,602</b>		<b>\$ 19,067</b>		<b>\$ 19,544</b>		<b>\$ 20,033</b>
<b>4. Supplies and Expenses</b>										
a. General Supplies & Expenses		4,400		4,400		4,400		4,400		4,400
b. Minor Equipment										
c. Recruiting & Marketing		1,000		1,000		1,000		1,000		1,000
d. Travel & Entertainment		9,050		9,050		9,050		9,050		9,050
e. Other (Library, subscriptions, IT)										
<b>Total Supplies and Expense</b>		<b>\$ 14,450</b>		<b>\$ 14,450</b>		<b>\$ 14,450</b>		<b>\$ 14,450</b>		<b>\$ 14,450</b>
<b>5. Capital</b>										
a. Capitalized Equipment										
b. Repair & Replacement										
<b>Total Equipment</b>		<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>
<b>Total Expenditures</b>		<b>\$ 225,576</b>		<b>\$ 227,966</b>		<b>\$ 242,737</b>		<b>\$ 245,249</b>		<b>\$ 260,363</b>
<b>Projected Program Surplus/(Deficit)*</b>		<b>\$ 21,924</b>		<b>\$ 19,534</b>		<b>\$ 66,363</b>		<b>\$ 63,851</b>		<b>\$ 111,437</b>

**Table 1**  
**Program Financial Projection**  
**Financial Office Table**  
**Purdue West Lafayette Campus**

**MS Degree in Defense Engineering and Technology with Concentration in Expeditionary Warfare**

\* For the CHE proposal, only identify the nature of the support. It is not necessary to note dollars in the report; however, it should be stated that there is sufficient revenue to cover expenses. 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.

^ Enter footnotes in the last section of this table for to provide additional details (required for 'other' categories) and projection and/or calculation logic.

**FOOTNOTES**

**I. Enrollment Details**

1. Program Credit Hours Generated

During each year of the program, two Purdue courses will be offered with a minimum of 20 students in each course. This is designed as a hybrid three year degree program where students will be taking two courses each summer session (residential and online). The summer course will consist of one week on onsite instruction at WestGate. Students will then complete a project and/or homework over an eight-week period following the final exam in the summer course. Faculty will be available to answer questions about this work via email, Skype, chat, or similar.

2. Full-Time Equivalents (FTE)

Students will be taking a six credit hours during one of the summer modules, which would have them registered as full-time students

3. Program Majors - Headcount

There will be a minimum of 20 students in this program each summer.

**II. Incremental Revenue Details**

1. Projected # of New Students

Each course will have a minimum of 20 students. This may include returning students or new students to the program.

2. General Tuition & Fees

Purdue will bill Crane a flat rate of \$5500 per student, per course. Purdue and Crane are expected to recruit a minimum of 20 students in each class.

The General Service per credit fee rate was determined by using the \$5500 flat rate that will be billed to Crane (per student) and reducing this by the required per credit fees (tech, R&R, Engr Diff Fee and Online fee).

3. Additional Fees - if applicable

Graduate Digital Education Support Fee (West Lafayette)(per credit hour), \$50/per credit hour

Engineering Differential fee assessed at 50% for the summer session

**III. Expenditure Details**

1. Salary and Wages

Two summer months - Academic Director, One month summer - Assessment Director, 50% effort - Associate Director of Workforce Engagement , Flat rate \$11,000/per faculty instructor/per class (3 instructors per course projected)

2. Fringes and Fee Remissions

Two summer months - Academic Director, One month summer - Assessment Director, 50% effort - Associate Director of Workforce Engagement

**Table 1**  
**Program Financial Projection**  
**Financial Office Table**  
**Purdue West Lafayette Campus**

**MS Degree in Defense Engineering and Technology with Concentration in Expeditionary Warfare**

3. Supplies and Expenses

Course materials, marketing/recruitment materials, rent and computer rental fees at WestGate, travel to/from WestGate for instructors

4. F & A Fee - Gross Revenue - (DE, RR, Tech, Diff, External) x 10%

Purdue Online Fee - Gross Revenue - (DE, RR, Tech, Diff) x 10%

**Table 2**  
**Program Revenue and Expenditure Summary**  
**Board of Trustees Table**  
**Purdue West Lafayette Campus**

**MS Degree in Defense Engineering and Technology with Concentration in Expeditionary Warfare College of Engineering**

	<b>Year #1 FY 2020</b>	<b>Year #2 FY 2021</b>	<b>Year #3 FY 2022</b>	<b>Year #4 FY 2023</b>	<b>Year #5 FY 2024</b>
<b>Total Incremental Revenue*</b>	\$ 247,500	\$ 247,500	\$ 309,100	\$ 309,100	\$ 371,800
<b>Total Expenditures</b>	\$ 225,576	\$ 227,966	\$ 242,737	\$ 245,249	\$ 260,363
<b>Projected Program Surplus/(Deficit)**</b>	<b>\$ 21,924</b>	<b>\$ 19,534</b>	<b>\$ 66,363</b>	<b>\$ 63,851</b>	<b>\$ 111,437</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**

**MS Degree in Defense Engineering and Technology with Concentration in Expeditionary WarfareCollege of Engineering**

	<b>Year #1 FY 2020</b>	<b>Year # 2 FY 2021</b>	<b>Year # 3 FY 2022</b>	<b>Year # 4 FY 2023</b>	<b>Year # 5 FY 2024</b>
<b>Enrollment Projections (Headcount)</b>	<b>20</b>	<b>20</b>	<b>25</b>	<b>25</b>	<b>30</b>
<b>Enrollment Projections (FTE)</b>	<b>23</b>	<b>23</b>	<b>28</b>	<b>28</b>	<b>34</b>
<b>Degree Completions Projection</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>20</b>