

## In Workflow

1. **SSIE Chair**
2. **SS Curriculum Committee Chair**
3. **SS Associate Dean**
4. **AAP Program Approval Coordinator**
5. Provost Program Proposal Review Committee Chair
6. Lihui Bai
7. SSIE Chair
8. SS Associate Dean
9. SS Curriculum Committee Chair
10. AAP Program Approval Coordinator
11. Faculty Senate Academic Programs Committee Chair
12. Faculty Senate Chair
13. AAP Program Approval Coordinator
14. OAPA Program Implementation

## Approval Path

1. Tue, 14 Nov 2023 01:58:36 GMT  
Pratik Parikh (pjpari01): Approved for SSIE Chair
2. Thu, 22 Feb 2024 18:20:48 GMT  
Katherine Markuson (klmark01): Approved for SS Curriculum Committee Chair
3. Thu, 22 Feb 2024 18:24:40 GMT  
Erin Gerber (eljack04): Approved for SS Associate Dean
4. Mon, 26 Feb 2024 19:11:34 GMT  
Derek Hottell (dlhott01): Rollback to SS Associate Dean for AAP Program Approval Coordinator
5. Tue, 27 Feb 2024 15:46:26 GMT  
Krista Young (k0youn08): Rollback to SS Curriculum Committee Chair for SS Associate Dean
6. Tue, 27 Feb 2024 20:46:26 GMT  
Katherine Markuson (klmark01): Rollback to Initiator
7. Tue, 27 Feb 2024 22:45:33 GMT  
Pratik Parikh (pjpari01): Approved for SSIE Chair
8. Wed, 28 Feb 2024 16:25:48 GMT  
Katherine Markuson (klmark01): Approved for SS Curriculum Committee Chair
9. Wed, 28 Feb 2024 16:49:40 GMT  
Erin Gerber (eljack04): Approved for SS Associate Dean
10. Thu, 29 Feb 2024 19:07:39 GMT  
Derek Hottell (dlhott01): Approved for AAP Program Approval Coordinator

11. Thu, 29 Feb 2024 19:28:08 GMT  
Derek Hottell (dlhott01): Rollback to AAP Program Approval Coordinator for Provost Program Proposal Review Committee Chair
12. Thu, 29 Feb 2024 19:29:38 GMT  
Derek Hottell (dlhott01): Approved for AAP Program Approval Coordinator
13. Tue, 26 Mar 2024 18:10:14 GMT  
Derek Hottell (dlhott01): Rollback to Initiator
14. Tue, 02 Apr 2024 20:13:05 GMT  
Pratik Parikh (pjpari01): Approved for SSIE Chair
15. Wed, 10 Apr 2024 19:46:28 GMT  
Katherine Markuson (klmark01): Approved for SS Curriculum Committee Chair
16. Wed, 10 Apr 2024 20:04:44 GMT  
Erin Gerber (eljack04): Approved for SS Associate Dean
17. Mon, 15 Apr 2024 15:27:47 GMT  
Derek Hottell (dlhott01): Approved for AAP Program Approval Coordinator
18. Thu, 23 May 2024 13:29:10 GMT  
Derek Hottell (dlhott01): Rollback to Initiator
19. Wed, 29 May 2024 17:12:28 GMT  
Pratik Parikh (pjpari01): Approved for SSIE Chair
20. Fri, 14 Jun 2024 18:27:11 GMT  
Derek Hottell (dlhott01): Approved for SS Curriculum Committee Chair
21. Fri, 14 Jun 2024 18:27:40 GMT  
Derek Hottell (dlhott01): Approved for SS Associate Dean
22. Fri, 14 Jun 2024 18:27:57 GMT  
Derek Hottell (dlhott01): Approved for AAP Program Approval Coordinator
23. Thu, 20 Jun 2024 14:37:22 GMT  
Derek Hottell (dlhott01): Approved for Provost Program Proposal Review Committee Chair
24. Thu, 11 Jul 2024 19:54:14 GMT  
Lihui Bai (l0bai002): Approved for l0bai002
25. Thu, 11 Jul 2024 20:27:31 GMT  
Pratik Parikh (pjpari01): Approved for SSIE Chair
26. Fri, 26 Jul 2024 18:31:24 GMT  
Erin Gerber (eljack04): Approved for SS Associate Dean
27. Wed, 31 Jul 2024 15:27:12 GMT  
Derek Hottell (dlhott01): Rollback to Initiator
28. Tue, 13 Aug 2024 13:29:28 GMT  
Pratik Parikh (pjpari01): Approved for SSIE Chair
29. Tue, 13 Aug 2024 16:41:22 GMT  
Katherine Markuson (klmark01): Approved for SS Curriculum Committee Chair
30. Tue, 13 Aug 2024 17:40:40 GMT  
Erin Gerber (eljack04): Approved for SS Associate Dean

# New Program Proposal

Date Submitted: Tue, 13 Aug 2024 12:36:41 GMT

## Viewing: **396: Analytics for Decision Making Graduate Certificate**

Last edit: Tue, 13 Aug 2024 13:09:50 GMT

Changes proposed by: Pratik Parikh (pjpari01)

### Contact Information

Contact Name	Title	Email	Work Phone
Pratik Parikh	Professor	Pratik.Parikh@louisville.edu	5028526342

### Program Title

Analytics for Decision Making Graduate Certificate

### Affiliated Departments

Department(s)
Industrial Engineering

### Affiliated Colleges

College(s)
Speed School of Engineering

Is an approval letter from the Education Professional Standards Board (EPSB) required for this program?

No

Attach a copy to this proposal.

### Proposed Start Date

Spring 2025

### Effective Catalog Edition

2024-2025

### Program Level

Graduate

### Degree or Certificate Type

Certificate - Graduate (GCRT)

**Current Method of Delivery (Check all that apply).**

In-Person  
Online

**Program Credential (If appropriate)**

Certificate

**For certificates, please acknowledge**

I am aware that the Provost now requires new certificate programs to investigate the possibility of creating a full degree program within three years of opening.

**Does the unit plan to offer this program as a stand-alone certificate eligible for Title IV Financial Aid?**

No

**Is there a specialized accrediting agency related to this program?**

No

**Does this program have a clinical component?**

No

**Program Abstract/Overview**

Code	Course List Title	Hours
<a href="#"><u>IE 662</u></a>	Predictive Analytics for Decision Making I (required.)	3
<a href="#"><u>IE 561</u></a>	Developing Decision Support Systems with Excel	3
<a href="#"><u>IE 663</u></a>	Predictive Analytics for Decision Making II	3
<a href="#"><u>IE 646</u></a>	Operations Research Methods	3
<a href="#"><u>IE 645</u></a>	Simulation	3

Industrial Engineering (IE) is proposing a graduate certificate entitled “Analytics for Decision Making (ADM).” The main goal of this certificate is to address the growing need for analytics and data-driven decision-making. The overall goal is to develop talent in operational decision analytics, including both predictive and prescriptive skills, regionally and nationally. This certificate aims to prepare workforce for a wide range of organizations (businesses, non-profit, NGOs, etc.) in the US to address data-driven decisions in a variety of areas. Examples

include: production planning (analyzing historical production data to optimize scheduling, minimize downtime, and balance workloads across machines), safety design (predicting human behavior in specific environments such as workplaces and healthcare to improve safety protocols or enhance operational efficiency), transportation planning (predicting traffic and weather patterns and optimizing dispatching and routing accordingly). The certificate will be available in two formats: 100% online and on-campus. The certificate will require students to complete nine credit hours of graduate coursework. Students in the Master of Science in Industrial Engineering (MSIE) and Master of Engineering in Engineering Management Online (MEEMO) will be able to complete the certificate within their academic plan at no additional tuition charge or program credit hour requirements. Non-degree-seeking students completing the stand-alone ADM may count the nine credit hours towards their future MSIE and MEEMO degrees. Upon completion, students will acquire core knowledge of data analytics in decision making. The proposed certificate uniquely combines three Industrial Engineering subareas: Data Analytics, Operations Research, and Decision Making.

## Program Quality and Student Success

**The curriculum should be structured to meet the stated objectives and student learning outcomes of the program.**

**Will any of these outcomes differ by track?**

There is no track for this certificate.

**Explain how the curriculum achieves the program-level student learning outcomes by describing the relationship between the overall curriculum or the major curricular components and the program objectives.**

Learning Objectives:

- Student Learning Outcome 1 (SLO1): Collect, process, and analyze data to develop effective prescriptive and predictive models that enhance decision-making capabilities.
- Student Learning Outcome 2 (SLO2): Integrate prescriptive and predictive modeling results to inform and make actionable recommendations to decision-makers, transforming data insights into practical strategies for improved decision-making.

IE662 provides the core foundation of predictive analytics. IE646 offers a key technique, primarily optimization, in prescriptive analytics. IE645 offers another key technique, which is discrete-event simulation, to account for underlying dynamic and stochastic elements in a system. IE561 enables students to design a use-friendly decision support system that conveys effectively solutions from simulation and optimization to end users. Finally, IE663 will offer interested students with advanced topics in machine learning.

SLO1: Assignments from each of the three courses the student selected as part of this Certificate will be evaluated (see other portions of the proposal for core and elective courses). Success will be defined as observing 80% or more of students achieving 70% or greater on these assignments.

SLO2: Case studies or projects from each of the three courses the student selected as part of this Certificate will be evaluated (see other portions of the proposal for core and elective courses). Note that all courses included in this certificate require projects or case studies. Success will be defined as observing 80% or more of students achieving 70% or greater on the projects or case studies.

### Program-Level Learning Outcomes

Program-level Student Learning Outcome	Program Goal/Objective	Outcome addressed in courses or curricular components
<p>Student Learning Outcome 1 (SLO1): Collect, process, and analyze data to develop effective prescriptive and predictive models that enhance decision-making capabilities.</p> <p>Outcome 2 (SLO2): Integrate prescriptive and predictive modeling results to inform and make actionable recommendations to decision-makers, transforming data insights into practical strategies for improved decision-making.</p>	<p>The proposed Graduate Certificate in Analytics for Decision Making aims to achieve the following objectives:</p> <p>1. Prepare Students for the Technology Revolution: The program's primary objective is to equip graduate-level students with comprehensive knowledge and skills to navigate the upcoming technology revolution surrounding big data, artificial intelligence, and data analytics. As industries become increasingly data-driven, it is crucial to train future professionals to effectively use, manage and analyze vast amounts of information. By focusing on these emerging technologies, the certificate program aligns with the university's mission of preparing students for the careers and workplaces of tomorrow.</p> <p>2. Address Fast-Changing Marketplace Needs: The certificate program directly responds to the rapidly evolving marketplace demands for data science expertise within the broader analytics-driven in enterprise decision-making. The University of Louisville's strategic plan emphasizes the importance of being a great place to learn, work, and invest. By offering a Graduate Certificate in Analytics</p>	<p>For SLO1, the direct indicator of achievement of the outcome will be based on the assessment of the assignments by the instructors.</p> <p>As an example, Predictive Analytics for Decision Making I (IE662), assessment will consist of 2 components:</p> <p>1. Phase I (50%): Project proposal, including problem definition, data plan, background, and comprehensive literature review (50%).</p> <p>2. Phase II (50%): Project methodology and evaluation, including methodology development, performance evaluation in numerical experiments, and benchmark comparison.</p> <p>These assessment components ensure that students not only develop the technical skills required for modeling and analyzing complex systems but also compare and select the appropriate models based</p>

Program-level Student Learning Outcome	Program Goal/Objective	Outcome addressed in courses or curricular components
	<p>for Decision Making, the university demonstrates its commitment to addressing the skill gaps in the job market and providing students with practical knowledge applicable to real-world challenges.</p> <p>3. Foster Economic Development and Serve Societal Needs: The program's focus on skills and methods in advanced data analytics aligns with the economic needs of the Louisville region and beyond. By equipping graduates with analytical and decision-making skills in various societal aspects, such as analytics in advanced manufacturing, analytics healthcare, and analytics in logistics, this certificate program contributes to regional and state economic development. This, in turn, supports the university's strategic priority of becoming an active partner in fostering economic growth and innovation in the community.</p> <p>4. Provide Continuing Education and Experiential Learning Opportunities: The Graduate Certificate in Analytics for Decision Making offers engineering professionals access to a valuable continuing education program. This initiative supports the university's mission of being a great place to work by promoting lifelong learning and professional development for its faculty, staff, and external stakeholders. Additionally, the program provides future engineering professionals with experiential learning opportunities in analytics and decision-making, aligning with the strategic priority of promoting hands-on learning experiences and practical skill development.</p> <p>5. Address Talent Shortages and Facilitate Career Advancement:</p>	<p>on the decision-making needs.</p> <p>Target: 80% of students achieve 70% or better. Frequency of data collection: every year.</p> <p>For SLO2, the direct indicator of achievement of the outcome will be based on the assessment of the projects used by the instructor. As an example, for Operations Research Methods (IE515, new number effective Summer 2024 would be IE646), this assessment will consist of 5 components:</p> <p>1. Problem Formulation (20%): Students can accurately define the complex system and its components that need optimization. This includes identifying the key variables, constraints, objectives, and relationships within the system.</p> <p>2. Model Development (20%): Students can construct an appropriate optimization model to represent the complex system. This involves translating real-world elements into mathematical equations or logic that reflect the system's behavior, interactions, and goals.</p> <p>3. Solution Interpretation (20%): Students demonstrate the ability to interpret the results of the optimization model. This includes explaining the significance of optimal values, understanding trade-offs between variables, and providing insights into the system's behavior based on the solutions obtained.</p> <p>4. Sensitivity Analysis (20%): Students conduct sensitivity</p>

Program-level Student Learning Outcome	Program Goal/Objective	Outcome addressed in courses or curricular components
	<p>The certificate program addresses the pressing need for skilled talent in analytics in today's competitive marketplace. By providing professionals with specialized training, the program enhances career advancement opportunities and fosters individual professional growth. This objective aligns with the university's mission of preparing students for success in their chosen careers and supporting their personal and professional development.</p> <p>By addressing these objectives, the Graduate Certificate in Analytics for Decision Making will contribute significantly to the university's mission, strategic priorities, and societal needs, while also supporting the region's economic growth and ensuring a competitive edge for graduates in the job market.</p>	<p>analysis to assess the robustness of their optimization models and solutions. This involves varying input parameters, constraints, or objectives to evaluate how changes impact the optimal solution and system performance.</p> <p>5. Trade-off, Limitation and Contingency Assessment (20%): Students demonstrate an understanding of trade-offs between factors like cost, proximity to suppliers and customers, and operational efficiency. They make well-justified decisions considering these trade-offs.</p> <p>Target: 80% of students achieve 70% or better. Frequency of data collection: every year.</p>

**Attach Curriculum Map**

Template\_Blank CM Map\_GRADPROF-Level-ADM-August 2024.pdf

**Describe administrative oversight to ensure the quality of the program.**

The program director will conduct an annual review of course content and delivery, as well as student feedback. Department faculty and IAB members will be informed of the program status, issues, and potential remedies, if needed.

**For a program offered in a compressed timeframe (e.g., with 8-week courses), describe the methodology for determining that levels of knowledge and competencies comparable to those required in traditional formats have been achieved. (You must provide an entry.)**

We expect some students to take courses online. These courses were developed using best practices suggested by Delphi, in collaboration with a Delphi appointed course designer, and are identical in quality and content to that of the face-to-face offering of the same course. In most cases, students are advised to take one course per 8-week term to ensure quality study and learning outcomes. Faculty who teach online are also trained to provide reasonable flexibility (e.g., exam times, class times, etc.) to online students in their compressed learning duration.



## **Admission Requirements**

Students will be required to possess a bachelor's degree and proficiency in Calculus I for program admission. The successful applicant will typically have an undergraduate grade point average of 2.75 or above (on a 4.00 scale). Applicants with a GPA between 2.5 and 2.75 may be considered for admission and will be required to submit additional application materials. GRE scores will not be required.

## **Graduation Requirements**

Students will be required to maintain an overall 3.0 GPA to graduate with this certificate.

## **Curriculum**

### **Course Template Form**

Template\_Form--KPPPS-Course-Template-ADM August 2024.xlsx

## **List of new courses to be developed**

### **Potential for collaboration with other units at UofL and/or articulation with other institutions**

## **Linkage with the Mission and Strategic Plan**

### **Describe how the proposed program supports the university and unit mission/strategic plans.**

UofL's 2023-2025 Plan highlights the University's strong commitment to the state of Kentucky and its economic health. To support sustainable economic growth, workforce development in physical and digital forms is critical. The 2023-2025 plan calls for UofL to be a great place to learn, discover, connect with communities and work. Particularly, one principal notion under the "Great Place to Learn" is to engage students in meaningful experiential learning opportunities by creating high-quality, industry-focused, core-skill certifications to help students succeed upon graduation. To this extent, the proposed Analytics for Decision Making certificate will meet the goal of preparing the workforce for these needs to help economic growth in the Commonwealth, and will perfectly align with the theme of making UofL a great place to learn.

At the unit level, the mission of SSOE is "to serve the University, the Commonwealth of Kentucky, and the engineering profession by providing high-quality educational programs to all students; engaging in research and scholarship that will extend knowledge; and assisting the economic development of the regional, state and national economies through technology transfer." This certificate serves all the above missions by creating an opportunity for engineering professionals to have access to a continuing education program

and an opportunity for future engineering professionals to have access to an experiential learning program in the areas of operations research and data analytics. This will address the pressing needs for analytics towards organizational decision making.

### **Diversity, Equity, and Inclusivity**

The program recognizes the importance of diversity, equity, and inclusion in the workforce, especially given the collaborative and multi-faceted nature of today's businesses and armed forces. We plan to promote the certificate to diverse associations such as the Black Business Association, Minority Business Development Agency, National Hispanic Business Group, and National Minority Supplier Development Council. Speed School has long history of promoting engineering to URM groups via programs such as Brown Forman Scholarship, Society of Women Engineers, Women's Leadership Conference, and National Society of Black Engineers. Our marketing and outreach will work with these existing programs to draw those interested in data analytics, human factors, and operational decision making into the certificate.

## **Market Demand**

### **Program Need**

Demand from students is driven by demand from the economic development of the region and the nation. According to the latest U.S. Bureau of Labor Statistics (<https://www.bls.gov/ooh/fastest-growing.htm>), among the 20 occupations with the highest projected percent change of employment between 2022-2032 are data scientist (#3) and operations research analyst (#14), with a 2022 median pay of \$103,500 and \$85,720 per year, respectively.

Furthermore, current MSIE students have expressed (via ad hoc interviews conducted by the department chair) a strong interest in this certificate program and to be able to complete the certificate without additional financial cost by taking certificate courses as electives towards their degrees. This will enable them to further differentiate themselves from MSIE graduates at other universities when seeking internships or full-time positions.

## **Academic Demand**

### **Skills/Programs/Employment**

The academic demand addressed by this certificate program is to assist students in designing and managing various operations in an enterprise using data-driven approaches. Skills required for this purpose, and covered through this certificate, include the following: data curation, data storage, descriptive analysis (via Excel, Python, and other available tools), predicting future events (via machine learning tools), and prescribing solutions (using optimization and simulation tools). Such a collection of skill sets is of immense importance in the current economy for job seekers and those who want to grow in their profession, while

also helping the industry improve decision making, reduce cost, and remain environmentally friendly.

This program is designed for students and professions to either enter the workforce or sustain their current employment. These students are expected to be more competitive for jobs in these fast growing high-paying occupations. This certificate presents opportunities and aspirations of either student population groups getting promoted in their company or at a different company. Some job titles may include Senior Analytics Professional, Director or VP of Analytics, Senior Operations Manager, Senior Human Factors Engineering, Senior Data Scientist, or similar. The other purpose could be for non-degree seeking students to get excited about this domain and eventually enroll in one of our Masters programs; e.g., MSIE or MEEM.

From a program viewpoint, this certificate will not replace any other existing program in the department. The program will coincide with and enhance existing Department of Industrial Engineering programs: the Online Master of Engineering in Engineering Management (MEEM) program and an Online MSIE (that was launched in Fall 2021). That is, students from other IE programs will be able to select the courses to earn the ADM Certificate as well. These collaborative programs are comprised of 8-week, 6-term sessions.

Given the focus on operations and decision making, which includes optimization and simulation techniques, the most applicable CIP code is 14.3701 – “Operations Research.” LightCast search was not able to identify any other similar programs in the commonwealth. Therefore, no similar program table is necessary. However, we provide the following comparison data with two other existing graduate certificates related to analytics at UofL.

**Will this program replace or enhance any existing programs(s) or tracks, concentrations, or specializations within an existing program? If yes, please specify.**

No

**Attach Similar Programs Table**

Template\_Program-Duplication-Table-ADM-July 2024.pdf

**Student Demand**

**Specify evidence of student demand and projected enrollments for the first five years of the program.**

Student demand for the program is believed to mirror Market Demand (see previous section).

**Full-Time**

**Year 1**

1-2

**Year 2**

3-4

**Year 3**

5-7

**Year 4**

5-8

**Year 5**

5-8

**Part-Time**

**Year 1**

2-3

**Year 2**

5-6

**Year 3**

7-8

**Year 4**

10-12

**Year 5**

10-12

**Projected Tuition Revenue (\$\$)**

**Year 1**

16808

**Year 2**

44820

**Year 3**

67230

**Year 4**

84038

**Year 5**

84038

**Provide a description of how the tuition projections were calculated.**

The above table illustrates the projected enrollment for the first five years for the ADM certificate. Note that this estimated enrollment is for the non-degree seeking students, not including current students who take certificate courses toward their degree. Using the lower value in the range (totaled across full-time and part-time), we have estimated the projected revenue to be approximately \$296,933 for the unit for this 9-credit hour certificate.

## Employer Demand

### **Attach Employer Demand Table**

Template\_Employer-Demand-Table-ADM-July 2024.pdf

Graduate Certificate in Analytics for Decision Making Letter of Support from Dean Collins.pdf

## Funding Sources

### **Additional Faculty**

No additional faculty is needed.

### **Faculty Workload**

The proposed ADM requires minimal to moderate additional faculty resources and workload. All courses are fully developed for 100% asynchronous online teaching following Delphi Center's best practices guidelines. When the program grows, some workload adjustment will be made to accommodate for potential new sections, both online and on-campus.

### **Estimate of Marketing and Outreach Expenditures**

A yearly marketing expense of approximately \$6,500 is appraised for the certificate.

### **Budgetary Rationale**

The certificate is built upon existing courses that are fully developed in both on-campus and 100% online modes (per Delphi's standards). So, we simply use our existing offerings and convert them into a certificate for working professionals that other universities are offering in the IE program (with different names and slightly different flavors). If the students can be accommodated in our existing sections, then the net revenue would equal the tuition generated from the students (\$830/cr hr, among which the unit receives approximately \$623/cr hr). With increase in the enrollment, if the class size needs to be increased and/or new sections of the course would need to be added, then the department will compensate faculty accordingly and/or hire graders. The IE department will work with the SSOE Dean's office to support such growth. We do not expect any other program on the campus to be affected given the uniqueness of this certificate. Considering this, we deem this focus area to yield a high ROI.

## Financial Resources and Program Impact

### Projected Revenues

Projected Revenues	Year 1	Year 2	Year 3	Year 4	Year 5	Five-Year Total
Other revenues, list each one	16808	44820	67230	84038	84038	296933

### New Resource Requirements

#### Describe your other revenue sources

UofL tuition using the tuition rate per credit hour suggested by Delphi (\$623/credit hour, i.e., 75% x \$830/cr hr).

#### Upload Projected Expenses

Template\_New-Resource-Requirements-Table-ADM-July 2024.pdf

#### Library Resources.

The letter of support from Dean Fox is attached.

#### Please also submit a letter of support from the UofL Libraries.

Letter of Support for the proposed Analytics for Decision Making graduate certificate-10-27-2023.pdf

#### Graduate-level programs will require the GRE, GMAT or other standardized tests for admission.

No

#### The unit's lead fiscal officer has reviewed the budget calculations for this proposal.

Yes

#### The unit dean has approved this proposal and its related financial commitments and endorses the creation of this program as described.

Yes

### Online Delivery

#### Distance Education Plans

This program will be offered both 100% online (asynchronous) and on-campus. For online, all courses have already been developed as 8-week sessions in collaboration with Delphi.

**Please complete the employer demand table.**

### Online Program Best Practice

**8-week courses: For undergraduate programs, this would be major classes at a minimum although also recommended for general education classes**

Yes

**Allow part-time enrollment**

Yes

**Admit students at least two times/year**

Yes

**Asynchronous classes (no regular required meeting times)**

Yes

**100% online (in-person experiences that can be done off-site do not affect this factor, meaning it would still be considered 100% online even if the student has to do in-person assignments where they live)**

Yes

### Quality Program Practice

**Require all faculty who will be developing and/or teaching in the program to go through DelphiU or have gone through an equivalent training**

Yes

**Require all faculty developing online courses to partner with an instructional designer in the Delphi Center and adhere to established deadlines for course creation**

Yes

#### **Explanation**

We will follow best practices. All online courses in the certificate are already products co-developed with Delphi.

NEW PROGRAM TO DO SECTION - FOR PROVOST OFFICE USE ONLY  
(Academic unit faculty/staff: do not enter information below this line.)

**AAP Program Approval Coordinator**

**IRP Executive Director**

**Type of Proposal**

Edits of Pre Proposal

ADMIN PROGRAM TO DO SECTION - FOR PROVOST OFFICE USE ONLY  
(Academic unit faculty/staff: do not enter information below this line.)

**Program Admin**

**Catalog Admin**

**Reviewer Comments**

**Derek Hottell (dlhott01) (Mon, 26 Feb 2024 19:11:34 GMT):** Rollback: What are the "other" expenses listed in the budget? No explanation is provided of those "other" expenses.

**Krista Young (k0youn08) (Tue, 27 Feb 2024 15:46:26 GMT):** Rollback: Rolling back to SS Curriculum Committee step so Katherine can work on requested revisions - Katherine, you can also roll back to Lihui Bai directly if you would prefer.

**Katherine Markuson (klmark01) (Tue, 27 Feb 2024 20:46:26 GMT):** Rollback: Please see the comments from OAPA at the bottom of the page under "Reviewer Comments".

**Derek Hottell (dlhott01) (Thu, 29 Feb 2024 19:28:08 GMT):** Rollback: Questions about curriculum.

**Derek Hottell (dlhott01) (Tue, 26 Mar 2024 18:10:15 GMT):** Rollback: Per email correspondence, admissions standards are not consistent throughout proposal, and the budget needs to be updated per email feedback.

**Derek Hottell (dlhott01) (Thu, 23 May 2024 13:29:11 GMT):** Rollback: Per Dr. Bai's request to update the enrollment projections and budget.

**Derek Hottell (dlhott01) (Wed, 31 Jul 2024 15:27:12 GMT):** Rollback: Lihui, I'm rolling the proposal back to you, so you can make the revisions described in my email. DH

Key: 396



Select any proposals you would like to bundle together for approval. Only proposals you have saved are available to bundle.

Bundle Title:

Course:

Proposal A

Program:

Proposal B