APPROVED BY SENATE
02/08/2021

EP.21.051_FINAL
Approved by EP 01/25/2021

10KS0127PHD: INDUSTRIAL ENGINEERING, PHD

In Workflow

1. U Program Review (dforgacs@illinois.edu; eastuby@illinois.edu; aledward@illinois.edu)
2. 1422 Head (thurston@illinois.edu; hcraddoc@illinois.edu; lredman@illinois.edu)
3. KP Committee Chair (mch@illinois.edu; bsnewell@illinois.edu; danko@illinois.edu; kcp@illinois.edu)
4. KP Dean (candyd@illinois.edu)
5. University Librarian (jpwilkin@illinois.edu)
6. Grad_College (agrindly@illinois.edu; jch@illinois.edu; lowry@illinois.edu)
7. Provost (kmartens@illinois.edu)
8. Senate EPC (bjlehman@illinois.edu; moorhouz@illinois.edu; kmartens@illinois.edu)
9. Senate (jtempel@illinois.edu)
10. U Senate Conf (none)
11. Board of Trustees (none)
12. IBHE (none)
13. DMI (eastuby@illinois.edu; aledward@illinois.edu; dforgacs@illinois.edu)

Approval Path

1. Mon, 12 Oct 2020 16:05:52 GMT
   Deb Forgacs (dforgacs): Approved for U Program Review
2. Thu, 15 Oct 2020 19:07:29 GMT
   Deborah Thurston (thurston): Approved for 1422 Head
3. Tue, 17 Nov 2020 19:28:55 GMT
   Keri Pipkins (kcp): Approved for KP Committee Chair
4. Tue, 17 Nov 2020 20:59:25 GMT
   Candy Deaville (candyd): Approved for KP Dean
5. Tue, 17 Nov 2020 22:15:09 GMT
   John Wilkin (jpwilkin): Approved for University Librarian
6. Thu, 10 Dec 2020 20:05:25 GMT
   Allison McKinney (agrindly): Approved for Grad_College
7. Thu, 10 Dec 2020 20:38:22 GMT
   Kathy Martensen (kmartens): Approved for Provost

History

1. May 8, 2019 by Deb Forgacs (dforgacs)
2. Jul 1, 2019 by Mary Lowry (lowry)
3. Jul 1, 2019 by Mary Lowry (lowry)

Date Submitted:Mon, 12 Oct 2020 16:04:20 GMT

Viewing:10KS0127PHD : Industrial Engineering, PhD

Changes proposed by: Lauren Redman

Proposal Type

Proposal Type:

Major (ex. Special Education)

This proposal is for a:

Revision

Proposal Title:

If this proposal is one piece of a multi-element change please include the other impacted programs here.*example: A BS revision with multiple concentration revisions*

PhD revision with multiple minor revisions

The other programs that are tied to this revision include:
IE, MS -- key 337
SE, MS -- key 338
SE, PHD -- key 335

EP Control Number

EP.21.051

Official Program Name

Industrial Engineering, PhD

Effective Catalog Term

Fall 2021

Sponsor College

Grainger College of Engineering

Sponsor Department

Industrial and Enterprise Systems Engineering

Sponsor Name

Lauren Redman

Sponsor Email

lredman@illinois.edu

College Contact

Harry Dankowicz

College Contact Email

danko@illinois.edu

Program Description and Justification

Justification for proposal change:

The Department of Industrial and Enterprise Systems Engineering would like to align both the Industrial Engineering and Systems & Entrepreneurial Engineering curriculum requirements to create consistency among both programs. This has no implication for students from a financial aspect and should make the requirements much more clear to avoid confusion that we currently experience.

In particular, we are proposing the following:
PhD With Approved Masters:
*Structuring the electives -- STEM courses and 400/500-level IE courses
*Defining the STEM courses that will count toward the degree
*Increase GPA requirement to 3.25 to match PhDSSE

PhD With Approved Bachelors:
*Structuring the electives -- STEM courses, 400/500-level IE courses, and open electives
*Defining the STEM courses that will count toward the degree
*Increasing number of 500-level courses to match PhDSEE
*Increase GPA requirement to 3.25 to match PhDSEE

Corresponding Degree

PhD Doctor of Philosophy

Is this program interdisciplinary?

No

Academic Level

Graduate

Will you admit to the concentration directly?

No

Is a concentration required for graduation?

No

CIP Code

143501 - Industrial Engineering.

Is This a Teacher Certification Program?

No

Will specialized accreditation be sought for this program?

No

Admission Requirements

Is this revision a change to the admission status of the program?

No

Enrollment

Describe how this revision will impact enrollment and degrees awarded.

No impact in enrollment or degrees awarded is expected

Estimated Annual Number of Degrees Awarded

What is the matriculation term for this program?

Fall

What is the typical time to completion of this program?

5 years

What are the minimum Total Credit Hours required for this program?

64

Delivery Method

Is this program available on campus and online?

No

This program is available:

On Campus

Budget

Are there budgetary implications for this revision?

No

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

No

Resource Implications

Facilities

Will the program require new or additional facilities or significant improvements to already existing facilities?

No

Technology

Will the program need additional technology beyond what is currently available for the unit?

No

Non-Technical Resources

Will the program require additional supplies, services or equipment (non-technical)?

No

Resources

For each of these items, be sure to include in the response if the proposed new program or change will result in replacement of another program(s). If so, which program(s), what is the anticipated impact on faculty, students, and instructional resources? Please attach any letters of support/ acknowledgement from faculty, students, and/or other impacted units as appropriate.

Faculty Resources

Library Resources

Instructional Resources

Will there be any reduction in other course offerings, programs or concentrations by your department as a result of this new program/proposed change?

No

Does the program include other courses/subjects impacted by the creation/revision of this program?

No

Financial Resources

How does the unit intend to financially support this proposal?

No financial impact is expected

Will the unit need to seek campus or other external resources?

No

Are you seeking a change in the tuition rate or differential for this program?

Yes

Is this program requesting self-supporting status?

No

Program Regulation and Assessment

Is the career/profession for graduates of this program regulated by the State of Illinois?

No

Program of Study

“Baccalaureate degree requires at least 120 semester credit hours or 180 quarter credit hours and at least 40 semester credit hours (60 quarter credit hours) in upper division courses” (source: https://www.ibhe.org/assets/files/PrivateAdminRules2017.pdf). For proposals for new bachelor’s degrees, if this minimum is not explicitly met by specifically-required 300- and/or 400-level courses, please provide information on how the upper-division hours requirement will be satisfied.

All proposals must attach the new or revised version of the Academic Catalog program of study entry. Contact your college office if you have questions.

Revised programs

PhDIE ProposedChanges 101220.pdf

Attach a side-by-side comparison with the existing program AND, if the revision references or adds “chose-from” lists of courses students can select from to fulfill requirements, a listing of these courses, including the course rubric, number, title, and number of credit hours.

Catalog Page Text

Statement for Programs of Study Catalog

Entering with approved M.S./M.A. degree

Code	Title	Hours
IE 599	Thesis Research[A maximum of 32 credit hours of IE 599 (or other approved thesis) may be counted toward the degree]	32
IE 590	Seminar (registration for 0 hours every term while in residence)	0
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		32
400/500-level IE Courses		20
STEM courses from outside of major[STEM courses must be approved and be from a College of Engineering department, including ABE and CHBE (or other approved department). Excludes TEC and ENG courses.]		12
Total Hours		64

Other Requirements and Conditions (may overlap)

Requirement	Description
Other Requirements and Conditions may overlap	
Minimum 500-level Hours Required Overall:	16
A maximum of 4 hours ofIE 597(or other approved independent study) may be applied toward the elective course work requirement.	
4 hours of the elective courses must be from a College of Engineering department, including ABE and CHBE.	
A maximum of 4 CR-graded credit hours in non-IE courses may be applied toward the degree.	
Minimum GPA:	3.25
Minimum 500-level credit hours applied toward the degree:	16
Independent study/project design courses do not count toward 500-level requirement.	
A maximum of 8 hours ofIE 597(or other approved independent study/ project design) may be applied toward the elective course work requirement.	
Ph.D. exam and dissertation requirements:	
Qualifying exam: Qualifying examinations should be taken as early as possible	
Qualifying exam	
Preliminary exam	
Final exam or dissertation defense	
Dissertation deposit	

Entering with approved B.S./B.A. degree

Code	Title	Hours
IE 599	Thesis Research[A maximum of 40 credit hours of IE 599 (or other approved thesis) may be counted toward the degree]	40
IE 590	Seminar (registration for 0 hours every term while in residence)	0
Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)		56
400/500-level IE Courses		32
STEM courses from outside of major[STEM courses must be approved and be from a College of Engineering department, including ABE and CHBE (or other approved department). Excludes TEC and ENG courses.]		12
Electives in consultation with advisor		12
Total Hours		96

Other Requirements and Conditions (may overlap)

Requirement	Description
Other Requirements and Conditions may overlap	
Minimum 500-level Hours Required Overall:	24
For the thesis option, a maximum of 4 hours ofIE 597(or other approved independent study) may be applied toward the elective course work requirement.	

4 hours of the elective courses must be from a College of Engineering department, including ABE and CHBE.	
A maximum of 4 CR-graded credit hours in non-IE courses may be applied toward the degree.	
Minimum GPA:	3.25
Minimum 500-level credit hours applied toward the degree:	28
Independent study/project design do not count toward 500-level requirement.	
A maximum of 8 hours ofIE 597(or other approved independent study/ project design) may be applied toward the degree.	
Ph.D. exam and dissertation requirements:	
Qualifying exam: Qualifying examinations should be taken no later than the fifth semester for those entering with approved B.S. or B.A. degree.	
Qualifying exam	
Preliminary exam	
Final exam or dissertation defense	
Dissertation deposit	

EP Documentation

DMI Documentation

Banner/Codebook Name

Doctor of Philosophy, PhD

Program Code:

10KS0127PHD

Degree Code

PHD

Major Code

0127

Program Reviewer Comments

Deb Forgacs (dforgacs) (Mon, 12 Oct 2020 15:36:20 GMT): Rollback: requested.

Key: 336

10KS0127PHD Program Code
Effective Fall 2021

PhDIE Approved Masters Current		PhDIE Approved Masters Proposed	
Thesis credit (IE 599)	32	Thesis credit (IE 599)	32
Seminar registration each semester (IE 590)	0	Seminar registration each semester (IE 590)	0
Electives in consultation with advisor	32	400/500-level IE Courses	20
		STEM courses from outside of major	12
Total	64	Total	64

A minimum of 16 credit hours of 500-level hours overall.	At least 16 hours of 500-level credit must be applied toward the degree. Independent study/project design courses do not count toward 500-level requirement.
4 hours of the elective courses must be from a College of Engineering department, including ABE and CHBE.	STEM courses must be approved and be from a College of Engineering department, including ABE and CHBE (or other approved department). Excludes TEC and ENG courses.
A maximum of 4 hours of IE 597 (or other approved independent study) may be applied toward the elective course work requirement.	A maximum of 8 credit hours of IE 597 (or other approved independent study/project design) may be counted toward the degree.
PhD exam and dissertation requirements: qualifying exams, preliminary exam, final exam or dissertation defense, dissertation deposit.	PhD exam and dissertation requirements: qualifying exams, preliminary exam, final exam or dissertation defense, dissertation deposit.
Minimum GPA: 3.0	Minimum GPA: 3.25

A maximum of 4 CR-graded credit hours in non-IE courses may be applied toward the degree.

PhDIE Approved Bachelors Current		PhDIE Approved Bachelors Proposed	
Thesis credit (IE 599)	40	Thesis credit (IE 599)	40
Seminar registration each semester (IE 590)	0	Seminar registration each semester (IE 590)	0
Electives in consultation with advisor	56	400/500-level IE Courses	32
		STEM courses from outside of major	12
		Electives in consultation with advisor	12
Total	96	Total	96

A minimum of 24 credit hours of 500-level hours overall.	At least 28 hours of 500-level credit must be applied toward the degree. Independent study/project design do not count toward 500-level requirement.
4 hours of the elective courses must be from a College of Engineering department, including ABE and CHBE.	STEM courses must be approved and be from a College of Engineering department, including ABE and CHBE (or other approved department). Excludes TEC and ENG courses.
A maximum of 4 hours of IE 597 (or other approved independent study) may be applied toward the elective course work requirement.	A maximum of 8 credit hours of IE 597 (or other approved independent study/project design) may be counted toward the degree.
PhD exam and dissertation requirements: qualifying exams, preliminary exam, final exam or dissertation defense, dissertation deposit.	PhD exam and dissertation requirements: qualifying exams, preliminary exam, final exam or dissertation defense, dissertation deposit.
Minimum GPA: 3.0	Minimum GPA: 3.25

A maximum of 4 CR-graded credit hours in non-IE courses may be applied toward the degree.