10KS0127MS & 10KS0127MSU: INDUSTRIAL ENGINEERING, MS (ON CAMPUS & ONLINE)

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 16:05:49 GMT
   Deb Forgacs (dforgacs): Approved for U Program Review
2. Thu, 15 Oct 2020 19:07:12 GMT
   Deborah Thurston (thurston): Approved for 1422 Head
3. Tue, 17 Nov 2020 19:28:49 GMT
   Keri Pipkins (kcp): Approved for KP Committee Chair
4. Tue, 17 Nov 2020 20:59:20 GMT
   Candy Deaville (candyd): Approved for KP Dean
5. Tue, 17 Nov 2020 22:14:50 GMT
   John Wilkin (jpwilkin): Approved for University Librarian
6. Thu, 10 Dec 2020 20:05:23 GMT
   Allison McKinney (agrindly): Approved for Grad_College
7. Thu, 10 Dec 2020 20:38:00 GMT
   Kathy Martensen (kmartens): Approved for Provost

History
1. Jul 1, 2019 by Mary Lowry (lowry)
2. Jul 1, 2019 by Mary Lowry (lowry)

Date Submitted: Mon, 12 Oct 2020 16:04:30 GMT

Viewing: 10KS0127MS & 10KS0127MSU : Industrial Engineering, MS (on campus & online)
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*

MS revision with multiple minor revisions.

The other programs that are tied to this revision include:
IE, PHD -- key 336
SE, MS -- key 338
SE, PHD -- key 335

**EP Control Number**

EP21.050

**Official Program Name**

Industrial Engineering, MS (on campus & online)

**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 structuring the electives that students are taking to ensure they know the types of courses we want them to take – 500-level IE courses, a STEM course, and open electives. We are also defining the STEM courses that will count toward the degree.

Corresponding Degree

MS Master of Science

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?
2 years

What are the minimum Total Credit Hours required for this program?
32

Delivery Method

Is this program available on campus and online?
Yes

This program is available:
On Campus and Online

Describe the use of this delivery method:
This program is available on campus & online.

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
MSIE 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

Catalog Page Text: Description of program for the catalog page. This is not official content, it is used to help build the catalog pages for the program. Can be edited in the catalog by the college or department.

same catalog text as what previously exists
This degree program can be completed with or without a thesis; either on campus or online, the requirements are listed below:

**Thesis Option**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE 599</td>
<td>Thesis Research (Thesis Research)</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>A maximum of 8 credit hours of IE 599 (or other approved thesis) may be counted toward the degree</td>
<td></td>
</tr>
<tr>
<td>IE 590</td>
<td>Seminar (registration for 0 hours every term while in residence)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>500-level IE Courses</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>STEM course from outside of major</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>STEM course must be approved and be from a College of Engineering department, including ABE and CHBE (or other approved department). Excludes TEC and ENG courses.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electives in consultation with advisor</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>A maximum of 4 hours of IE 597 (or other approved independent study/project design) may be applied toward the elective coursework requirement.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>32</td>
</tr>
</tbody>
</table>

**Non-Thesis Option**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE 597</td>
<td>Independent Study</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Elective courses – chosen in consultation with advisor (subject to Other Requirements and Conditions below)</td>
<td>32</td>
</tr>
<tr>
<td>IE 590</td>
<td>Seminar (registration for 0 hours every term while in residence)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>500-level IE Courses</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>STEM course from outside of major</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>STEM course must be approved and be from a College of Engineering department, including ABE and CHBE (or other approved department). Excludes TEC and ENG courses.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electives in consultation with advisor</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>A maximum of 4 additional credit hours of IE 597 (or other approved independent study/project design) may be counted toward the elective coursework requirement.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Hours</td>
<td>36</td>
</tr>
</tbody>
</table>

**Other Requirements and Conditions (may overlap)**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Requirements and conditions may overlap</td>
<td></td>
</tr>
<tr>
<td>A minimum of 12 500-level credit hours applied toward the degree, 8 of which must be IE.</td>
<td></td>
</tr>
<tr>
<td>A maximum of 4 hours of IE 597 (or other approved independent study) may be applied toward the elective coursework requirement.</td>
<td></td>
</tr>
<tr>
<td>Other Requirements and Conditions may overlap</td>
<td></td>
</tr>
<tr>
<td>Minimum 500-level credit hours applied toward the degree:</td>
<td>12</td>
</tr>
<tr>
<td>Minimum GPA:</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Departmental approval is required to pursue the non-thesis option, for students terminating their studies with the M.S. degree. For students in the non-thesis option, 4 hours of IE 597 are required (4 hours maximum allowed towards the M.S. degree), because each student must show evidence of the ability to do independent research.
Minimum 500-level credit hours applied toward the degree: 12
Minimum GPA: 3.0

EP Documentation

DMI Documentation

Banner/Codebook Name
MS:Industrial Engineering -UIUC & MS:Industrial Engr Online-UIUC

Program Code:
10KS0127MS & 10KS0127MSU

Degree Code
MS

Major Code
0127

Program Reviewer Comments

Key: 337
### MSIE Thesis Current

<table>
<thead>
<tr>
<th></th>
<th>MSIE Thesis Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis credit (IE 599)</td>
<td>8</td>
</tr>
<tr>
<td>Seminar registration each semester (IE 590)</td>
<td>0</td>
</tr>
<tr>
<td>Electives in consultation with advisor</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

- **STEM course** 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.
- Minimum GPA: 3.0

**A minimum of 12 500-level credit hours applied toward the degree, 8 of which must be**

### MSIE Non-Thesis Current

<table>
<thead>
<tr>
<th></th>
<th>MSIE Non-Thesis Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Study (IE 597)</td>
<td>4</td>
</tr>
<tr>
<td>Seminar registration each semester (IE 590)</td>
<td>0</td>
</tr>
<tr>
<td>Electives in consultation with advisor</td>
<td>32</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

- **STEM course** must be approved and be from a College of Engineering department, including ABE and CHBE (or other approved department). Excludes TEC and ENG courses.
- For students in the non-thesis option, 4 hours of IE 597 are required (4 hours maximum allowed towards the M.S. degree), because each student must show evidence of the ability to do independent research.
- Minimum GPA: 3.0

**A minimum of 12 500-level credit hours applied toward the degree, 8 of which must be**